



# Graduate Bulletin

2024-25

 UNIVERSITY OF DENVER

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# GRADUATE BULLETIN

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Select from more than 120 graduate degree and certificate programs that will challenge, inspire and prepare you to achieve your highest academic and professional goals. DU graduate programs combine rigorous study with critical thinking, collaboration and applied learning experiences that will enable you to expand your skills, deepen your expertise and apply your knowledge to benefit you and the world.

## About this Bulletin

The University of Denver Graduate Bulletin has been prepared by the faculty and administration to serve as the governing document for University's graduate academic programs, courses and policies. The Graduate Bulletin represents the University's best planning at the time of publication. Course and curriculum changes; modification to tuition, fees or other charges; and unforeseen changes in other aspects of the University of Denver sometimes occur after the bulletin has been published, but before the changes can be incorporated in a later edition and apply to all students as of the date they become effective, regardless of whether they were in effect at the time the student initially enrolled at the University of Denver. Students are responsible for knowing all academic and administrative policies and regulations affecting their program of study and for abiding by all such policies and regulations during their period of enrollment at the University. The Graduate Bulletin does not constitute a contract between the University of Denver and its students on either a collective or individual basis.

The Graduate Bulletin is published and distributed annually in both a web and a PDF version. Maintaining document fidelity, both versions remain static after publication. Corrections to published errors can be obtained on the errata page accessed through the table of contents and on the Registrar's Office website.

## About the University of Denver

### The University of Denver

Founded in 1864, the University of Denver is an independent coeducational institution located in a residential neighborhood eight miles southeast of downtown Denver. Colleges, schools and divisions of the University include the following:

- College of Arts, Humanities and Social Sciences
- College of Natural Sciences and Mathematics
- Daniel Felix Ritchie School of Engineering and Computer Science
- Daniels College of Business
- Josef Korbel School of International Studies
- Graduate School of Professional Psychology
- Graduate School of Social Work
- Morgridge College of Education
- Sturm College of Law
- University College

## Students

University of Denver students come from all 50 states, in addition to the District of Columbia and from several U.S. territories, and from 82 different countries. Enrollment is approximately 13,400: 6,400 undergraduates and 7,000 graduate students.

## Accreditation

### Institutional Accreditation

The University of Denver is accredited as a doctoral degree-granting institution by the Higher Learning Commission (HLC) and is authorized to offer post-secondary education in the state of Colorado by the Colorado Department of Higher Education.

Higher Learning Commission  
 230 South LaSalle Street, Suite 7-500  
 Chicago, IL 60604-1413  
 312-263-0456  
 800-621-7440  
<https://www.hlcommission.org/>

Colorado Department of Higher Education  
 1560 Broadway, Suite 1600  
 Denver, CO 80208  
 303-866-2723

<http://highered.colorado.gov>

## Specialized Accreditation

Individual academic programs undergo periodic review by accreditation or certification bodies in their field.

- Accreditation Association for Ambulatory Health Care
- Accrediting Board for Engineering and Technology
- American Bar Association
- American Chemical Society
- American Library Association
- American Psychological Association
- Association to Advance Collegiate Schools of Business International
- Colorado Department of Education
- Council for Accreditation of Educator Preparation
- Council on Social Work Education
- Master's in Psychology and Counseling Accreditation Council
- National Association for the Education of Young Children
- National Association of Schools of Arts and Design
- National Association of School Psychologists
- National Association of Schools of Music
- National Professional Science Master's Association
- National Security Agency - Center of Academic Excellence

## University Governance and Organization

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**Office of Graduate Education**

The Office of Graduate Education (OGE) provides leadership and support for graduate education and advocates on behalf of graduate students and programs at the University of Denver. Under the direction of the Vice Provost for Research and Graduate Education, the OGE partners with deans, academic units and University governance to ensure excellence and integrity in educational programs and curricula. The OGE facilitates the development of new degree programs at the graduate level, oversees processes to ensure the quality of graduate and credential programs, acts as an advisory resource to programs initiating or transforming their academic programs, and ensures the University is in compliance with all federal, state, and university policies related to graduate education. On behalf of the Provost and working in consultation with the Graduate Council, the office is responsible for the authorship and oversight of graduate policy.

**Graduate Council**

The Vice Provost and the Graduate Council are charged with the responsibility of reviewing, formulating, and implementing policy concerning graduate education.

**Composition**

Council membership includes the Vice Provost for Research and Graduate Education, all of the academic deans from units with graduate programs, an elected faculty representative from each division, two elected representatives from the Faculty Senate and two representatives of the Graduate Student Government.

Administrators such as the Registrar, the Dean of the Library, the Vice Chancellor for University Technology Services, the Chair of the Undergraduate Council, the Vice Provost for Research and the Vice Provost for Internationalization serve *ex officio* and participate in the Committee's proceedings as voting members.

### Responsibilities

The Graduate Council shall oversee the configuration of graduate degree and certificate programs, monitor the degree to which these programs further the University's mission, avoid unwarranted program duplication, and establish, monitor and maintain academic standards across the graduate curricula. The Council shall recommend policies including, but not limited to, the structure and quality of the graduate curricula; procedures concerning graduate student appeals; and policies governing the initiation and termination of graduate degree programs.

### Academic Units

Graduate Studies at the University of Denver includes programs in the following academic units:

- College of Arts, Humanities and Social Sciences (p. 65)
- Daniel Felix Ritchie School of Engineering and Computer Science (p. 241)
- Daniels College of Business (p. 341)
- DU-Iliff Joint Doctoral Program in the Study of Religion (p. 446)
- Graduate School of Professional Psychology (p. 469)
- Graduate School of Social Work (p. 524)
- Josef Korbel School of International Studies (p. 585)
- Morgridge College of Education (p. 686)
- College of Natural Sciences and Mathematics (p. 813)
- Sturm College of Law (p. 892)
- University College (p. 988)

## Academic Calendar

Courses for programs other than the Sturm College of Law are offered on the quarter system; the Sturm College of Law operates on a semester calendar.

### Quarter System

The academic calendar is divided into fall, winter and spring quarters and a summer session. Each quarter is approximately ten weeks long and summer session is nine weeks. There are two interterm sessions. Students may complete degree requirements through continuous enrollment, including summers, or may arrange the normal work of a three-quarter academic year in any desirable sequence of quarters and summer session.

### Semester System

The academic calendar is divided into fall, spring and summer semesters.

### Interterms

Interterms are the periods preceding each academic quarter, during which short, innovative on-campus, online, and travel experiences for undergraduate and graduate students are offered. Hours completed in interterms are applied as credit toward graduation requirements and may be applied to the major or minor. Students can find more information about and register for interterm classes through the Academic Programs (<https://www.du.edu/interterm/>) office. Questions about interterms should be directed to Academic Programs, Mary Reed Building, Room 301, 2199 S. University Blvd., Denver, CO 80208-2360, or by emailing [uap@du.edu](mailto:uap@du.edu).

### Summer Session

Summer session (<http://www.du.edu/summer/>) is an avenue for continuing undergraduate and graduate students to accelerate their programs or complete necessary coursework. Elective, Common Curriculum and required courses for majors and minors are offered in a variety of time frames. Travel and other unique courses including short, intensive workshops are part of the summer program. Visiting students, professionals and individuals from the community interested in attending for the summer only are encouraged to attend and are admitted (<http://bulletin.du.edu/undergraduate/admission/traditionalbachelorsprogram/summer/>) under an open-enrollment policy.

Academic Calendar: Quarter System (p. 13)

Academic Calendar: Semester System (p. 13)

## 2024-2025 Academic Calendar: Quarter System

### Autumn Quarter 2024

September 9	Monday	Classes begin
November 16	Saturday	Last day of classes
November 18-21	Monday-Thursday	Final examination period

### Winter Interterm 2024

November 22	Friday	Classes begin
December 21	Saturday	Last day of classes

### Winter Quarter 2025

January 6	Monday	Classes begin
March 17	Monday	Last day of classes
March 18-21	Tuesday-Friday	Final examination period

### Spring Interterm 2025

March 22	Saturday	Classes begin
March 30	Sunday	Last day of classes

### Spring Quarter 2025

March 31	Monday	Classes begin
June 7	Monday	Last day of classes
June 9-12	Monday-Thursday	Final examination period
June 13	Friday	Graduate Commencement
June 14	Saturday	Undergraduate Commencement

### Summer Session 2025

June 14	Saturday	Classes begin
August 22	Friday	Last day of classes
August 23	Saturday	Commencement

### University Holidays

September 2, 2024	Monday	Labor Day
November 28-29 2024	Thursday-Friday	Thanksgiving
December 25-31, 2024	Wednesday-Tuesday	Winter Holiday
January 1 2025	Wednesday	New Year's Day
January 20, 2025	Monday	Martin Luther King Jr. Day
May 26, 2025	Monday	Memorial Day
June 19, 2025	Thursday	Juneteenth
July 4, 2025	Friday	Independence Day

## 2024-2025 Academic Calendar: Semester System

### Autumn Semester 2024

August 5-14	Monday-Wednesday	Orientation for first-year & JD transfer students
August 17	Saturday	Classes begin
November 25	Monday	Last day of classes
December 4-18	Wednesday-Wednesday	Final examination period

### Spring Semester 2025

January 4	Saturday	Classes begin
April 21	Monday	Last day of classes

April 30-May 15	Wednesday-Thursday	Final examination period
May 17	Saturday	Sturm College of Law Commencement

## Summer Semester 2025

May 16	Friday	Classes begin
July 16	Wednesday	Last day of classes
July 22-28	Tuesday-Monday	Final examination period

## University Holidays

September 2, 2024	Monday	Labor Day
November 28-29, 2024	Thursday-Friday	Thanksgiving
January 20, 2025	Monday	Martin Luther King Jr. Day
June 19, 2025	Thursday	Juneteenth
July 4, 2025	Friday	Independence Day

# University's Non Discrimination Statement

The information below is accurate as of the date of publication of the Bulletin. For the current version of the University's Non-Discrimination Statement and current contact information for the Office of Equal Opportunity & Title IX (EOIX), please visit the webpages for the Non-Discrimination Statement (<https://www.du.edu/equalopportunity/non-discrimination-statement/>) and EOIX Staff (<https://www.du.edu/equalopportunity/who-we-are/>)

### University's Non-Discrimination Statement

The University of Denver prohibits discrimination on the basis of race, color, national origin, ancestry, age, religion, creed, disability, sex, sexual orientation, gender identity, gender expression, marital status, pregnancy, genetic information, military enlistment, or veteran status, and any other class of individuals protected from discrimination under federal, state, or local law, regulation, or ordinance in any of the University's educational programs and activities, and in the employment (including application for employment) and admissions (including application for admission) context, as required by Title IX of the Education Amendments of 1972; the Americans with Disabilities Act; Section 504 of the Rehabilitation Act of 1973; Title VI and VII of the Civil Rights Act of 1964; the Age Discrimination Act of 1975; the Age Discrimination in Employment Act of 1967; the Equal Pay Act; the Colorado Equal Pay for Equal Work Act; the Colorado Protecting Opportunities and Workers' Rights ("POWR") Act; and any other federal, state, and local laws, regulations, or ordinances that prohibit discrimination, harassment, and/or retaliation.

The University prohibits unlawful harassment of students, employees, and third parties on the basis of any protected characteristic as identified above.

The University also prohibits retaliation against any individual for the purpose of interfering with any right or privilege secured by University policy or law, or because the individual makes a good faith report or formal complaint, testifies, assists, participates, or refuses to participate in any manner in an investigation, proceeding, or hearing under the University's Comprehensive Discrimination & Harassment Procedures or Title IX Sexual Harassment Procedures.

The University has designated the Associate Vice Chancellor for Equal Opportunity & Title IX (AVC for EOIX) to coordinate the University's compliance with federal and state civil rights laws regarding protected characteristics, including Title IX, the Age Discrimination Act of 1975, and those other laws and regulations referenced above:

Marti McCaleb, JD

Associate Vice Chancellor for Equal Opportunity & Title IX and Title IX Coordinator

Office of Equal Opportunity & Title IX

(303) 871-7016

<https://www.du.edu/equalopportunity/index.html> ([https://www.du.edu/equalopportunity%20/t%20%22\\_blank/](https://www.du.edu/equalopportunity%20/t%20%22_blank/))

[titleix@du.edu](mailto:titleix@du.edu) (%20titleix@du.edu) #or [Marti.McCaleb@du.edu](mailto:Marti.McCaleb@du.edu)

The University complies with all federal and state laws that protect individuals with disabilities from discrimination based on their disability or perceived disability status. As such, reasonable accommodations and auxiliary aids and services are available to individuals with disabilities when such modifications and services are necessary to access the University's programs and services. The University's ADA/504 Coordinator is

Joshua Kaufman

ADA Coordinator

Office of Equal Opportunity & Title IX

Driscoll Commons, Suite 30

2050 E. Evans Ave.

Denver CO 80208

(303) 871-3941

Accessibility | Denver (du.edu)

<https://www.du.edu/equalopportunity/index.html> (<https://www.du.edu/equalopportunity/>)

[ADACoordinator@du.edu](mailto:ADACoordinator@du.edu)

Inquiries about Title IX or the University's prohibitions against discrimination, harassment, and retaliation can be directed to the Associate Vice Chancellor for Equal Opportunity & Title IX, the ADA/504 Coordinator (for disability-related questions) or to the U.S. Department of Education, Office of Civil Rights, at the contact information below.

Complaints and inquiries regarding discrimination, harassment, and retaliation involving federal laws may be directed to:

U.S. Equal Employment Opportunity Commission

Denver Field Office

950 17th Street, Suite 300

Denver, CO 80202

Telephone: (800) 669-4000

FAX: (303) 866-1085

TTY: (800) 669-6820

ASL Video Phone: (844) 234-5122

Denver Office

Office for Civil Rights

U.S. Department of Education

Cesar E. Chavez Memorial Building

1244 Speer Boulevard, Suite 310

Denver, CO 80204-3582

Telephone: 303-844-5695

FAX: 303-844-4303

TDD: 800-877-8339

Email: [OCR.Denver@ed.gov](mailto:OCR.Denver@ed.gov)

Any person who believes the University as a federal contractor has violated nondiscrimination or affirmative action obligations may contact the Office of Federal Contract Compliance Programs (OFCCP) at:

OFCCP

U.S. Department of Labor

200 Constitution Ave. NW

Washington, D.C. 20210

[www.dol.gov](http://www.dol.gov)

Telephone: (800) 397-6251



TTY: (202) 693-133

The University provides more information about the Office of Equal Opportunity & Title IX (EOIX) on the EOIX website (<https://www.du.edu/equalopportunity/>), including the University's Discrimination and Harassment Policy (<https://www.du.edu/equalopportunity/policies-procedures/>), the EOIX procedures (<https://www.du.edu/equalopportunity/policies-procedures/>), and the EOIX online reporting form (<https://www.du.edu/equalopportunity/reporting-resources/>).

## Unit of Credit

### Unit of Credit

Credit hours are the unit of measure of the amount of work represented by specified learning outcomes in an academic program. Academic programs at the University of Denver are scheduled on both quarter and semester (College of Law) calendars. Each academic program specifies the number of (quarter- or semester-hour) credits required. Courses award credit based on learning outcomes for the course. For lecture courses, one credit hour represents one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-classroom student work each week the quarter or semester. Credit for non-lecture courses such as laboratories, internships, practica, studios or music performance classes represent equivalent learning outcomes. The amount of scheduled times for these courses vary.

More information regarding the University of Denver's credit guidelines and instructional methodology definitions can be found on the Registrar website (<https://www.du.edu/registrar/course/credithourguidelines.html>).

## Dual Degree Programs

Dual Undergraduate-Graduate Degree Programs (p. 16)

Flexible Dual Degree Programs (p. 41)

Formal Dual Graduate Degrees (p. 42)

## Dual Undergraduate-Graduate Degree Programs

### Dual Undergraduate-Graduate Degree Programs

A Dual Undergraduate-Graduate Degree Program is an institutionally approved program in which a DU undergraduate student begins taking classes toward a graduate degree program prior to earning a baccalaureate degree. Both degrees must be earned within five years of matriculation into the undergraduate degree program. Students pursuing a dual degree with a Juris Doctorate must earn both degrees within six years.

The programs may reduce a limited number of both undergraduate and graduate credit hours toward both degrees.

The amount of the credit hour reduction is variable across programs. To be admitted, a student's academic progress must demonstrate that the requirements of the program can be completed within the set time-frame.

Undergraduates still need to meet all normal core, major, minor and total credit hour requirements of their respective majors and minors before receiving the undergraduate degree. Graduate coursework is usually taken during the undergraduate "senior" year. Students should be admitted to the dual undergraduate-graduate program *before* taking graduate courses since undergraduate students generally may not take graduate courses. Usually, no more than 30 hours of electives may be used in the senior year to begin the graduate/professional program. Only graduate credit may be counted for the graduate degree. The total number of credit hours required varies by department. All requirements of the graduate or professional program need to be completed before receiving the advanced degree.

- For students enrolled in a dual degree program, the University will award the undergraduate degree at the time it is earned.
- A student who chooses not to continue on for the graduate degree may count the graduate courses, if approved as relevant by the advisor, toward the undergraduate degree (Students should visit the appropriate college or school for opt-out options and requirements).
- Students enrolled in the dual undergraduate-graduate program who have been awarded the BA/BS degree, completed all required coursework and are working on a thesis may be eligible to enroll in graduate continuous enrollment.

### Dual Undergraduate-Graduate Financial Aid

Eligibility for financial aid differs for undergraduate and graduate students and it differs for institutional aid and federal aid. Students enrolled in dual degree programs are considered graduate students for federal financial aid purposes after attaining 198 credit hours even if the student has not met the undergraduate degree requirements. Federal regulations do not allow students in dual degree programs who have completed four academic years (defined as 198 credit hours) to continue to receive undergraduate aid. Students in the law school dual degree program are aided as graduate students after three undergraduate academic years (149 hours for federal aid purposes). While undergraduate merit or need-based institutional grant

aid are not available for fifth-year dual-degree students, each graduate department may offer graduate students grant or scholarship funds at their discretion. Students should contact their graduate program for details on available funding for the fifth year.

### **Institutional Aid Eligibility Differs From Federal Aid Eligibility**

#### *Institutional Aid*

The Financial Aid office expects first-time, first-year undergraduate students to be eligible for consideration for institutional merit or need-based undergraduate financial aid for a maximum of four academic years from the point of initial enrollment (excluding summer and interterm periods), or until the student earns the bachelor's degree, whichever comes first. For institutional aid eligibility for dual degree students the university defines four academic years as up to 12 quarters of fall, winter, spring enrollment. Students who receive any amount of credit in a quarter are considered to be enrolled. If a student is not receiving aid in one or more of those enrolled quarters, the timeline for 12 quarters of aid eligibility continues. For example, a student may not continue to receive undergraduate aid into a 13<sup>th</sup> quarter of enrollment due to not receiving aid or not accepting aid in one or more of the prior 12 quarters of enrollment. It is not the intent of this policy to cut off students from twelve quarters of fall, winter, spring institutional aid consideration, but it also is not the intent to allow students who are enrolled in dual degree programs to continue into their fifth year of enrollment as undergraduate students. Any student who has taken the undergraduate degree is no longer eligible for undergraduate institutional aid regardless of the number of quarters of aid already received.

#### *Federal Aid*

For federal aid purposes dual degree students automatically become graduate students in the next enrollment period after attaining 198 hours of earned or accepted credit. Any dual degree student who has completed their undergraduate degree requirements is considered a graduate student regardless of the number of quarters of prior enrollment. For example, a student who has accelerated their program with outside credits or additional credits during prior academic years (overload enrollment, interterms, summer, AP or IB) and completes their baccalaureate degree or reaches the credit threshold stated above is automatically treated as a graduate student for federal aid purposes regardless of the number of quarters of prior enrollment or prior aid consideration.

### **Dual Undergraduate-Graduate Admission and Records Procedures**

The following must be followed consistently and accurately:

- Students are admitted to dual undergraduate-graduate degree programs by the graduate admission unit. The graduate unit follows all normal admission procedures and the student must meet all admission criteria for the graduate program other than receipt of the baccalaureate degree. Students should be admitted to the dual undergraduate-graduate program as early as practical for financial aid and other reasons. They must be admitted to the dual undergraduate-graduate program by the start of the first term that the student reaches senior standing (135 earned credits).
- The effective term for admission should be the term in which the student is permitted to take graduate courses. For example, if the student's senior year begins in the fall and the student meets admission criteria and may begin taking graduate courses in the subsequent spring term, the admission term should be that spring.
- Graduate units are responsible for assuring that the student information is accurate.

**Note:** A student who receives a bachelor's degree and was not previously enrolled in a dual undergraduate-graduate program is **not** eligible to return and enroll in a graduate program and reduce the number of credit hours for the graduate degree.

## **College of Arts, Humanities and Social Sciences**

### **Master of Arts in Art History or Master of Arts in Art History with a Concentration in Museum Studies and Bachelor of Arts in Art History**

- Undergraduate-level credits required with the dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 56
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 227

All students pursuing the dual BA in Art History/MA in Art History, Concentration in Museum Studies are required to complete all degree requirements for both the BA and MA degrees.

### **Master of Arts in Art History, Master of Arts in Art History with a Concentration in Museum Studies**

Admission Requirements (p. 88)

Degree Requirements (p. 89)

## **Bachelor of Arts in Art History**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/schoolofartandarthistory/#programstext>)

## **Master of Arts in Psychology and Bachelor of Arts or Bachelor of Science in Psychology**

- Undergraduate-level credits required with the dual degree: 183
- Undergraduate credit reduction with dual degree: 0 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual BA or BS in Psychology/MA in Psychology are required to complete all degree requirements for both the BA/BS and MA degrees.

## **Master of Arts in Psychology**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/psychology/#admissionrequirementsstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/psychology/#programofstudytext>)

## **Bachelor of Arts in Psychology**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/psychology/#programofstudytext>)

## **Bachelor of Science in Psychology**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/psychology/#programofstudytext>)

## **Master of Science in Economics and Social Policy and Bachelor of Arts in Economics**

- Undergraduate-level credits required with the dual degree: 163
- Undergraduate credit reduction with dual degree: 20 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 208

All students pursuing the dual BA in Economics/MS in Economics and Social Policy are required to complete all degree requirements for both the BA and MS degrees.

## **Master of Science in Economics and Social Policy**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/economics/#admissionrequirementsstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/economics/#programofstudytext>)

## **Bachelor of Arts in Economics**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/economics/#programofstudytext>)

## **Master of Arts in Emergent Digital Practices and Bachelor of Arts in Emergent Digital Practices**

- Undergraduate-level credits required with the dual degree: 175
- Undergraduate credit reduction with dual degree: 8 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48

- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 223

All students pursuing the dual BA/MA in Emergent Digital Practices are required to complete all degree requirements for both the BA and MA degrees.

### **Master of Arts in Emergent Digital Practices**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/emergent-digital-practices/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/arts-humanities-and-social-sciences/emergent-digital-practices/#programofstudy>)

### **Bachelor of Arts in Emergent Digital Practices**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/emergentdigitalpractices/#programofstudy>)

## **Daniels College of Business**

### **Master of Accountancy and Bachelor of Science in Accounting**

- Undergraduate-level credits required with dual degree: 186
- Undergraduate credit reduction with dual degree: 0 credits from the original 186 required for the undergraduate degree
- Graduate-level credits required with dual degree: 40
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 226

All students pursuing the dual Bachelor of Science in Accounting/Master's in Accountancy are required to complete all degree requirements for both the BS and Master's. Eight credits from the graduate program are cross-counted to meet the undergraduate degree requirements. Please contact the department for details.

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

### **Bachelor of Science in Accounting**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudy>)

### **Master of Science in Business Analytics and Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Chemistry**

- Undergraduate-level credits required with dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 58
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 229

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### **Master of Science in Business Analytics**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#programofstudy>)

### **Bachelor of Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## **Bachelor of Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## **Bachelor of Science in Chemistry**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## **Master of Science in Business Analytics and Bachelor of Fine Arts**

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 12 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 58
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 235

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## **Master of Science in Business Analytics**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#programofstudytext>)

## **Bachelor of Fine Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## **Master of Science in Business Analytics and Bachelor of Music**

- Undergraduate-level credits required with dual degree: 182
- Undergraduate credit reduction with dual degree: 12 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 58
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 240

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## **Master of Science in Business Analytics**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#programofstudytext>)

## **Bachelor of Music**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## **Master of Science in Business Analytics and Bachelor of Science in Business Administration or Bachelor of Science in Accounting**

- Undergraduate-level credits required with dual degree: 173 for BSBA or 174 for BSACC
- Undergraduate credit reduction with dual degree: 12 credits from the original 185 required for the BSBA degree or 186 for the BSACC degree
- Graduate-level credits required with dual degree: 58
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 232 for MS and BSACC degrees or 231 for MS and BSBA degrees

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Business Analytics

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/informationtechnology/#programofstudytext>)

## Bachelor of Science in Accounting

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudytext>)

## Bachelor of Science in Business Administration

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Master of Science in Applied Quantitative Finance and Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Chemistry

- Undergraduate-level credits required with dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-57 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 216-228

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Applied Quantitative Finance

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#programofstudytext>)

## Bachelor of Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## Bachelor of Science

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Bachelor of Science in Chemistry

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## Master of Science in Applied Quantitative Finance and Bachelor of Fine Arts

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 12 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-57 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 222-234

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Applied Quantitative Finance

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#programofstudytext>)

## Bachelor of Fine Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## Master of Science in Applied Quantitative Finance and Bachelor of Music

- Undergraduate-level credits required with dual degree: 182
- Undergraduate credit reduction with dual degree: 12 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-57 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 227-239

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Applied Quantitative Finance

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#programofstudytext>)

### Bachelor of Music

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## Master of Science in Applied Quantitative Finance and Bachelor of Science in Business Administration or Bachelor of Science in Accounting

- Undergraduate-level credits required with dual degree: 173 for BSBA or 174 for BSACC
- Undergraduate credit reduction with dual degree: 12 credits from the original 185 required for the BSBA degree or 186 for the BSACC degree
- Graduate-level credits required with dual degree: 45-57 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 218-230 for MS and BSBA degrees or 219-231 for MS and BSACC degrees

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Applied Quantitative Finance

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/finance/#programofstudytext>)

### Bachelor of Science in Accounting

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudytext>)

### Bachelor of Science in Business Administration

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Master of Science in Management and Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Chemistry

- Undergraduate-level credits required with dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 216

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Management

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#programofstudytext>)

## Bachelor of Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## Bachelor of Science

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

Degree Requirements - Chemistry (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## Master of Science in Management and Bachelor of Fine Arts

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 12 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 222

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Management

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#programofstudy>)

## Bachelor of Fine Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## Master of Science in Management and Bachelor of Music

- Undergraduate-level credits required with dual degree: 182
- Undergraduate credit reduction with dual degree: 12 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 227

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Management

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#programofstudy>)

## Bachelor of Music

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## Master of Science in Management and Bachelor of Science in Business Administration or Bachelor of Science in Accounting

- Undergraduate-level credits required with dual degree: 173 for BSBA or 174 for BSACC
- Undergraduate credit reduction with dual degree: 12 credits from the original 185 required for the BSBA degree or 186 for the BSACC degree
- Graduate-level credits required with dual degree: 45 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 218 for MS and BSBA degrees or 219 for MS and BSACC degrees

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.



## Master of Science in Management

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/management/#programofstudy>)

## Bachelor of Science in Accounting

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudy>)

## Bachelor of Science in Business Administration

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Master of Science in Marketing and Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Chemistry

- Undergraduate-level credits required with dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-47 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 216-218

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Marketing

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#programofstudy>)

## Bachelor of Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## Bachelor of Science

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Bachelor of Science in Chemistry

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## Master of Science in Marketing and Bachelor of Fine Arts

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 12 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-47 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 222-224

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## Master of Science in Marketing

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#programofstudy>)

## Bachelor of Fine Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## Master of Science in Marketing and Bachelor of Music

- Undergraduate-level credits required with dual degree: 182
- Undergraduate credit reduction with dual degree: 12 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 45-47 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 227-229

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Marketing

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#programofstudytext>)

### Bachelor of Music

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## Master of Science in Marketing and Bachelor of Science in Business Administration or Bachelor of Science in Accounting

- Undergraduate-level credits required with dual degree: 173 for BSBA or 174 for BSACC
- Undergraduate credit reduction with dual degree: 12 credits from the original 185 required for the BSBA degree or 186 for the BSACC degree
- Graduate-level credits required with dual degree: 45-47 credits
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 218-220 for MS and BSBA degrees or 219-221 for MS and BSACC degrees

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Marketing

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/marketing/#programofstudytext>)

### Bachelor of Science in Accounting

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudytext>)

### Bachelor of Science in Business Administration

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## Master of Science in Real Estate and Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Chemistry

- Undergraduate-level credits required with dual degree: 171
- Undergraduate credit reduction with dual degree: 12 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 219

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### Master of Science in Real Estate and the Built Environment

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#programofstudytext>)

## **Bachelor of Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## **Bachelor of Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

Degree Requirements - Chemistry (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## **Master of Science in Real Estate and Bachelor of Fine Arts**

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 12 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 225

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## **Master of Science in Real Estate and the Built Environment**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#programofstudytext>)

## **Bachelor of Fine Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## **Master of Science in Real Estate and Bachelor of Music**

- Undergraduate-level credits required with dual degree: 182
- Undergraduate credit reduction with dual degree: 12 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 230

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

## **Master of Science in Real Estate and the Built Environment**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestateandconstructionmanagement/#programofstudytext>)

## **Bachelor of Music**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## **Master of Science in Real Estate and Bachelor of Science in Business Administration or Bachelor of Science in Accounting**

- Undergraduate-level credits required with dual degree: 173 for BSBA or 174 for BSACC
- Undergraduate credit reduction with dual degree: 12 credits from the original 185 required for the BSBA degree or 186 for the BSACC degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 221 for MS and BSBA degrees or 222 for MS and BSACC degrees

All students pursuing the dual degree are required to complete all degree requirements for both the bachelor and master's degrees.

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestatedandconstructionmanagement/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/realestatedandconstructionmanagement/#programofstudytext>)

### **Bachelor of Science in Accounting**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/accounting/#programofstudytext>)

### **Bachelor of Science in Business Administration**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## **Daniel Felix Ritchie School of Engineering and Computer Science**

Up to nine credit hours of qualifying coursework (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees. Other degree requirements and restrictions will be as described in the Graduate Bulletin for the appropriate M.S. program.

Students must satisfy the B.S. and M.S. degree requirements separately with the exception that a maximum of nine credit hours of qualifying coursework (3000- or 4000-level) taken to satisfy B.S. requirements can also be used to fulfill nine credit hours of M.S. degree requirements. Admission to the Dual Undergraduate-Graduate Degree Program does not require completion of the bachelor's degree; however, admission to the M.S. degree will require completion of the bachelor's degree.

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Game Development**

- Undergraduate-level credits: 183
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 219

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

### **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Engineering (p. 293)

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Engineering (p. 295)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

### **Bachelor of Science in Game Development**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>)

## **Master of Science in Computer Science and Bachelor of Science in Game Development**

- Undergraduate-level credits: 183
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.

- Graduate-level credits required with dual degree: 48
- Minimum number of total undergraduate and graduate credits required with dual degree: 222

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

### **Master of Science in Computer Science**

Admission Requirements - Computer Science (p. 243)

Degree Requirements - Computer Science (p. 245)

### **Bachelor of Science in Game Development**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>)

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Computer Science**

- Undergraduate-level credits: 183
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 219

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

### **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Engineering (p. 293)

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Engineering (p. 295)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

### **Bachelor of Science in Computer Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>)

## **Master of Science in Computer Science and Bachelor of Science in Computer Science**

- Undergraduate-level credits: 183
- Graduate-level credits required with dual degree: 36
- Minimum number of total undergraduate and graduate credits required with dual degree: 219

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

### **Master of Science in Computer Science**

Admission Requirements - Computer Science (p. 243)

Degree Requirements - Computer Science (p. 245)

### **Bachelor of Science in Computer Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>)

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Mechanical Engineering**

- Undergraduate-level credits: 192
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 228

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Engineering (p. 293)

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Engineering (p. 295)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

## **Bachelor of Science in Mechanical Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinmechanicalengineering/>)

## **Master of Science in Computer Science and Bachelor of Science in Mechanical Engineering**

- Undergraduate-level credits: 192
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 48
- Minimum number of total undergraduate and graduate credits required with dual degree: 231

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Computer Science**

Admission Requirements - Computer Science (p. 243)

Degree Requirements - Computer Science (p. 245)

## **Bachelor of Science in Mechanical Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinmechanicalengineering/>)

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Computer Engineering**

- Undergraduate-level credits: 192
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 228

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Engineering (p. 293)

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Engineering (p. 295)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

## **Bachelor of Science in Computer Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceincomputerengineering/>)

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Electrical Engineering**

- Undergraduate-level credits: 197
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 233

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Materials Science, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Engineering (p. 293)

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Engineering (p. 295)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

## **Bachelor of Science in Electrical Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinelectricalengineering/>)

## **Master of Science in Computer Science and Bachelor of Science in Computer Engineering**

- Undergraduate-level credits: 192
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 48
- Minimum number of total undergraduate and graduate credits required with dual degree: 231

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Computer Science**

Admission Requirements - Computer Science (p. 243)

Degree Requirements - Computer Science (p. 245)

## **Bachelor of Science in Computer Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceincomputerengineering/>)

## **Master of Science in Computer Science and Bachelor of Science in Electrical Engineering**

- Undergraduate-level credits: 197
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 48
- Minimum number of total undergraduate and graduate credits required with dual degree: 236

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Computer Science**

Admission Requirements - Computer Science (p. 243)

Degree Requirements - Computer Science (p. 245)

## **Bachelor of Science in Electrical Engineering**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinelectricalengineering/>)

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Engineering, Mechanical Engineering or Mechatronic Systems Engineering and Bachelor of Science in Biological Sciences, Biochemistry, Chemistry, Environmental Chemistry, Math, Molecular Biology or Physics**

- Undergraduate-level credits: 183
- 9 credit hours (3000- or 4000-level) may be used to satisfy degree requirements for both the B.S. and M.S. degrees.
- Graduate-level credits required with dual degree: 45
- Minimum number of total undergraduate and graduate credits required with dual degree: 219

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

## **Master of Science in Bioengineering, Computer Engineering, Electrical Engineering, Mechanical Engineering and Mechatronic Systems Engineering**

Admission Requirements - Mechanical and Materials Engineering (p. 317)

Admission Requirements - Electrical and Computer Engineering (p. 264)

Degree Requirements - Mechanical and Materials Engineering (p. 319)

Degree Requirements - Electrical and Computer Engineering (p. 267)

## **Bachelor of Science in Biological Sciences, Biochemistry, Chemistry, Environmental Chemistry, Math, Molecular Biology and Physics**

Degree Requirements - Biological Sciences (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/biology/#programofstudytext>)

Degree Requirements - Biochemistry (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/chemistryandbiochemistry/#programofstudytext>)

Degree Requirements - Chemistry (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/chemistryandbiochemistry/#programofstudytext>)

Degree Requirements - Environmental Chemistry (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/chemistryandbiochemistry/#programofstudytext>)



Degree Requirements - Math (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/mathematics/#programofstudytext>)

Degree Requirements - Molecular Biology (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/biology/#programofstudytext>)

Degree Requirements - Physics (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/physicsandastronomy/#programofstudytext>)

## **Master of Science in Data Science and Bachelor of Science in Computer Science**

- Undergraduate-level credits required with the dual degree: 171
- The BS degree is reduced by 12 credits from the original 183 required for the undergraduate degree, waiving the following three data science courses: COMP 3006, 3007 and 3008
- Graduate-level credits required with dual degree: 48
- Minimum number of total undergraduate and graduate credits required with dual degree: 219

All students pursuing the dual degree program are required to complete all degree requirements for both the Bachelor's and Master's.

### **Master of Science in Data Science**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielfelixritchieschoolofengineeringandcomputerscience/computerscience/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielfelixritchieschoolofengineeringandcomputerscience/computerscience/#programofstudytext>)

### **Bachelor of Science in Computer Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>)

## **Division of Natural Sciences and Mathematics**

### **Master of Science in Geographic Information Science and Bachelor of Arts in Environmental Science**

- Undergraduate-level credits required with dual degree: 180
- Undergraduate credit reduction with dual degree: 3 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual BA in Environmental Science and the MS in Geographic Information Science are required to complete all degree requirements for both the BA and the MS degrees.

### **Master of Science in Geographic Information Science**

Admission Requirements (p. 849)

Degree Requirements (p. 851)

### **Bachelor of Arts in Environmental Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext>)

### **Master of Science in Geographic Information Science and Bachelor of Science in Environmental Science**

- Undergraduate-level credits required with dual degree: 180
- Undergraduate credit reduction with dual degree: 3 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual BS in Environmental Science and the MS in Geographic Information Science are required to complete all degree requirements for both the BS and the MS degrees.

## **Master of Science in Geographic Information Science**

Admission Requirements (p. 849)

Degree Requirements (p. 851)

## **Bachelor of Science in Environmental Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext>)

## **Master of Science in Geographic Information Science and Bachelor of Arts in Geography**

- Undergraduate-level credits required with dual degree: 180
- Undergraduate credit reduction with dual degree: 3 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual BA in Geography and the MS in Geographic Information Science are required to complete all degree requirements for both the BA and the MS degrees.

## **Master of Science in Geographic Information Science**

Admission Requirements (p. 849)

Degree Requirements (p. 851)

## **Bachelor of Arts in Geography**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/geographyandtheenvironment/#programofstudytext>)

## **Graduate School of Social Work**

### **Master of Social Work and Bachelor of Arts (Traditional Bachelor's Program), Bachelor of Science or Bachelor of Science in Chemistry**

- Undergraduate-level credits required with dual degree: 153
- Undergraduate credit reduction with dual degree: 30 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 81
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 234

All students pursuing the dual BA (Traditional Bachelor's Program), BS or BS in Chemistry and the MSW are required to complete all degree requirements for both the BA or BS and the MSW degrees.

## **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Bachelor of Arts (Traditional Bachelor's Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## **Bachelor of Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience/>)

Degree Requirements - Bachelor of Science in Chemistry (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinchemistry/>)

## **Master of Social Work and Bachelor of Science in Accounting**

- Undergraduate-level credits required with dual degree: 156
- Undergraduate credit reduction with dual degree: 30 credits from the original 186 required for the undergraduate degree
- Graduate-level credits required with dual degree: 81
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 237

All students pursuing the dual BS in Accounting and the MSW are required to complete all degree requirements for both the BS and the MSW degrees.

### **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### **Bachelor of Science in Accounting**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinaccounting/>)

## **Master of Social Work and Bachelor of Science in Business Administration**

- Undergraduate-level credits required with dual degree: 155
- Undergraduate credit reduction with dual degree: 30 credits from the original 185 required for the undergraduate degree
- Graduate-level credits required with dual degree: 81
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 236

All students pursuing the dual BS in Business Administration and the MSW are required to complete all degree requirements for both the BS and the MSW degrees.

### **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### **Bachelor of Science in Business Administration**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## **Morgridge College of Education**

## **Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Arts, Bachelor of Science or Bachelor of Science in Chemistry**

- Undergraduate-level credits required with dual degree: 174
- Undergraduate credit reduction with dual degree: 9 credits from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 226

All students pursuing the dual BA or BS degree/MA in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program are required to complete all degree requirements for both the BA or BS and MA degrees.

### **Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program**

Admission Requirements (p. 761)

Degree Requirements (p. 767)

### **Bachelor of Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

## Bachelor of Science

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience/>)

Degree Requirements- Chemistry (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorsandminors/chemistryandbiochemistry/#programofstudytext>)

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Fine Arts

- Undergraduate-level credits required with dual degree: 180
- Undergraduate credit reduction with dual degree: 9 credits from the original 189 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 232

All students pursuing the dual BA or BS degree/MA in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program are required to complete all degree requirements for both the BA or BS and MA degrees.

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program

Admission Requirements (p. 761)

Degree Requirements (p. 767)

## Bachelor of Fine Arts

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bacheloroffinearts/>)

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Music

- Undergraduate-level credits required with dual degree: 185
- Undergraduate credit reduction with dual degree: 9 credits from the original 194 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 237

All students pursuing the dual BA or BS degree/MA in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program are required to complete all degree requirements for both the BA or BS and MA degrees.

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program

Admission Requirements (p. 761)

Degree Requirements (p. 767)

## Bachelor of Music

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofmusic/>)

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Science in Accounting

- Undergraduate-level credits required with dual degree: 177
- Undergraduate credit reduction with dual degree: 9 credits from the original 186 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 229

All students pursuing the dual BA or BS degree/MA in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program are required to complete all degree requirements for both the BA or BS and MA degrees.

## Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program

Admission Requirements (p. 761)

Degree Requirements (p. 767)

### **Bachelor of Science in Accounting**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinaccounting/>)

## **Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program and Bachelor of Science in Business Administration**

- Undergraduate-level credits required with dual degree: 176
- Undergraduate credit reduction with dual degree: 9 credits from the original 185 required for the undergraduate degree
- Graduate-level credits required with dual degree: 52
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 228

All students pursuing the dual BA or BS degree/MA in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program are required to complete all degree requirements for both the BA or BS and MA degrees.

### **Master of Arts in Curriculum, Instruction and Teaching with a Concentration in Teacher Education Program**

Admission Requirements (p. 761)

Degree Requirements (p. 767)

### **Bachelor of Science Business Administration**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscienceinbusinessadministration/>)

## **Stur姆 College of Law**

### **Juris Doctor and Bachelor of Arts (Traditional Bachelor's Program), Bachelor of Science**

- Undergraduate-level credits required with dual degree: 138 quarter hours
- Undergraduate credit reduction with dual degree: 45 quarter hours from the original 183 required for the undergraduate degree
- Graduate-level credits required with dual degree: 135 quarter hours (90 semester hours)
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 273 quarter hours

All students pursuing the dual BA or BS degree/Juris Doctor are required to complete all degree requirements for both the BA or BS and JD degrees.

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Bachelor of Arts**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts/>)

### **Bachelor of Science**

Degree Requirements (<http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience/>)

## **University College**

### **Master of Arts in Communication Management and Bachelor of Arts in Communication Arts, Bachelor of Arts in Global Studies or Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48

- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Global Studies, BA in Communication Arts or BA in Leadership and Organization Studies (BA Completion Program)/MA in Communication Management are required to complete all degree requirements for both the BA and MA degrees.

## **Master of Arts in Communication Management**

Admission Requirements (p. 1004)

Degree Requirements (p. 1004)

## **Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext>)

## **Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext>)

## **Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext>)

## **Master of Arts in Professional Creative Writing and Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Communication Arts degree (BA Completion Program)/MA in Professional Creative Writing are required to complete all degree requirements for both the BA and MA degrees.

## **Master of Arts in Professional Creative Writing**

Admission Requirements (p. 991)

Degree Requirements (p. 992)

## **Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext>)

## **Master of Arts in Global Community Engagement and Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Global Studies degree (BA Completion Program)/MA in Global Community Engagement are required to complete all degree requirements for both the BA and MA degrees.

## **Master of Arts in Global Community Engagement**

Admission Requirements (p. 1056)

Degree Requirements (p. 1057)

### **Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext>)

### **Master of Arts in Arts and Culture Management and Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Communication Arts degree (BA Completion Program)/MA in Arts and Culture Management are required to complete all degree requirements for both the BA and MA degrees.

### **Master of Arts in Arts and Culture Management**

Admission Requirements (p. 991)

Degree Requirements (p. 992)

### **Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext>)

### **Master of Science in Healthcare Management and Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Leadership and Organization Studies (BA Completion Program)/MS in Healthcare Management are required to complete all degree requirements for both the BA and MS degrees.

### **Master of Science in Healthcare Management**

Admission Requirements (p. 1081)

Degree Requirements (p. 1082)

### **Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext>)

### **Master of Science in Healthcare Management and Bachelor of Arts in Healthcare Administration (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Healthcare Administration (BA Completion Program)/MS in Healthcare Management are required to complete all degree requirements for both the BA and MS degrees.

## Master of Science in Healthcare Management

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/healthcareleadership/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/healthcareleadership/#programofstudytext>)

## Bachelor of Arts in Healthcare Administration (Bachelor of Arts Completion Program)

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/healthcareadministration/#programofstudytext>)

## Master of Science in Information Technology and Bachelor of Arts in Information Technology (Bachelor of Arts Completion Program)

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Information Technology (BA Completion Program)/MS in Information Technology are required to complete all degree requirements for both the BA and MS degrees.

## Master of Science in Information Technology

Admission Requirements (p. 1101)

Degree Requirements (p. 1102)

## Bachelor of Arts in Information Technology (Bachelor of Arts Completion Program)

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/informationtechnology/#programofstudytext>)

## Master of Science in Nonprofit Leadership and Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Leadership and Organization Studies (BA Completion Program)/MS in Nonprofit Leadership are required to complete all degree requirements for both the BA and MS degrees.

## Master of Science in Nonprofit Leadership

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/nonprofitleadership/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/nonprofitleadership/#programofstudytext>)

## Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext>)

## Master of Science in Organizational Leadership and Bachelor of Arts in Communication Arts, Bachelor of Arts in Global Studies or Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48



- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Global Studies (Bachelor of Arts Completion Program)/MS in Organizational Leadership are required to complete all degree requirements for both the BA and MS degrees.

### **Master of Science in Organizational Leadership**

Admission Requirements (p. 1148)

Degree Requirements (p. 1149)

### **Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext>)

### **Bachelor of Arts in Global Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalstudies/#programofstudytext>)

### **Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext>)

## **Master of Science in Security Management and Bachelor of Arts in Transportation and Supply Chain (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Transportation and Supply Chain (BA Completion Program)/MS in Security Management are required to complete all degree requirements for both the BA and MS degrees.

### **Master of Science in Security Management**

Admission Requirements (p. 1176)

Degree Requirements (p. 1177)

### **Bachelor of Arts in Transportation and Supply Chain (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalcommerceandtransportation/#programofstudytext>)

## **Master of Science in Strategic Human Resources and Bachelor of Arts in Communication Arts or Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Communication Arts (Bachelor of Arts Completion Program)/MS in Strategic Human Resources are required to complete all degree requirements for both the BA and MS degrees.

### **Master of Science in Strategic Human Resources**

Admission Requirements (p. 1189)

Degree Requirements (p. 1189)

## **Bachelor of Arts in Communication Arts (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/communicationarts/#programofstudytext>)

## **Bachelor of Arts in Leadership and Organization Studies (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/leadershipandorganizationstudies/#programofstudytext>)

## **Master of Science in Supply Chain Management and Bachelor of Arts in Transportation and Supply Chain (Bachelor of Arts Completion Program)**

- Undergraduate-level credits required with the dual degree: 172
- Undergraduate credit reduction with dual degree: 8 credits from the original 180 required for the undergraduate degree
- Graduate-level credits required with dual degree: 48
- Graduate credit reduction: 0
- Minimum number of credits required with dual degree: 220

All students pursuing the dual BA in Transportation and Supply Chain (BA Completion Program)/MS in Supply Chain Management are required to complete all degree requirements for both the BA and MS degrees.

## **Master of Science in Supply Chain Management**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/supplychainmanagement/#admissionrequirementstext>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/universitycollege/supplychainmanagement/#programofstudytext>)

## **Bachelor of Arts in Transportation and Supply Chain (Bachelor of Arts Completion Program)**

Degree Requirements (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/universitycollege/globalcommerceandtransportation/#programofstudytext>)

## **Flexible Dual Degree Programs**

### **Flexible Dual Degree Programs**

Students may propose a flexible dual degree program that links two master's degrees or a master's degree and a JD degree.

Students must submit the proposal for the flexible dual degree no later than one term prior to matriculation into the second degree.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

Any significant changes to the approved program require the student to resubmit a revised proposal packet to the deans/chairs/directors and advisors of both programs and the Office of Graduate Education.

### **Proposing a Flexible Dual Degree**

To propose a flexible dual degree, the student must first apply to and be admitted by both programs, pay application fees and admissions deposits for both programs, and seek the counsel of an advisor in each program. Admission into each program does not take the place of filing a Flexible Dual Degree proposal (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) nor guarantee approval of the proposal.

The dean, chair, or director of each degree program and both program advisors must carefully compare the requirements for each program and approve the proposed curriculum. The student must then submit a copy of the original requirements for each degree (printout from the unit website or copy from the student handbook is acceptable), a detailed course plan showing all proposed courses, the credit hours, and non-coursework requirements; a one to two- page statement of the educational/career objectives stating the reasons for the specific course selection and which courses most clearly serve the educational and career goals of the student; and current official/unofficial transcript(s) showing any work already completed towards the proposed program and degrees.

The student then submits the documents listed above to the Office of Graduate Education, which reviews and decides on the proposals. Proposals with errors or course/program inconsistencies will be returned for revision.

Once the proposal is approved, the student will be entered into the University computer system as a flexible dual degree student.

## Curriculum Structure

Students may propose any flexible dual degree program that seems reasonable to them and their advisors for academic and career objectives. Only elective courses may be counted among the hours used for reduction.

All the core requirements of each program must be preserved and cannot be overlapped or waived. Credit reduction of elective courses will be limited to the following for each program as determined by the original number of credit hours required for each degree.

Required credit hours for degrees and flexible dual degree reduction allowed:

- 45-60 quarter hour degree program: Reduce a maximum of 10 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 11-15 quarter hours. A reduction of 15 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.
- 61-75 quarter hour degree program: Reduce a maximum of 12 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 15-19 quarter hours. A reduction of 25 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.
- 76-90 quarter hour degree program: Reduce or cross-count a maximum of 15 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 19-22.5 quarter hours. A reduction of 35 quarter hours will be the maximum allowed from the original degree when combining outside transfer hours and the reduction of degree hours.

Note: Credits at the Sturm College of Law for a JD degree are calculated using semester hours: 1 semester hour equals 1.5 quarter hours. A 90 semester hour JD degree may only be reduced by a maximum of 10 semester hours for a total of 80 semester hours completed for the JD (10 semester hours equals 15 quarter hours).

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the flexible dual degree proposal. Students must complete all the original requirements for the remaining degree in order to graduate.

# Formal Dual Degree Programs

## Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

# Daniel Felix Ritchie School of Engineering and Computer Science

## Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

## Master of Science in Computer Science and Juris Doctor

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 40 quarter credits
- MS credit reduction: 8 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 120 (80 semester credits and 40 quarter credits)

## Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## Master of Science in Computer Science

Admission Requirements (p. 243)

Degree Requirements (p. 245)

# Daniels College of Business

## Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

### **Non-Course Requirements**

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

## **Master of Business Administration: The Denver MBA and Juris Doctor**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MBA credits required with dual degree: 60 quarter credits
- MBA credit reduction: 20 quarter credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 140 (80 semester credits and 60 quarter credits)

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Business Administration: The Professional MBA Program and Master of Social Work**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

### **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Social Work: MSW@DENVER and Master of Business Administration: MBA@Denver**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

### **Master of Social Work: MSW@Denver**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### **Master of Business Administration: MBA@Denver**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Social Work and Master of Business Administration: The Denver MBA**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 64
- MBA credit reduction: 16 credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 130 with the MSW or 103 with the MSW-Advanced Standing

### **Master of Social Work**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#programofstudy>)

### **Master of Business Administration: Denver MBA**

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#programofstudy>)

### **Master of Science in Real Estate and the Built Environment and Juris Doctorate**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 35 quarter credits
- MS credit reduction: 13 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 115 (80 semester credits and 35 quarter credits)

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Business Administration: The Denver MBA and Master of Accountancy in Accounting**

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 28 credits from the original 80 required credits (cross-count 24 elective credits from MAcc and waive MBA 4130 & 4230 from DMBA)
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 92

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

## **Master of Business Administration: The Denver MBA and Master of Science in Business Analytics**

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 28 credits from the original 80 required credits
- MS in Business Analytics credits required with dual degree: 54
- MS in Business Analytics credit reduction: 4 credits from the original 58 required credits
- Minimum number of credits required with dual degree: 106

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

## **Master of Business Administration: The Denver MBA and Master of Science in Applied Quantitative Finance**

- MBA credits required with dual degree: 56
- MBA credit reduction with dual degree: 24 credits from the original 80 required credits
- MS in Applied Quantitative Finance credits required with dual degree: 43
- MS in Applied Quantitative Finance credit reduction: 14 credits from the original 57 required credits
- Minimum number of credits required with dual degree: 99

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

## **Master of Business Administration: The Denver MBA and Master of Science in Marketing**

- MBA credits required with dual degree: 56
- MBA credit reduction with dual degree: 24 credits from the original 80 required credits
- MS in Marketing credits required with dual degree: 42
- MS in Marketing credit reduction: 3 credits from the original 45 required for the MS in Marketing
- Minimum number of credits required with dual degree: 98

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Marketing**

Admission Requirements (p. 393)

Degree Requirements (p. 395)

## **Master of Business Administration: The Denver MBA and Master of Science in Real Estate and the Built Environment**

- MBA credits required with dual degree: 56
- MBA credit reduction with dual degree: 24 credits from the original 80 required credits
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 100

### **Master of Business Administration: The Denver MBA**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Accountancy in Accounting and Master of Science in Business Analytics**

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
- MS in Business Analytics credits required with dual degree: 50
- MS in Business Analytics credit reduction: 8 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 90

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)



## **Master of Accountancy in Accounting and Master of Science in Applied Quantitative Finance**

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
- MS in Applied Quantitative Finance credits required with dual degree: 41
- MS in Applied Quantitative Finance credit reduction: 16 credits from the original 57 required for the MSAQF (waive ACTG 4610 and cross-count 12 core or elective credits from MAcc)
- Minimum number of credits required with dual degree: 81

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

## **Master of Accountancy in Accounting and Master of Science in Management**

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
- MS in Management credits required with dual degree: 41
- MS in Management credit reduction: 4 credits from the original 45 required for the MS in Management
- Minimum number of credits required with dual degree: 81

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

### **Master of Science in Management**

Admission Requirements (p. 379)

Degree Requirements (p. 380)

## **Master of Accountancy in Accounting and Master of Science in Real Estate and the Built Environment**

- MAcc credits required with dual degree: 40
- MAcc credit reduction with dual degree: 0 credits from the original 40 required for the MAcc
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 84

### **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Science in Applied Quantitative Finance and Master of Science in Business Analytics**

- MS in Applied Quantitative Finance credits required with dual degree: 33
- MS in Applied Quantitative Finance credit reduction with dual degree: 24 credits from the original 57 required for the MS in Applied Quantitative Finance
- MS in Business Analytics credits required with dual degree: 54
- MS in Business Analytics credit reduction: 4 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 87

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

## **Master of Science in Applied Quantitative Finance and Master of Science in Management**

- MS in Applied Quantitative Finance credits required with dual degree: 45-53
- MS in Applied Quantitative Finance credit reduction with dual degree: 8-12 credits from the original 57 required for the MS in Applied Quantitative Finance
- MS in Management credits required with dual degree: 37
- MS in Management credit reduction: 8 credits from the original 45 required for the MS in Management
- Minimum number of credits required with dual degree: 82-90

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

### **Master of Science in Management**

Admission Requirements (p. 379)

Degree Requirements (p. 380)

## **Master of Science in Applied Quantitative Finance and Master of Science in Real Estate and the Built Environment**

- MS in Applied Quantitative Finance credits required with dual degree: 45
- MS in Applied Quantitative Finance credit reduction with dual degree: 12 credits from the original 57 required for the MS in Applied Quantitative Finance
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 89

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Science in Business Analytics and Master of Science in Marketing**

- MS in Business Analytics credits required with dual degree: 54
- MS in Business Analytics credit reduction with dual degree: 4 credits from the original 58 required for the MS in Business Analytics
- MS in Marketing credits required with dual degree: 37
- MS in Marketing credit reduction: 8 credits from the original 45 required for the MS in Marketing
- Minimum number of credits required with dual degree: 91

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

### **Master of Science in Marketing**

Admission Requirements (p. 393)

Degree Requirements (p. 395)

## **Master of Science in Business Analytics and Master of Science in Real Estate and the Built Environment**

- MS in Business Analytics credits required with dual degree: 54
- MS in Business Analytics credit reduction with dual degree: 4 credits from the original 58 required for the MS in Business Analytics
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 98

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Science in Marketing and Master of Science in Management**

- MS in Marketing credits required with dual degree: 42
- MS in Marketing credit reduction with dual degree: 3 credits from the original 45 required for the MS in Marketing
- MS in Management credits required with dual degree: 41
- MS in Management credit reduction: 4 credits from the original 45 required for the MS in Management
- Minimum number of credits required with dual degree: 83

### **Master of Science in Marketing**

Admission Requirements (p. 393)

Degree Requirements (p. 395)

### **Master of Science in Management**

Admission Requirements (p. 379)

Degree Requirements (p. 380)

## **Master of Science in Marketing And Master of Science in Real Estate and the Built Environment**

- MS in Marketing credits required with dual degree: 41
- MS in Marketing credit reduction with dual degree: 4 credits from the original 45 required for the MS in Marketing

- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 85

## **Master of Science in Marketing**

Admission Requirements (p. 393)

Degree Requirements (p. 395)

## **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Science in Management And Master of Science in Real Estate and the Built Environment**

- MS in Management credits required with dual degree: 37
- MS in Management credit reduction: 8 credits from the original 45 required for the MS in Management
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 81

## **Master of Science in Management**

Admission Requirements (p. 379)

Degree Requirements (p. 380)

## **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Business Administration: The Professional MBA Program and Master of Accountancy in Accounting**

- MBA credits required with dual degree: 48
- MBA credit reduction with dual degree: 12 credits from the original 60 required for the MBA
- MAcc credits required with dual degree: 40
- MAcc credit reduction: 0 credits from the original 40 required for the MAcc
- Minimum number of credits required with dual degree: 88

## **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Accountancy**

Admission Requirements (p. 436)

Degree Requirements (p. 437)

## **Master of Business Administration: The Professional MBA Program and Master of Science in Business Analytics**

- MBA credits required with dual degree: 44
- MBA credit reduction with dual degree: 16 credits from the original 60 required for the MBA
- MS in Business Analytics credits required with dual degree: 54

- MS in Business Analytics credit reduction: 4 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 98

### **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

## **Master of Business Administration: The Professional MBA Program and Master of Science in Applied Quantitative Finance**

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 8 credits from the original 60 required for the MBA
- MS in Applied Quantitative Finance credits required with dual degree: 35
- MS in Applied Quantitative Finance credit reduction: 22 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 87

### **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

## **Master of Business Administration: The Professional MBA Program and Master of Science in Marketing**

- MBA credits required with dual degree: 48
- MBA credit reduction with dual degree: 12 credits from the original 60 required for the MBA
- MS in Marketing credits required with dual degree: 37
- MS in Marketing credit reduction: 8 credits from the original 45 required for the MS in Marketing
- Minimum number of credits required with dual degree: 85

### **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

### **Master of Science in Marketing**

Admission Requirements (p. 393)

Degree Requirements (p. 395)

## **Master of Business Administration: The Professional MBA Program and Master of Science in Real Estate and the Built Environment**

- MBA credits required with dual degree: 52
- MBA credit reduction with dual degree: 8 credits from the original 60 required for the MBA
- MS in Real Estate and the Built Environment credits required with dual degree: 44
- MS in Real Estate and the Built Environment credit reduction: 4 credits from the original 48 required for the MS in Real Estate and the Built Environment
- Minimum number of credits required with dual degree: 96

## **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 427)

Degree Requirements (p. 428)

## **Master of Business Administration: The Executive MBA Program and Master of Science in Business Analytics**

- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MS in Business Analytics credits required with dual degree: 50
- MS in Business Analytics credit reduction: 8 credits from the original 58 required for the MS in Business Analytics
- Minimum number of credits required with dual degree: 110

## **Master of Business Administration: The Executive MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Science in Business Analytics**

Admission Requirements (p. 347)

Degree Requirements (p. 348)

## **Master of Business Administration: The Executive MBA Program and Master of Science in Applied Quantitative Finance**

- MBA credits required with dual degree: 60
- MBA credit reduction with dual degree: 0 credits from the original 60 required for the MBA
- MS in Applied Quantitative Finance credits required with dual degree: 33
- MS in Applied Quantitative Finance credit reduction: 24 credits from the original 57 required for the MS in Applied Quantitative Finance
- Minimum number of credits required with dual degree: 93

## **Master of Business Administration: The Executive MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Science in Applied Quantitative Finance**

Admission Requirements (p. 368)

Degree Requirements (p. 370)

# **College of Natural Sciences and Mathematics**

## **Formal Dual Degree Programs**

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

## Master of Arts in Geography and Juris Doctor

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MA credits required with dual degree: 35 quarter credits
- MA credit reduction: 10 quarter credits from the original 45 required for the MA
- Minimum number of credits required with dual degree: 115 (80 semester credits and 35 quarter credits)

### Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### Master of Arts in Geography

Admission Requirements (p. 849)

Degree Requirements (p. 851)

## Graduate School of Social Work

### Master of Social Work and Juris Doctor

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MSW credits required with dual degree: 66 quarter credits
- MSW credit reduction: 15 quarter credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits
- MSW-Advanced Standing credit reduction: 15 quarter credits from the original 54 required for the MSW-Advanced Standing
- Minimum number of credits required with dual degree: 146 (80 semester credits and 66 quarter credits) with the MSW or 119 (80 semester credits and 39 quarter credits) with the MSW-Advanced Standing

### Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master of Arts in International Development

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### Master of Arts in International Development

Admission Requirements (p. 600)

Degree Requirements (p. 603)

## Master of Social Work and Master of Arts in International Human Rights

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### Master of Arts in International Human Rights

Admission Requirements (p. 600)

Degree Requirements (p. 603)

## Master of Social Work and Master of Arts in International studies

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### Master of Arts in International Studies

Admission Requirements (p. 600)

Degree Requirements (p. 603)



## Master of Social Work and Master of Legal Studies

- MSW credits required with dual degree: 66 quarter credits
- MSW credit reduction with dual degree: 15 quarter credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits
- MSW-Advanced Standing credit reduction with dual degree: 15 quarter credits from the original 54 required for the MSW-Advanced Standing
- MLS credits required with dual degree: 20 semester credits
- MLS credit reduction: 10 semester credits from the original 30 required for the MLS
- Minimum number of credits required with dual degree: 86 (66 quarter credits and 20 semester credits) with the MSW or 59 (39 quarter credits and 20 semester credits) with the MSW-Advanced Standing

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

### Master of Legal Studies

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## Master of Social Work and Master of Public Health

- MSW credits required with dual degree: 66 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits completed at the University of Denver
- MSW-Advanced Standing credit reduction with dual degree: 15 from the original 54 required for the MSW-Advanced Standing
- MPH (completed at University of Colorado Anschutz) credits required with dual degree: 33 semester credits
- MPH (completed at University of Colorado Anschutz) credit reduction: 9 credits from the original 42 required for the MPH
- Minimum number of credits required with dual degree: 66 quarter credits for the MSW or 39 quarter credits for the MSW-Advanced Standing completed at the University of Denver, 33 semester credits completed at Colorado School of Public Health at the University of Colorado Anschutz

A student must apply for the MSW and MPH separately and be accepted into each program. Additionally, verification of enrollment in the MPH degree program at the University of Colorado Anschutz is required in order to qualify for the dual degree.

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master of Divinity

- MSW credits required with dual degree: 66 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits completed at the University of Denver
- MSW-Advanced Standing credit reduction with dual degree: 15 from the original 54 required for the MSW-Advanced Standing
- MDiv (completed at Iliff School of Theology) credits required with dual degree: 100 quarter credits
- MDiv (completed at Iliff School of Theology) credit reduction: 20 credits from the original 120 required for the MDiv
- Minimum number of credits required with dual degree: 66 quarter credits for the MSW or 39 quarter credits for the MSW-Advanced Standing completed at the University of Denver, 100 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MDiv separately and be accepted into each program. Additionally, verification of enrollment in the MDiv degree program at the Iliff School of Theology is required in order to qualify for the dual degree.

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master of Arts in Pastoral and Spiritual Care

- MSW credits required with dual degree: 66 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits completed at the University of Denver
- MSW-Advanced Standing credit reduction with dual degree: 15 from the original 54 required for the MSW-Advanced Standing
- MAPSC (completed at Iliff School of Theology) credits required with dual degree: 68 quarter credits
- MAPSC (completed at Iliff School of Theology) credit reduction: 12 credits from the original 80 required for the MAPSC
- Minimum number of credits required with dual degree: 66 quarter credits for the MSW or 39 quarter credits for the MSW-Advanced Standing completed at the University of Denver, 68 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MAPSC separately and be accepted into each program. Additionally, verification of enrollment in the MAPSC degree program at the Iliff School of Theology is required in order to qualify for the dual degree.

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master in Social Justice and Ethics

- MSW credits required with dual degree: 66 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits completed at the University of Denver
- MSW-Advanced Standing credit reduction with dual degree: 15 from the original 54 required for the MSW-Advanced Standing
- MSJE (completed at Iliff School of Theology) credits required with dual degree: 68 quarter credits
- MSJE (completed at Iliff School of Theology) credit reduction: 12 credits from the original 80 required for the MSJE
- Minimum number of credits required with dual degree: 66 quarter credits for the MSW or 39 quarter credits for the MSW-Advanced Standing completed at the University of Denver, 68 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MSJE separately and be accepted into each program. Additionally, verification of enrollment in the MSJE degree program at the Iliff School of Theology is required in order to qualify for the dual degree.

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master of Theological Studies

- MSW credits required with dual degree: 66 quarter credits completed at the University of Denver
- MSW credit reduction with dual degree: 15 from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits completed at the University of Denver
- MSW-Advanced Standing credit reduction with dual degree: 15 from the original 54 required for the MSW-Advanced Standing
- MTS (completed at Iliff School of Theology) credits required with dual degree: 60 quarter credits
- MTS (completed at Iliff School of Theology) credit reduction: 12 credits from the original 72 required for the MTS
- Minimum number of credits required with dual degree: 66 quarter credits for the MSW or 39 quarter credits for the MSW-Advanced Standing completed at the University of Denver, 60 quarter credits completed at Iliff School of Theology

A student must apply for the MSW and MTS separately and be accepted into each program. Additionally, verification of enrollment in the MTS degree program at the Iliff School of Theology is required in order to qualify for the dual degree.

### Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Social Work and Master of Public Policy

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW

- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MPP credits required with dual degree: 48
- MPP credit reduction: 12 credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

## **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Public Policy**

Admission Requirements (p. 586)

Degree Requirements (p. 586)

## **Master of Social Work and Master of Business Administration: The Professional MBA Program**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

## **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Business Administration: The Professional MBA Program**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Social Work: MSW@DENVER and Master of Business Administration: MBA@Denver**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 48
- MBA credit reduction: 12 credits from the original 60 required for the MBA
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

## **Master of Social Work: MSW@Denver**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Business Administration: MBA@Denver**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Master of Social Work and Master of Business Administration: The Denver MBA**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW

- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MBA credits required with dual degree: 64
- MBA credit reduction: 16 credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 130 with the MSW or 103 with the MSW-Advanced Standing

## Master of Social Work

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/socialwork/socialwork/#programofstudy>)

## Master of Business Administration: Denver MBA

Admission Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#admissionrequirements>)

Degree Requirements (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/danielscollegeofbusiness/generalbusiness/#programofstudy>)

# Josef Korbel School of International Studies

## Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

## Master of Arts in International Development and Master of Social Work

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

## Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Arts in International Development**

Admission Requirements (p. 600)

Degree Requirements (p. 603)

## **Master of Arts in International Human Rights and Master of Social Work**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

## **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Arts in International Human Rights**

Admission Requirements (p. 600)

Degree Requirements (p. 603)

## **Master of Arts in International Studies and Master of Social Work**

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MA credits required with dual degree: 44
- MA credit reduction: 16 credits from the original 60 required for the MA
- Minimum number of credits required with dual degree: 110 with the MSW or 83 with the MSW-Advanced Standing

## **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Arts in International Studies**

Admission Requirements (p. 600)

Degree Requirements (p. 603)

## **Master of Public Policy and Juris Doctor**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MPP credits required with dual degree: 48 quarter credits
- MPP credit reduction: 12 quarter credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 128 (80 semester credits and 48 quarter credits)

## **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## Master of Public Policy

Admission Requirements (p. 586)

Degree Requirements (p. 586)

## Master of Public Policy and Master of Social Work

- MSW credits required with dual degree: 66
- MSW credit reduction with dual degree: 15 credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39
- MSW-Advanced Standing credit reduction with dual degree: 15 credits from the original 54 required for the MSW-Advanced Standing
- MPP credits required with dual degree: 48
- MPP credit reduction: 12 credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 114 with the MSW or 87 with the MSW-Advanced Standing

## Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Public Policy

Admission Requirements (p. 586)

Degree Requirements (p. 586)

## Sturm College of Law

### Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

### Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

## Juris Doctor and Master of Laws in Environmental and Natural Resources Law and Policy

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- LLM credits required with dual degree: 24 semester credits

- LLM credit reduction: 0 semester credits from the original 24 required for the LLM
- Minimum number of credits required with dual degree: 104 semester credits

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Laws in Environmental and Natural Resources Law and Policy**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## **Juris Doctor and Master of Laws in International Business Transactions**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- LLM credits required with dual degree: 24 semester credits
- LLM credit reduction: 0 semester credits from the original 24 required for the LLM
- Minimum number of credits required with dual degree: 104 semester credits

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Laws in International Business Transactions**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## **Juris Doctor and Master of Science in Legal Administration**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MSLA credits required with dual degree: 27 semester credits
- MSLA credit reduction: 3 semester credits from the original 30 required for the MSLA
- Minimum number of credits required with dual degree: 107 semester credits

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Science in Legal Administration**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## **Juris Doctor and Master of Laws in Taxation**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- LLM credits required with dual degree: 24 semester credits
- LLM credit reduction: 0 semester credits from the original 24 required for the LLM
- Minimum number of credits required with dual degree: 104 semester credits

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

## Master of Laws in Taxation

Admission Requirements (p. 981)

Degree Requirements (p. 982)

## Juris Doctor and Master of Public Policy

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MPP credits required with dual degree: 48 quarter credits
- MPP credit reduction: 12 quarter credits from the original 60 required for the MPP
- Minimum number of credits required with dual degree: 128 (80 semester credits and 48 quarter credits)

### Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### Master of Public Policy

Admission Requirements (p. 586)

Degree Requirements (p. 586)

## Juris Doctor and Master of Business Administration: The Denver MBA

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MBA credits required with dual degree: 60 quarter credits
- MBA credit reduction: 20 quarter credits from the original 80 required for the MBA
- Minimum number of credits required with dual degree: 140 (80 semester credits and 60 quarter credits)

### Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### Master of Business Administration: The Denver MBA

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## Juris Doctor and Master of Science in Computer Science

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 40 quarter credits
- MS credit reduction: 8 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 120 (80 semester credits and 40 quarter credits)

### Juris Doctor

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### Master of Science in Computer Science

Admission Requirements (p. 243)

Degree Requirements (p. 245)



## **Juris Doctor and Master of Science in Real Estate and the Built Environment**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MS credits required with dual degree: 35 quarter credits
- MS credit reduction: 13 quarter credits from the original 48 required for the MS
- Minimum number of credits required with dual degree: 115 (80 semester credits and 35 quarter credits)

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Science in Real Estate and the Built Environment**

Admission Requirements (p. 411)

Degree Requirements (p. 413)

## **Juris Doctor and Master of Arts in Geography**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MA credits required with dual degree: 35 quarter credits
- MA credit reduction: 10 quarter credits from the original 45 required for the MA
- Minimum number of credits required with dual degree: 115 (80 semester credits and 35 quarter credits)

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Arts in Geography**

Admission Requirements (p. 849)

Degree Requirements (p. 851)

## **Juris Doctor and Master of Social Work**

- JD credits required with dual degree: 80 semester credits
- JD credit reduction with dual degree: 10 semester credits from the original 90 required for the JD
- MSW credits required with dual degree: 66 quarter credits
- MSW credit reduction: 15 quarter credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits
- MSW-Advanced Standing credit reduction: 15 quarter credits from the original 54 required for the MSW-Advanced Standing
- Minimum number of credits required with dual degree: 146 (80 semester credits and 66 quarter credits) with the MSW or 119 (80 semester credits and 39 quarter credits) with the MSW-Advanced Standing

### **Juris Doctor**

Admission Requirements (p. 893)

Degree Requirements (p. 896)

### **Master of Social Work**

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## **Master of Legal Studies and Master of Social Work**

- MSW credits required with dual degree: 66 quarter credits
- MSW credit reduction with dual degree: 15 quarter credits from the original 81 required for the MSW
- MSW-Advanced Standing credits required with dual degree: 39 quarter credits

- MSW-Advanced Standing credit reduction with dual degree: 15 quarter credits from the original 54 required for the MSW-Advanced Standing
- MLS credits required with dual degree: 20 semester credits
- MLS credit reduction: 10 semester credits from the original 30 required for the MLS
- Minimum number of credits required with dual degree: 86 (66 quarter credits and 20 semester credits) with the MSW or 59 (39 quarter credits and 20 semester credits) with the MSW-Advanced Standing

## Master of Social Work

Admission Requirements (p. 527)

Degree Requirements (p. 529)

## Master of Legal Studies

Admission Requirements (p. 893)

Degree Requirements (p. 896)

# Schools, Colleges, and Divisions

## Degrees and Certificates

List of All Graduate Degrees and Certificates (<http://bulletin.du.edu/graduate/schoolscollegesanddivisions/programs/>)

## Academic Units

Graduate Studies at the University of Denver includes programs in the following academic units:

- College of Arts, Humanities and Social Sciences (p. 65)
- Daniel Felix Ritchie School of Engineering and Computer Science (p. 241)
- Daniels College of Business (p. 341)
- DU-Iliff Joint Doctoral Program in the Study of Religion (p. 446)
- Graduate School of Professional Psychology (p. 469)
- Graduate School of Social Work (p. 524)
- Josef Korbel School of International Studies (p. 585)
- Morgridge College of Education (p. 686)
- College of Natural Sciences and Mathematics (p. 813)
- Sturm College of Law (p. 892)
- University College (p. 988)

# College of Arts, Humanities and Social Sciences

The College of Arts, Humanities, and Social Sciences (CAHSS) is the liberal arts hub of the University of Denver and represents a variety of schools, departments, and programs. Our graduate programs include two top-ranked doctoral programs in English and Literary Arts and in Psychology. Our masters of arts programs range from a MA in Economics to a MA in Music with a concentration in Musicology, and from a MA in Religious Studies to a MA in International and Intercultural Communication - all grounded in academic rigor and focused on launching students toward successful and meaningful post-graduation careers. With about 300 CAHSS graduate students, our student-centered graduate programs feature small class sizes, with supportive faculty who are nationally and internationally recognized for their research and creative endeavors. In our interdisciplinary, highly collaborative environment, we strive to foster meaningful partnerships among students and faculty, support student research opportunities, and provide both theoretical and "real-world" learning opportunities for our graduate students.

## Anthropology

Office: Sturm Hall, Room 146

Mail Code: 2000 E. Asbury Ave., Denver, CO 80208

Phone: 303-871-2406

Email: [anthropology@du.edu](mailto:anthropology@du.edu)

Web Site: <http://www.du.edu/ahss/anthropology> (<http://www.du.edu/ahss/anthropology/>)

The department of anthropology has a research-active faculty that works closely with students in developing their academic and professional interests on a one-on-one basis, in classes, the field, archaeology and ethnographic labs, and the Museum of Anthropology.

Anthropology is the study of human cultural and biological diversity across time and space. It is an interdisciplinary field concerned with topics that cross-cut the natural sciences, social sciences, arts and humanities. In the words of the American cultural anthropologist Alfred Kroeber: "Anthropology is the most humanistic of the sciences and the most scientific of the humanities."

There are three basic options for construction of a master's degree in anthropology: archaeology, cultural anthropology, and museum and heritage studies. Each concentration has its own formal course work, independent study and requirements for graduation.

## Master or Arts in Anthropology with a Concentration in Archaeology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Anthropology with a Concentration in Archaeology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Anthropology with a Concentration in Cultural Anthropology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Anthropology with a Concentration in Museum & Heritage Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Anthropology with a Concentration in Archaeology

### *TRACK: Thesis*

### Degree Requirements

#### Course Requirements

Code	Title	Credits
<b>Required Courses:</b>		<b>16</b>
ANTH 3630	Archaeological Method and Theory	
ANTH 3660	Anthropological Theory and Context	
ANTH 4000	Advanced Anthropology	
<b>Select at least one of the following Archaeology Courses:</b>		<b>4</b>
ANTH 3170	Applied Heritage Management	
ANTH 3390	Geoarchaeology	
ANTH 4040	Historical Archaeology: Theory and Method	
<b>Select one Cultural Anthropology Course:</b>		<b>4</b>
ANTH 3020	Native Religions	
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3070	Folklore and Cultural Heritage	
ANTH 3080	Memory and Memorialization	

ANTH 3135	Feasting, Fasting and Food: The Anthropology of Food	
ANTH 3225	Human Rights in Latin America	
ANTH 3290	Art and Anthropology	
ANTH 3310	Indigenous Environment	
ANTH 3320	Medical Anthropology	
ANTH 3330	Human Rights of Indg Peoples	
ANTH 3370	Social Inequalities and Social Justice in Latin America	
ANTH 3470	Applied Anthropology	
ANTH 3540	The Nature of Language	
ANTH 3701	Topics in Anthropology	
ANTH 3750	Ethnographic Methods	
ANTH 3880	Culture, Ecology, Adaptation	
ANTH 3890	Context of Material Culture	
ANTH 4070	Folklore and Cultural Heritage	
ANTH 4200	Native North America	
ANTH 4220	Human Rights in Latin America	
ANTH 4290	Art and Anthropology	
ANTH 4320	Medical Anthropology	
ANTH 4360	Cross-Cultural Perspectives of Women	
ANTH 4370	Sex, Class and Race in Latin America	
ANTH 4701	Special Topics in Anthropology	
<b>Select one Museum Course:</b>		<b>4</b>
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3070	Folklore and Cultural Heritage	
ANTH 3170	Applied Heritage Management	
ANTH 3290	Art and Anthropology	
ANTH 3500	City and Society	
ANTH 3661	Museums and their Visitors	
ANTH 3701	Topics in Anthropology	
ANTH 3742	Museum Exhibit Development	
ANTH 3743	Managing Collections	
ANTH 3791	Critical Perspectives in Museum Studies	
ANTH 3890	Context of Material Culture	
ANTH 4070	Folklore and Cultural Heritage	
ANTH 4290	Art and Anthropology	
ANTH 4701	Special Topics in Anthropology	
ANTH 4744	Museum Anthropology	
<b>Select Electives</b>		<b>20</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required for the degree: 48****Additional Course Requirements**

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Must have completed Field School, Field Methods Course, or professional experience approved by advisor or graduate director

**Additional Degree Requirements**

- Maximum of 10 hours of transfer work
- Minimum GPA: 3.0

**Non-Course Requirements**

- Advancement to candidacy
- Oral defense
- Thesis
- Qualifying examination
- Three quarters residency as a graduate student at DU

**TRACK: Master's Paper****Degree Requirements****Course Requirements**

Code	Title	Credits
<b>Required Courses:</b>		<b>16</b>
ANTH 3630	Archaeological Method and Theory	
ANTH 3660	Anthropological Theory and Context	
ANTH 4000	Advanced Anthropology	
<b>Select at least one of the following Archaeology Courses:</b>		<b>4</b>
ANTH 3170	Applied Heritage Management	
ANTH 3390	Geoarchaeology	
ANTH 4040	Historical Archaeology: Theory and Method	
<b>Select one of the following Cultural Anthropology Courses:</b>		<b>4</b>
ANTH 3020	Native Religions	
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3070	Folklore and Cultural Heritage	
ANTH 3080	Memory and Memorialization	
ANTH 3135	Feasting, Fasting and Food: The Anthropology of Food	
ANTH 3225	Human Rights in Latin America	
ANTH 3290	Art and Anthropology	
ANTH 3310	Indigenous Environment	
ANTH 3320	Medical Anthropology	
ANTH 3330	Human Rights of Indg Peoples	
ANTH 3370	Social Inequalities and Social Justice in Latin America	
ANTH 3470	Applied Anthropology	
ANTH 3500	City and Society	
ANTH 3540	The Nature of Language	
ANTH 3620	Ethnoarchaeology	
ANTH 3701	Topics in Anthropology	
ANTH 3750	Ethnographic Methods	
ANTH 3880	Culture, Ecology, Adaptation	
ANTH 3890	Context of Material Culture	
ANTH 4070	Folklore and Cultural Heritage	
ANTH 4200	Native North America	
ANTH 4220	Human Rights in Latin America	
ANTH 4290	Art and Anthropology	
ANTH 4320	Medical Anthropology	
ANTH 4360	Cross-Cultural Perspectives of Women	
ANTH 4370	Sex, Class and Race in Latin America	
ANTH 4701	Special Topics in Anthropology	
<b>Select one of the following Museum and Heritage Studies Courses:</b>		<b>4</b>
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	

ANTH 3070	Folklore and Cultural Heritage	
ANTH 3080	Memory and Memorialization	
ANTH 3170	Applied Heritage Management	
ANTH 3290	Art and Anthropology	
ANTH 3500	City and Society	
ANTH 3661	Museums and their Visitors	
ANTH 3701	Topics in Anthropology	
ANTH 3742	Museum Exhibit Development	
ANTH 3743	Managing Collections	
ANTH 3791	Critical Perspectives in Museum Studies	
ANTH 3890	Context of Material Culture	
ANTH 4070	Folklore and Cultural Heritage	
ANTH 4290	Art and Anthropology	
ANTH 4701	Special Topics in Anthropology	
ANTH 4744	Museum Anthropology	
<b>Select Electives</b>		<b>32</b>
<b>Total Credits</b>		<b>60</b>

**Minimum number of credits required for the degree: 60****Additional Course Requirements**

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Must have completed a Field School or Field Methods Course approved by advisor or Graduate Director

**Additional Degree Requirements**

- Maximum of 10 hours of transfer work
- Minimum GPA: 3.0

**Non-Course Requirements**

- Advancement to candidacy
- Master's paper
- Qualifying examination
- Three-quarters residency as a graduate student at DU

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## Master of Arts in Anthropology with a Concentration in Cultural Anthropology

**TRACK: Thesis****Degree requirements****Course requirements**

Code	Title	Credits
<b>Required Courses:</b>		<b>12</b>
ANTH 3660	Anthropological Theory and Context	
ANTH 3750	Ethnographic Methods	
ANTH 4000	Advanced Anthropology	
<b>Select four of the following Cultural Anthropology Courses:</b>		<b>20</b>
ANTH 3020	Native Religions	
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3070	Folklore and Cultural Heritage	
ANTH 3080	Memory and Memorialization	
ANTH 3135	Feasting, Fasting and Food: The Anthropology of Food	
ANTH 3225	Human Rights in Latin America	

ANTH 3290	Art and Anthropology
ANTH 3310	Indigenous Environment
ANTH 3320	Medical Anthropology
ANTH 3330	Human Rights of Indg Peoples
ANTH 3370	Social Inequalities and Social Justice in Latin America
ANTH 3470	Applied Anthropology
ANTH 3500	City and Society
ANTH 3540	The Nature of Language
ANTH 3620	Ethnoarchaeology
ANTH 3701	Topics in Anthropology
ANTH 3880	Culture, Ecology, Adaptation
ANTH 3890	Context of Material Culture
ANTH 4070	Folklore and Cultural Heritage
ANTH 4220	Human Rights in Latin America
ANTH 4290	Art and Anthropology
ANTH 4320	Medical Anthropology
ANTH 4360	Cross-Cultural Perspectives of Women
ANTH 4370	Sex, Class and Race in Latin America
ANTH 4701	Special Topics in Anthropology

**Select one of the following Archaeology Courses:****4**

ANTH 3030	Digital Anthropology
ANTH 3040	Anthropologies of Place
ANTH 3060	Cultural Narratives
ANTH 3080	Memory and Memorialization
ANTH 3130	The Archaeology of Gender
ANTH 3170	Applied Heritage Management
ANTH 3255	Ancient North America
ANTH 3290	Art and Anthropology
ANTH 3310	Indigenous Environment
ANTH 3350	Latin American Archaeology
ANTH 3390	Geoarchaeology
ANTH 3500	City and Society
ANTH 3510	The Ancient City
ANTH 3620	Ethnoarchaeology
ANTH 3630	Archaeological Method and Theory
ANTH 3701	Topics in Anthropology
ANTH 3743	Managing Collections
ANTH 3790	Field Methods in Archaeology
ANTH 3880	Culture, Ecology, Adaptation
ANTH 3890	Context of Material Culture
ANTH 3990	Summer Field School-Archaeology
ANTH 4040	Historical Archaeology: Theory and Method
ANTH 4701	Special Topics in Anthropology

**Select one of the following Museum & Heritage Studies Courses:****4**

ANTH 3030	Digital Anthropology
ANTH 3040	Anthropologies of Place
ANTH 3060	Cultural Narratives
ANTH 3070	Folklore and Cultural Heritage
ANTH 3080	Memory and Memorialization
ANTH 3170	Applied Heritage Management
ANTH 3290	Art and Anthropology
ANTH 3500	City and Society



ANTH 3661	Museums and their Visitors	
ANTH 3701	Topics in Anthropology	
ANTH 3742	Museum Exhibit Development	
ANTH 3743	Managing Collections	
ANTH 3791	Critical Perspectives in Museum Studies	
ANTH 3890	Context of Material Culture	
ANTH 4070	Folklore and Cultural Heritage	
ANTH 4290	Art and Anthropology	
ANTH 4701	Special Topics in Anthropology	
ANTH 4744	Museum Anthropology	
<b>Select Electives</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

### Minimum number of credits required for the degree: 48

#### Additional Degree Requirements

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0
- Minimum grade for individual courses counted toward degree: B

#### Additional Course Requirements

- Maximum of 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Students must take at least **half** of their courses in cultural anthropology

#### Non-course requirements

- Advancement to candidacy
- Thesis
- Oral examination
- Qualifying examination
- Three quarters of residency as a graduate student at the University of Denver

### **TRACK: Master's Paper**

#### Degree requirements

##### Course requirements

Code	Title	Credits
<b>Required Courses:</b>		<b>12</b>
ANTH 3660	Anthropological Theory and Context	
ANTH 3750	Ethnographic Methods	
ANTH 4000	Advanced Anthropology	
<b>Select four of the following Cultural Anthropology courses:</b>		<b>26</b>
ANTH 3020	Native Religions	
ANTH 3030	Digital Anthropology	
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3070	Folklore and Cultural Heritage	
ANTH 3080	Memory and Memorialization	
ANTH 3135	Feasting, Fasting and Food: The Anthropology of Food	
ANTH 3225	Human Rights in Latin America	
ANTH 3290	Art and Anthropology	
ANTH 3310	Indigenous Environment	
ANTH 3320	Medical Anthropology	
ANTH 3330	Human Rights of Indg Peoples	
ANTH 3370	Social Inequalities and Social Justice in Latin America	
ANTH 3470	Applied Anthropology	
ANTH 3500	City and Society	

ANTH 3540	The Nature of Language
ANTH 3620	Ethnoarchaeology
ANTH 3701	Topics in Anthropology
ANTH 3880	Culture, Ecology, Adaptation
ANTH 3890	Context of Material Culture
ANTH 4070	Folklore and Cultural Heritage
ANTH 4220	Human Rights in Latin America
ANTH 4290	Art and Anthropology
ANTH 4320	Medical Anthropology
ANTH 4360	Cross-Cultural Perspectives of Women
ANTH 4370	Sex, Class and Race in Latin America
ANTH 4701	Special Topics in Anthropology

**Select one of the following Archaeology Courses:****4**

ANTH 3030	Digital Anthropology
ANTH 3040	Anthropologies of Place
ANTH 3060	Cultural Narratives
ANTH 3080	Memory and Memorialization
ANTH 3130	The Archaeology of Gender
ANTH 3170	Applied Heritage Management
ANTH 3255	Ancient North America
ANTH 3290	Art and Anthropology
ANTH 3310	Indigenous Environment
ANTH 3350	Latin American Archaeology
ANTH 3390	Geoarchaeology
ANTH 3500	City and Society
ANTH 3510	The Ancient City
ANTH 3620	Ethnoarchaeology
ANTH 3630	Archaeological Method and Theory
ANTH 3701	Topics in Anthropology
ANTH 3743	Managing Collections
ANTH 3790	Field Methods in Archaeology
ANTH 3880	Culture, Ecology, Adaptation
ANTH 3890	Context of Material Culture
ANTH 3990	Summer Field School-Archaeology
ANTH 4040	Historical Archaeology: Theory and Method
ANTH 4701	Special Topics in Anthropology

**Select one of the following Museum & Heritage Studies Courses:****4**

ANTH 3030	Digital Anthropology
ANTH 3040	Anthropologies of Place
ANTH 3060	Cultural Narratives
ANTH 3070	Folklore and Cultural Heritage
ANTH 3080	Memory and Memorialization
ANTH 3290	Art and Anthropology
ANTH 3500	City and Society
ANTH 3661	Museums and their Visitors
ANTH 3701	Topics in Anthropology
ANTH 3742	Museum Exhibit Development
ANTH 3743	Managing Collections
ANTH 3791	Critical Perspectives in Museum Studies
ANTH 3890	Context of Material Culture
ANTH 4070	Folklore and Cultural Heritage
ANTH 4290	Art and Anthropology

ANTH 4701	Special Topics in Anthropology	
ANTH 4744	Museum Anthropology	
<b>Select Electives:</b>		<b>14</b>
<b>Total Credits</b>		<b>60</b>

**Minimum number of credits required for the degree: 60****Additional Degree Requirements**

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0
- Minimum grade for individual courses counted toward degree: B

**Additional Course Requirements**

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research
- Students must take at least **half** of their courses in cultural anthropology course work.

**Non-course requirements**

- Advancement to candidacy
- Master's paper
- Qualifying examination
- Three quarters of residency as a graduate student at the University of Denver

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## Master of Arts in Anthropology with a Concentration in Museum and Heritage Studies

**TRACK: Thesis****Degree requirements****Course requirements**

Code	Title	Credits
<b>Required Courses:</b>		<b>12</b>
ANTH 3660	Anthropological Theory and Context	
ANTH 4000	Advanced Anthropology	
ANTH 4744	Museum Anthropology	
<b>One of the following ANTH Courses:</b>		<b>4</b>
ANTH 3750	Ethnographic Methods	
ANTH 3630	Archaeological Method and Theory	
<b>Select six of the following Museum and Heritage Studies Courses:</b>		<b>24</b>
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3080	Memory and Memorialization	
ANTH 3170	Applied Heritage Management <sup>1</sup>	
ANTH 3290	Art and Anthropology	
ANTH 3500	City and Society	
ANTH 3620	Ethnoarchaeology	
ANTH 3661	Museums and their Visitors <sup>1</sup>	
ANTH 3701	Topics in Anthropology	
ANTH 3742	Museum Exhibit Development <sup>1</sup>	
ANTH 3743	Managing Collections <sup>1</sup>	
ANTH 3791	Critical Perspectives in Museum Studies	
ANTH 3890	Context of Material Culture	
ANTH 4040	Historical Archaeology: Theory and Method	
ANTH 4744	Museum Anthropology	
ANTH 4991	Independent Study	

ANTH 4995	Independent Research	
ANTH 4745	Museum Practicum <sup>1</sup>	
ANTH 4070	Folklore and Cultural Heritage	
<b>Electives:</b> <sup>2</sup>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

<sup>1</sup> Class is applied/practice oriented course. Students are limited to taking no more than three of these classes (12 credits) to count toward their requirements.

<sup>2</sup> Electives to be taken inside the department, outside the department, or as internship

### Minimum number of credits required for the degree: 48

#### Additional Degree Requirements

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0

#### Additional Course Requirements

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research

#### Non-course requirements

- Advancement to candidacy
- Thesis
- Oral examination
- Qualifying examination
- Internship, field school, or fieldwork (internship can be taken for credit as ANTH 4981 Museum Internship)

### **TRACK: Master's Paper**

#### Degree requirements

##### Course requirements

Code	Title	Credits
<b>Required Courses:</b>		<b>12</b>
ANTH 3660	Anthropological Theory and Context	
ANTH 4000	Advanced Anthropology	
ANTH 4744	Museum Anthropology	
<b>One of the following ANTH Courses:</b>		<b>4</b>
ANTH 3750	Ethnographic Methods	
ANTH 3630	Archaeological Method and Theory	
<b>Select six of the following Museum and Heritage Studies Courses:</b>		<b>24</b>
ANTH 3040	Anthropologies of Place	
ANTH 3060	Cultural Narratives	
ANTH 3080	Memory and Memorialization	
ANTH 3170	Applied Heritage Management <sup>1</sup>	
ANTH 3290	Art and Anthropology	
ANTH 3500	City and Society	
ANTH 3620	Ethnoarchaeology	
ANTH 3661	Museums and their Visitors <sup>1</sup>	
ANTH 3701	Topics in Anthropology	
ANTH 3742	Museum Exhibit Development <sup>1</sup>	
ANTH 3743	Managing Collections <sup>1</sup>	
ANTH 3791	Critical Perspectives in Museum Studies	
ANTH 3890	Context of Material Culture	
ANTH 4040	Historical Archaeology: Theory and Method	

ANTH 4744	Museum Anthropology	
ANTH 4991	Independent Study	
ANTH 4995	Independent Research	
ANTH 4745	Museum Practicum <sup>1</sup>	
ANTH 4070	Folklore and Cultural Heritage	
<b>Electives:</b> <sup>2</sup>		<b>20</b>
<b>Total Credits</b>		<b>60</b>

<sup>1</sup> Class is applied/practice oriented course. Students are limited to taking no more than three of these classes (12 credits) to count toward their requirements.

<sup>2</sup> Electives can be taken inside the department, outside the department, or as internship

### Minimum number of credits required for the degree: 60

#### Additional Degree Requirements

- Maximum of 10 hours of transfer work
- Minimum GPA of 3.0

#### Additional Course Requirements

- Maximum 12 quarter hours outside of ANTH prefix
- Maximum 8 quarter hours of ANTH 4991 Independent Study AND/OR ANTH 4995 Independent Research

#### Non-course requirements

- Advancement to candidacy
- Master's paper
- Qualifying examination
- Internship (can be taken for credit as ANTH 4981 Museum Internship)

#### ANTH 3001 Race, Sex and Evolution (4 Credits)

The course examines the paleoanthropology of race and sex. Our focus is on the nature and evolution of human racial differences, sexual anatomy, reproductive strategies, and gender roles. We will consider the history of thinking about race and sex in anthropology and related disciplines, and the uses to which particular conceptions have been put in our culture. We will discuss and evaluate alternative models for explaining the evolution of alleged biological and behavioral differences between racial groups and between men and women. Evaluation will proceed in light of evolutionary theory, comparative primate anatomy and behavior, the human fossil record, and general anthropological knowledge. Our aim is to examine myth and reality in popular and scientific understandings of these aspects of the human condition and, in the end, the social and political (i.e., policy) consequences of this knowledge. Enforced Prerequisites and Restrictions: ANTH 2105.

#### ANTH 3020 Native Religions (4 Credits)

A cross-cultural survey of concepts used to understand and talk about "religion," "the supernatural," and associated behavior among Native peoples of Turtle Island. Topics include healing and techniques of controlling and channeling supernatural power; sacred places and their significance; myths and symbols in their cultural contexts; initiation rites; conceptualizations of male and female deities; and responses of indigenous people to attempted missionization.

#### ANTH 3030 Digital Anthropology (4 Credits)

Digital Anthropology introduces students to computer technology used in anthropological research. Students study and then produce a number of digital products useful in the analysis and interpretation of museum collections, for archaeological mapping and research, and for the dissemination of anthropological knowledge online. This process covers the use of Geographic Information Systems (GIS) for spatial analysis, three-dimensional imaging programs ranging in scale from broad landscape mapping to detailed digital artifact analysis. In addition, the use of geophysical methods for imaging what is below the surface allows students to produce images of what lies below the ground in archaeological contexts.

#### ANTH 3040 Anthropologies of Place (4 Credits)

This class is an exploration of the relationship between people and places from an anthropological viewpoint. We concern ourselves with a variety of ideas about place, emphasizing not just how places are used, but how they infuse themselves into the lives, histories and ethics of those who interact with them. The course readings include book-length anthropological case studies interspersed with interdisciplinary readings about place and landscape. The course includes seminar-style discussions of readings, workshops and observations in the field. On several occasions, we take our class on the road, working together to think about how people and place interact. By the end of the class, each student creates his or her own anthropology of a place. Must be junior standing or above.

**ANTH 3060 Cultural Narratives (4 Credits)**

Human beings are natural storytellers. Whether reciting oral traditions or recounting personal experience, people everywhere use narratives as a way to express and to understand themselves. This course approaches cultural narratives from two angles. First, it explores the ways that anthropologists, usually trained in the social sciences, make use of and study narratives, whether through ethnographic observation, conducting an interview, gathering folklore or archaeological interpretation. Second, the class investigates narratives that, although produced by non-anthropologists, engage with anthropological issues such as kinship, gender, work, tradition and identity. The narratives range broadly from fiction, to poetry, to film. These two approaches are framed by theoretically informed readings about narrativity, both from the social sciences and the humanities. The class involves intensive reading and writing, as it makes use of both discussion and workshop formats. Each student in the course completes a research and writing project culminating in his or her own cultural narrative. Must be junior standing or above.

**ANTH 3070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Prerequisite: introductory social science course. Cross-listed with ANTH 4070.

**ANTH 3080 Memory and Memorialization (4 Credits)**

The course focuses on how social groups represent, experience and commemorate the remembered past; it explores issues of construction of memory, particularly how representations of the past- and its materialization through monuments, ruins, and landscapes- are connected with issues of institutionalized perceptions of national, ethnic, racial and religious identity. Furthermore, it discusses concepts such as "authenticity," "tradition," and "modernity" in the interpretation of cultural heritage and how the interpretation of the past and of culture depend on context (political and historical), experience and point of view. The course aims to develop an interdisciplinary approach to memory and to methodologies and empirical research.

**ANTH 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and RLGS 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**ANTH 3130 The Archaeology of Gender (4 Credits)**

This course examines the ways archaeology can contribute to the study of gender through investigations of the deep through recent past. The class will include readings on gender theory, the uses of archaeological data and specific case studies of engendered lives in the past. Cross listed with GWST 3130.

**ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food (4 Credits)**

Feasting, Fasting and Food focuses on foodways and food culture. Food and its acquisition and preparation are tied to the historical, social and cultural lives of all peoples. By drawing on historical sources, ethnography and a number of anthropological perspectives, we look at foodways as symbols of identity, culinary tourism, food work as trade or profession, the study of food as art and theater, and food and memory. Prerequisite: ANTH 2010.

**ANTH 3155 Native American Resistance in the Digital Age (4 Credits)**

Since Europeans first made contact with the Americas five centuries ago, depictions of indigenous peoples have largely been created by and for the colonizers. Only recently have native activists begun to take back control of their image. The course begins with the premise that indigenous peoples have been active producers of their own cultural heritage both before and after European expansion into the Americas. A postcolonial approach will be used to evaluate resistance from a historical standpoint, starting with the colonial period and into the twenty-first century. Primary attention will be placed on the late twentieth century and twenty-first century to better understand how indigenous filmmakers, curators, scientists, healers, artists, and scholars use indigenous knowledge systems to contest Western conceptions of authority. Specific topics include indigenous film and media; indigenous feminisms; the use of indigenous perspectives in natural resource management; indigenous voices in the decolonization of museums; and the role indigenous communities play in educating the public of long-lived environmental contamination of water and other natural resources. The course will be designed to explore the voice and agency of indigenous peoples in each of the aforementioned fields, and to teach the validity of indigenous perspectives. While students will be introduced to indigenous case studies from around the world, primary attention will be given to Native American tribal groups in the United States. Prerequisite: Any ANTH 1000-level course.

**ANTH 3170 Applied Heritage Management (4 Credits)**

Considers the role of archaeology in preservation and the management of cultural resources in terms of legislation, ethics and practical application, with emphasis of the utility, necessity and reality of doing archaeology today in the public sector. Site report writing, governmental regulations and the business side of archaeology are stressed. Archaeological information from site reports and artifact analysis are compiled and presented in a digital format. Prerequisite: ANTH 2310.

**ANTH 3200 Human Origins and Evolution (4 Credits)**

Examines the fossil record for human evolution from 6 million years ago to the origin of modern Homo sapiens, including current theories, evidence and controversies. Considers the historical and sociological contexts of human evolutionary studies, popular myths and misconceptions, and alternative scenarios for the future evolution of the human species.

**ANTH 3225 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we will explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

**ANTH 3255 Ancient North America (4 Credits)**

This course examines the history of American Indian cultures from their earliest archaeological traces on this continent up to and including contact with European explorers and colonists.

**ANTH 3290 Art and Anthropology (4 Credits)**

Study of the concept of art and its multiple roles in society from a cross-cultural and historical perspective. Commodification of culture through tourism and the global art market; arts of resistance and survival; and cultural expression and community development.

**ANTH 3310 Indigenous Environment (4 Credits)**

The purpose of this course is to introduce students to particular environmental issues that affect indigenous peoples, including subsistence and economic issues; sacred lands; cultural property dilemmas; and the impact that use of traditional cultural properties by others—including nation-state governments, corporations and tourists—have on indigenous peoples' cultural and social integrity. Particular focus is on one of these issues—travel and particularly "ecotravel" and "ecotourism."

**ANTH 3320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 3330 Human Rights of Indg Peoples (4 Credits)**

This course introduces students to the concept and definition of "indigenous peoples." It covers the history of resistance, revitalization, and assertion of sovereignty by Indigenous peoples, and why the United Nations felt it necessary to adopt a "Declaration on the Rights of Indigenous Peoples" in 2007. It covers how indigenous identities and indigenous rights issues do or do not "fit" with internationally accepted definitions of human rights. The course will concentrate on the intersection of indigenous autonomy with globalization, neo-liberal ideologies, and nation-state policies. Case studies focus on Iroquois, Crees, Mayans, Mapuche, Zapatistas, Maoris, and Sami.

**ANTH 3350 Latin American Archaeology (4 Credits)**

Covers the prehistory of the Western Hemisphere south of the Mexico-U.S. border, from initial colonization of the hemisphere by Paleo-Indian people, to the origins of agriculture and the rise of civilization. Olmec, Mayan, Aztec, Chavin, Moche and Inca cultures are covered in detail.

**ANTH 3370 Social Inequalities and Social Justice in Latin America (4 Credits)**

This course uses an intersectional approach to the study of gender, class and ethnicity in Latin America. Intersectionality aims at understanding the interlocking relation between these and other variables, how they are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. The course aims at understanding history, culture and peoples with a special emphasis on examining their heterogeneity, and how such heterogeneity is also related to social inequality. It examines contemporary issues such as women and LGBTQ+ rights, Indigenous movements, human rights, migrations, and economics from the perspective of intersectionality.

**ANTH 3390 Geoarchaeology (4 Credits)**

Use of geological methods to interpret archaeological sites, ancient landscape reconstruction, study of environmental change and habitation.

**ANTH 3470 Applied Anthropology (4 Credits)**

The practical application of cross-cultural knowledge and awareness to the solution of social and cultural problems. Ethnographic methodologies, a review of the history of applied anthropology and a consideration of the ideological and ethical components of applied anthropology are covered.

**ANTH 3500 City and Society (4 Credits)**

Examines the recent past and future of the city as a human built environment that reflects and reproduces social, political, economic, and cultural forces and ideals. Begins with the origin of 'modern' cities in the 19th century and ends with contemporary urban landscapes. Analysis is focused on both the technologies (physical qualities) and aesthetics of urban form. Emphasis is on re-imagining urban design to meet the social equity, cultural diversity, and environmental sustainability challenges of 21st century city life.

**ANTH 3510 The Ancient City (4 Credits)**

The archaeological study of ancient cities around the world is a booming and controversial area of research. This course investigates what we know about the nature of the earliest cities in the great original cradles of civilization: Mesopotamia, Asia, Africa, and the Americas. Our focus is on how the first cities were planned, built, and experienced by citizens.

**ANTH 3540 The Nature of Language (4 Credits)**

Language as social, psychological, cultural phenomenon; relationship between cultures, semantics; language as medium of cultural unification; relationship between dialects, social structure.

**ANTH 3620 Ethnoarchaeology (4 Credits)**

Ethnography has often been used as an illustrative device to animate archaeological remains, or to develop models of human behavior, regardless of the geographic and chronological distance between the ethnographic and the archaeological data. This course addresses different perspectives and theories concerning the use of ethnoarchaeology to complement archaeological information. It aims to define the role of ethnoarchaeology in the study of human past; to establish an agenda of issues to which their use is relevant; and to provide a critical overview of major approaches to the use of ethnographic analogies and historical information in archaeology.

**ANTH 3630 Archaeological Method and Theory (4 Credits)**

This class presents methods for gathering archaeological data in the laboratory and then using a variety of theoretical approaches in its interpretation. Students gather archaeological data using museum collections from a variety of sites. Those artifacts include stone tools and ceramics as well as other environmental data and architectural information in a variety of environmental and landscape contexts. For each site studied students are presented with a body of theoretical literature from which to interpret these data. A variety of interpretative methods can potentially be chosen for each site, and in most cases there is no right answer, only answers that can be supported by the data collected and interpreted using the theoretical constructs read. All students are required to write up complete site reports for each project including all raw data collected in the analysis and theoretical approaches used in interpretation.

**ANTH 3640 Race and Human Evolution (4 Credits)**

Examines the history of thought about the nature and evolution of human racial differences and sexual characteristics, from the mid-19th century to the present day. Considers scientific and popular models for explaining the evolution of racial differences, male-female reproductive behavior and gender roles. These models are examined in light of comparative primate data, ethnographic data and the material record of human evolution. Prerequisite: ANTH 2010.

**ANTH 3655 Indigenous Feminisms (4 Credits)**

This course examines a wide array of Indigenous feminisms. Rather than think of Indigenous feminisms as one static thing, we will inspect the field from multiple viewpoints and perspectives. We will draw from various thematic and transnational contexts across the Americas and Native Pacific in order to analyze the scope and significance of such knowledges, particularly as they relate to broader theories and practices of decolonization. We will begin by examining the foundational inquiries and methods of Indigenous feminist scholarship. Is gender a useful category of analysis? How have Indigenous women thought of gender? How have Indigenous women thought about, and responded to, feminism? With an emphasis on Indigenous scholars and feminists, we will cover a range of topics including (but not limited to) how Indigenous feminism fits into the feminist project, the connection between colonization and violence against Native women, the reclamation of women's initiations, gender and sovereignty, queer indigeneity, Indigenous feminist allies, and decolonial love. We will draw from readings across feminist movements, and as feminist Kanaka Maoli Professor Lani Teves says, we will attempt to "make links between Indigenous feminisms and Latinx feminisms, Black feminisms, and transnational feminisms. Rather than shy away from the tensions that emerge between multiple feminisms, instead we will attempt to cultivate nodes of alliance and solidarity to diversify our feminist tactics."

**ANTH 3660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographical research.

**ANTH 3661 Museums and their Visitors (4 Credits)**

This course is designed to be a comprehensive introduction to museums and their approaches to serving visitors, primarily through exhibitions and education. It examines current research and museum practice as it relates to the museum as an environment for meaningful visitor experiences and learning. The course is organized around the following core issues: (1) What do visitor experiences look like in a museum context? (2) How do museums design for different audience types? (3) What do we learn from assessing visitors' experiences? (4) How do objects, ideas and spaces affect visitor learning and experiences? Cross listed with ARTH 3661.

**ANTH 3680 Quantitative Methods-Anthropology (4 Credits)**

The use of statistics in all branches of anthropology; data screening; parametric and nonparametric statistics. Prerequisite: any course in basic statistics.

**ANTH 3701 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

**ANTH 3702 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3703 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3742 Museum Exhibit Development (4 Credits)**

Introduces general principles of planning, development, production and evaluation of museum exhibits. Explores design elements and methods of evaluation. Students have the opportunity to do exhibit mockups and exhibit evaluation.



**ANTH 3743 Managing Collections (4 Credits)**

Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

**ANTH 3750 Ethnographic Methods (4 Credits)**

In this course, students study the art and science of ethnographic research methods, conduct quarter-long field research projects, and write practice ethnographies. The course requires students to apply the American Anthropological Association's Code of Ethics in their research and to write Institutional Review Board applications for their projects. Course readings include texts on ethnographic methods as well as controversial and exemplary ethnographic publications for student dissection and debate.

**ANTH 3790 Field Methods in Archaeology (4 Credits)**

The purpose of this class is to introduce students to archaeological field methods through a combination of readings, lecture, discussion, and hands-on experience. Training begins with issues of archaeological ethics, legal mandates, and research designs. Students then transition to learning skills and methods both in the classroom and in the field. Methods you will learn will include the basics of site survey and mapping, testing, excavation, artifact recovery and field processing, and data recording in the field. Cross-listed with ANTH 1790. Prerequisite: ANTH 2310.

**ANTH 3791 Critical Perspectives in Museum Studies (4 Credits)**

This course critically explores museums and heritage complexes as sites of cultural production and consumption at different historical moments and in diverse cultural and national settings. Special attention is given to contemporary issues, debates, and approaches in the context of museum anthropology and heritage studies. The term museum is used to include a wide range of heritage projects that do not rely only on the traditional institution established to collect, conserve and exhibit material culture, but includes intangible heritage, historic built environment and event natural environment that was used and marked by human action.

**ANTH 3850 We are Family: Anthropological Perspectives on Kinship and Relations (4 Credits)**

Anthropologists have long been fascinated with defining who is related to whom. In the first half of this course, we will read works by leading historical anthropologists in order to gain an understanding of the various ways kinship has been defined in anthropology and defined in a diversity of cultures. These works will help us understand various kinship systems throughout the world and explore how anthropologists have worked with the concept of relatedness. This course will then turn to contemporary issues and we will devote our time to investigating current kinship studies of relatedness and how this applies to new reproductive technologies (like surrogate mothers, IVF, etc), and adoption.

**ANTH 3875 Research Methods in Anthropology (4 Credits)**

This course offers an in-depth introduction to anthropological research methods with the aim of providing students with the tools necessary to design a coherent research proposal. Starting with the notion that anthropological research is a scientific endeavor, the course offers knowledge and skills that allow for a systematic application of qualitative and quantitative methods to respond to research questions. Students will learn when and how to use one method, as well as the implications of doing it. Students will also learn how to critically read research reports that use qualitative, quantitative, or mixed methods. The course is organized in two portions. The qualitative portion will focus on a detailed exploration of the continuum that goes from posing a research question, choosing a methodology, carrying it on, and reporting the results. The quantitative portion is concentrated on collecting numerical data, methods of which are often based on a qualitative understanding of people. Quantitative analysis will present tools used to take readings, acquire data, observations, and other information necessary to test hypotheses about people, cultures and how we can understand them from their material remains. The purpose of the quantitative part of the class is to determine what is statistically significant and what ideas about people are supportable using the scientific method. This course is required for all anthropology graduate students, and suggested for advanced undergraduates who are working on senior theses, and have an interest in anthropological research. The course is also open to non-anthropology students interested in anthropological research.

**ANTH 3880 Culture, Ecology, Adaptation (4 Credits)**

This course is organized around these concepts: "ecology," "adaptation," "landscape," "technology," "artifact," and "architecture." The course focuses on defining and examining adaptation and the role of culture and technology in achieving adaptations, or in not achieving them. This focus will be especially pursued with respect to the concept of landscape—that is, culturally defined physical space—and the cultural artifacts that interpret and modify it in the course of human adaptation to its ecological components.

**ANTH 3890 Context of Material Culture (4 Credits)**

Examines how material culture both reflects and actively structures political, economic and cultural life. Considers the relationship between people and their material culture (portable objects, non-portable objects, buildings, socially-created landscapes) in Western, non-Western, ancient, and contemporary cultural contexts. Reading materials draw from the fields of ethnology, archaeology, folklore, geography, history, art and architecture.

**ANTH 3981 Museum Internship (1-6 Credits)****ANTH 3990 Summer Field School-Archaeology (4-6 Credits)**

Archaeological excavation, survey and recordings; analysis and conservation of artifacts in the field.

**ANTH 3991 Independent Study (1-15 Credits)****ANTH 3995 Independent Research (1-10 Credits)****ANTH 4000 Advanced Anthropology (4 Credits)****ANTH 4040 Historical Archaeology: Theory and Method (4 Credits)**

Because it is the archaeology of periods for which there is also written history, historical archaeology is a dynamic and interdisciplinary field. It also has a distinct set of concerns and methods that builds upon, but does not replicate, those of prehistoric archaeology. This course is designed to engage students in the practice of historical archaeology through readings, discussions, and the hands-on analysis of archaeological materials. The first class of each week is a discussion of readings in historical archaeology. The readings introduce students to theoretical and methodological issues in the discipline, as well as important case studies. Many of the readings have a North American focus, but address international practice. The second class of each week has a hands-on focus. Backed by readings on historic materials analysis, we discuss and practice the types of research historical archaeologists perform on actual materials, focusing on different material types each week. Students in the course each process and analyze a set of materials excavated from a historic site. Cross-listed with ANTH 2040.

**ANTH 4070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Cross-listed with ANTH 3070.

**ANTH 4200 Native North America (4 Credits)**

Native American cultures north of Mexico. Cross-listed with ANTH 2200.

**ANTH 4220 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

**ANTH 4290 Art and Anthropology (4 Credits)**

This class introduces students to anthropological approaches to the study of art and visual culture. The first part of the course covers foundational work in the field, introducing key concepts as well as methods for viewing and understanding art from a cross-cultural/comparative and interdisciplinary perspective. We examine the relationships among art, technology and the environment, as well as the importance of form, function, style, meaning, and aesthetics in the study of art. The second part addresses issues of contemporary concern in art and anthropology, such as the influence of market forces and tourism on artistic traditions and cultural expressions; the intersection of art and identity; the politics of cultural representation. The course also explores the ethnographic turn in some forms of contemporary art as well as doing ethnography as art.

**ANTH 4320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 4360 Cross-Cultural Perspectives of Women (4 Credits)**

Cross-listed with ANTH 3360.

**ANTH 4370 Sex, Class and Race in Latin America (4 Credits)**

This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

**ANTH 4660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographic research.

**ANTH 4700 Readings in Anthropology (1-5 Credits)**

Directed readings in anthropology under faculty supervision. May be repeated for credit.

**ANTH 4701 Special Topics in Anthropology (1-5 Credits)****ANTH 4702 Special Topics in Anthropology (1-5 Credits)****ANTH 4703 Special Topics in Anthropology (1-5 Credits)****ANTH 4704 Special Topics in Anthropology (1-5 Credits)****ANTH 4740 Perspectives-Museum Studies (4 Credits)****ANTH 4744 Museum Anthropology (4 Credits)**

This course introduces students to museum anthropology and the ethnography of museums as well as the theoretical and practical sides of museum studies. The course is based on the following premises: Museum anthropology is a form of applied anthropology in which museums are a venue for making anthropological insights and knowledge accessible and relevant to the public; Museums, as institutions of public culture, are a forum for exploring contemporary social issues and concerns; The role of museums in society and civic engagement is at the core of contemporary museum anthropology and Museology.

**ANTH 4745 Museum Practicum (2 Credits)**

Individually designed practicum in student's area of interest.

**ANTH 4981 Museum Internship (1-6 Credits)****ANTH 4991 Independent Study (1-17 Credits)****ANTH 4995 Independent Research (1-17 Credits)****Courses****ANTH 3001 Race, Sex and Evolution (4 Credits)**

The course examines the paleoanthropology of race and sex. Our focus is on the nature and evolution of human racial differences, sexual anatomy, reproductive strategies, and gender roles. We will consider the history of thinking about race and sex in anthropology and related disciplines, and the uses to which particular conceptions have been put in our culture. We will discuss and evaluate alternative models for explaining the evolution of alleged biological and behavioral differences between racial groups and between men and women. Evaluation will proceed in light of evolutionary theory, comparative primate anatomy and behavior, the human fossil record, and general anthropological knowledge. Our aim is to examine myth and reality in popular and scientific understandings of these aspects of the human condition and, in the end, the social and political (i.e., policy) consequences of this knowledge. Enforced Prerequisites and Restrictions: ANTH 2105.

**ANTH 3020 Native Religions (4 Credits)**

A cross-cultural survey of concepts used to understand and talk about "religion," "the supernatural," and associated behavior among Native peoples of Turtle Island. Topics include healing and techniques of controlling and channeling supernatural power; sacred places and their significance; myths and symbols in their cultural contexts; initiation rites; conceptualizations of male and female deities; and responses of indigenous people to attempted missionization.

**ANTH 3030 Digital Anthropology (4 Credits)**

Digital Anthropology introduces students to computer technology used in anthropological research. Students study and then produce a number of digital products useful in the analysis and interpretation of museum collections, for archaeological mapping and research, and for the dissemination of anthropological knowledge online. This process covers the use of Geographic Information Systems (GIS) for spatial analysis, three-dimensional imaging programs ranging in scale from broad landscape mapping to detailed digital artifact analysis. In addition, the use of geophysical methods for imaging what is below the surface allows students to produce images of what lies below the ground in archaeological contexts.

**ANTH 3040 Anthropologies of Place (4 Credits)**

This class is an exploration of the relationship between people and places from an anthropological viewpoint. We concern ourselves with a variety of ideas about place, emphasizing not just how places are used, but how they infuse themselves into the lives, histories and ethics of those who interact with them. The course readings include book-length anthropological case studies interspersed with interdisciplinary readings about place and landscape. The course includes seminar-style discussions of readings, workshops and observations in the field. On several occasions, we take our class on the road, working together to think about how people and place interact. By the end of the class, each student creates his or her own anthropology of a place. Must be junior standing or above.

**ANTH 3060 Cultural Narratives (4 Credits)**

Human beings are natural storytellers. Whether reciting oral traditions or recounting personal experience, people everywhere use narratives as a way to express and to understand themselves. This course approaches cultural narratives from two angles. First, it explores the ways that anthropologists, usually trained in the social sciences, make use of and study narratives, whether through ethnographic observation, conducting an interview, gathering folklore or archaeological interpretation. Second, the class investigates narratives that, although produced by non-anthropologists, engage with anthropological issues such as kinship, gender, work, tradition and identity. The narratives range broadly from fiction, to poetry, to film. These two approaches are framed by theoretically informed readings about narrativity, both from the social sciences and the humanities. The class involves intensive reading and writing, as it makes use of both discussion and workshop formats. Each student in the course completes a research and writing project culminating in his or her own cultural narrative. Must be junior standing or above.

**ANTH 3070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Prerequisite: introductory social science course. Cross-listed with ANTH 4070.

**ANTH 3080 Memory and Memorialization (4 Credits)**

The course focuses on how social groups represent, experience and commemorate the remembered past; it explores issues of construction of memory, particularly how representations of the past- and its materialization through monuments, ruins, and landscapes- are connected with issues of institutionalized perceptions of national, ethnic, racial and religious identity. Furthermore, it discusses concepts such as "authenticity," "tradition," and "modernity" in the interpretation of cultural heritage and how the interpretation of the past and of culture depend on context (political and historical), experience and point of view. The course aims to develop an interdisciplinary approach to memory and to methodologies and empirical research.

**ANTH 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and RLGS 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**ANTH 3130 The Archaeology of Gender (4 Credits)**

This course examines the ways archaeology can contribute to the study of gender through investigations of the deep through recent past. The class will include readings on gender theory, the uses of archaeological data and specific case studies of engendered lives in the past. Cross listed with GWST 3130.

**ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food (4 Credits)**

Feasting, Fasting and Food focuses on foodways and food culture. Food and its acquisition and preparation are tied to the historical, social and cultural lives of all peoples. By drawing on historical sources, ethnography and a number of anthropological perspectives, we look at foodways as symbols of identity, culinary tourism, food work as trade or profession, the study of food as art and theater, and food and memory. Prerequisite: ANTH 2010.

**ANTH 3155 Native American Resistance in the Digital Age (4 Credits)**

Since Europeans first made contact with the Americas five centuries ago, depictions of indigenous peoples have largely been created by and for the colonizers. Only recently have native activists begun to take back control of their image. The course begins with the premise that indigenous peoples have been active producers of their own cultural heritage both before and after European expansion into the Americas. A postcolonial approach will be used to evaluate resistance from a historical standpoint, starting with the colonial period and into the twenty-first century. Primary attention will be placed on the late twentieth century and twenty-first century to better understand how indigenous filmmakers, curators, scientists, healers, artists, and scholars use indigenous knowledge systems to contest Western conceptions of authority. Specific topics include indigenous film and media; indigenous feminisms; the use of indigenous perspectives in natural resource management; indigenous voices in the decolonization of museums; and the role indigenous communities play in educating the public of long-lived environmental contamination of water and other natural resources. The course will be designed to explore the voice and agency of indigenous peoples in each of the aforementioned fields, and to teach the validity of indigenous perspectives. While students will be introduced to indigenous case studies from around the world, primary attention will be given to Native American tribal groups in the United States. Prerequisite: Any ANTH 1000-level course.

**ANTH 3170 Applied Heritage Management (4 Credits)**

Considers the role of archaeology in preservation and the management of cultural resources in terms of legislation, ethics and practical application, with emphasis of the utility, necessity and reality of doing archaeology today in the public sector. Site report writing, governmental regulations and the business side of archaeology are stressed. Archaeological information from site reports and artifact analysis are compiled and presented in a digital format. Prerequisite: ANTH 2310.

**ANTH 3200 Human Origins and Evolution (4 Credits)**

Examines the fossil record for human evolution from 6 million years ago to the origin of modern Homo sapiens, including current theories, evidence and controversies. Considers the historical and sociological contexts of human evolutionary studies, popular myths and misconceptions, and alternative scenarios for the future evolution of the human species.

**ANTH 3225 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we will explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

**ANTH 3255 Ancient North America (4 Credits)**

This course examines the history of American Indian cultures from their earliest archaeological traces on this continent up to and including contact with European explorers and colonists.

**ANTH 3290 Art and Anthropology (4 Credits)**

Study of the concept of art and its multiple roles in society from a cross-cultural and historical perspective. Commodification of culture through tourism and the global art market; arts of resistance and survival; and cultural expression and community development.

**ANTH 3310 Indigenous Environment (4 Credits)**

The purpose of this course is to introduce students to particular environmental issues that affect indigenous peoples, including subsistence and economic issues; sacred lands; cultural property dilemmas; and the impact that use of traditional cultural properties by others—including nation-state governments, corporations and tourists—have on indigenous peoples' cultural and social integrity. Particular focus is on one of these issues—travel and particularly "ecotravel" and "ecotourism."

**ANTH 3320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 3330 Human Rights of Indg Peoples (4 Credits)**

This course introduces students to the concept and definition of "indigenous peoples." It covers the history of resistance, revitalization, and assertion of sovereignty by Indigenous peoples, and why the United Nations felt it necessary to adopt a "Declaration on the Rights of Indigenous Peoples" in 2007. It covers how indigenous identities and indigenous rights issues do or do not "fit" with internationally accepted definitions of human rights. The course will concentrate on the intersection of indigenous autonomy with globalization, neo-liberal ideologies, and nation-state policies. Case studies focus on Iroquois, Crees, Mayans, Mapuche, Zapatistas, Maoris, and Sami.

**ANTH 3350 Latin American Archaeology (4 Credits)**

Covers the prehistory of the Western Hemisphere south of the Mexico-U.S. border, from initial colonization of the hemisphere by Paleo-Indian people, to the origins of agriculture and the rise of civilization. Olmec, Mayan, Aztec, Chavin, Moche and Inca cultures are covered in detail.

**ANTH 3370 Social Inequalities and Social Justice in Latin America (4 Credits)**

This course uses an intersectional approach to the study of gender, class and ethnicity in Latin America. Intersectionality aims at understanding the interlocking relation between these and other variables, how they are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. The course aims at understanding history, culture and peoples with a special emphasis on examining their heterogeneity, and how such heterogeneity is also related to social inequality. It examines contemporary issues such as women and LGBTQ+ rights, Indigenous movements, human rights, migrations, and economics from the perspective of intersectionality.

**ANTH 3390 Geoarchaeology (4 Credits)**

Use of geological methods to interpret archaeological sites, ancient landscape reconstruction, study of environmental change and habitation.

**ANTH 3470 Applied Anthropology (4 Credits)**

The practical application of cross-cultural knowledge and awareness to the solution of social and cultural problems. Ethnographic methodologies, a review of the history of applied anthropology and a consideration of the ideological and ethical components of applied anthropology are covered.

**ANTH 3500 City and Society (4 Credits)**

Examines the recent past and future of the city as a human built environment that reflects and reproduces social, political, economic, and cultural forces and ideals. Begins with the origin of 'modern' cities in the 19th century and ends with contemporary urban landscapes. Analysis is focused on both the technologies (physical qualities) and aesthetics of urban form. Emphasis is on re-imagining urban design to meet the social equity, cultural diversity, and environmental sustainability challenges of 21st century city life.

**ANTH 3510 The Ancient City (4 Credits)**

The archaeological study of ancient cities around the world is a booming and controversial area of research. This course investigates what we know about the nature of the earliest cities in the great original cradles of civilization: Mesopotamia, Asia, Africa, and the Americas. Our focus is on how the first cities were planned, built, and experienced by citizens.

**ANTH 3540 The Nature of Language (4 Credits)**

Language as social, psychological, cultural phenomenon; relationship between cultures, semantics; language as medium of cultural unification; relationship between dialects, social structure.

**ANTH 3620 Ethnoarchaeology (4 Credits)**

Ethnography has often been used as an illustrative device to animate archaeological remains, or to develop models of human behavior, regardless of the geographic and chronological distance between the ethnographic and the archaeological data. This course addresses different perspectives and theories concerning the use of ethnoarchaeology to complement archaeological information. It aims to define the role of ethnoarchaeology in the study of human past; to establish an agenda of issues to which their use is relevant; and to provide a critical overview of major approaches to the use of ethnographic analogies and historical information in archaeology.

**ANTH 3630 Archaeological Method and Theory (4 Credits)**

This class presents methods for gathering archaeological data in the laboratory and then using a variety of theoretical approaches in its interpretation. Students gather archaeological data using museum collections from a variety of sites. Those artifacts include stone tools and ceramics as well as other environmental data and architectural information in a variety of environmental and landscape contexts. For each site studied students are presented with a body of theoretical literature from which to interpret these data. A variety of interpretative methods can potentially be chosen for each site, and in most cases there is no right answer, only answers that can be supported by the data collected and interpreted using the theoretical constructs read. All students are required to write up complete site reports for each project including all raw data collected in the analysis and theoretical approaches used in interpretation.

**ANTH 3640 Race and Human Evolution (4 Credits)**

Examines the history of thought about the nature and evolution of human racial differences and sexual characteristics, from the mid-19th century to the present day. Considers scientific and popular models for explaining the evolution of racial differences, male-female reproductive behavior and gender roles. These models are examined in light of comparative primate data, ethnographic data and the material record of human evolution. Prerequisite: ANTH 2010.

**ANTH 3655 Indigenous Feminisms (4 Credits)**

This course examines a wide array of Indigenous feminisms. Rather than think of Indigenous feminisms as one static thing, we will inspect the field from multiple viewpoints and perspectives. We will draw from various thematic and transnational contexts across the Americas and Native Pacific in order to analyze the scope and significance of such knowledges, particularly as they relate to broader theories and practices of decolonization. We will begin by examining the foundational inquiries and methods of Indigenous feminist scholarship. Is gender a useful category of analysis? How have Indigenous women thought of gender? How have Indigenous women thought about, and responded to, feminism? With an emphasis on Indigenous scholars and feminists, we will cover a range of topics including (but not limited to) how Indigenous feminism fits into the feminist project, the connection between colonization and violence against Native women, the reclamation of women's initiations, gender and sovereignty, queer indigeneity, Indigenous feminist allies, and decolonial love. We will draw from readings across feminist movements, and as feminist Kanaka Maoli Professor Lani Teves says, we will attempt to "make links between Indigenous feminisms and Latinx feminisms, Black feminisms, and transnational feminisms. Rather than shy away from the tensions that emerge between multiple feminisms, instead we will attempt to cultivate nodes of alliance and solidarity to diversify our feminist tactics."

**ANTH 3660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographical research.

**ANTH 3661 Museums and their Visitors (4 Credits)**

This course is designed to be a comprehensive introduction to museums and their approaches to serving visitors, primarily through exhibitions and education. It examines current research and museum practice as it relates to the museum as an environment for meaningful visitor experiences and learning. The course is organized around the following core issues: (1) What do visitor experiences look like in a museum context? (2) How do museums design for different audience types? (3) What do we learn from assessing visitors' experiences? (4) How do objects, ideas and spaces affect visitor learning and experiences? Cross listed with ARTH 3661.

**ANTH 3680 Quantitative Methods-Anthropology (4 Credits)**

The use of statistics in all branches of anthropology; data screening; parametric and nonparametric statistics. Prerequisite: any course in basic statistics.

**ANTH 3701 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

**ANTH 3702 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3703 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3742 Museum Exhibit Development (4 Credits)**

Introduces general principles of planning, development, production and evaluation of museum exhibits. Explores design elements and methods of evaluation. Students have the opportunity to do exhibit mockups and exhibit evaluation.

**ANTH 3743 Managing Collections (4 Credits)**

Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

**ANTH 3750 Ethnographic Methods (4 Credits)**

In this course, students study the art and science of ethnographic research methods, conduct quarter-long field research projects, and write practice ethnographies. The course requires students to apply the American Anthropological Association's Code of Ethics in their research and to write Institutional Review Board applications for their projects. Course readings include texts on ethnographic methods as well as controversial and exemplary ethnographic publications for student dissection and debate.

**ANTH 3790 Field Methods in Archaeology (4 Credits)**

The purpose of this class is to introduce students to archaeological field methods through a combination of readings, lecture, discussion, and hands-on experience. Training begins with issues of archaeological ethics, legal mandates, and research designs. Students then transition to learning skills and methods both in the classroom and in the field. Methods you will learn will include the basics of site survey and mapping, testing, excavation, artifact recovery and field processing, and data recording in the field. Cross-listed with ANTH 1790. Prerequisite: ANTH 2310.

**ANTH 3791 Critical Perspectives in Museum Studies (4 Credits)**

This course critically explores museums and heritage complexes as sites of cultural production and consumption at different historical moments and in diverse cultural and national settings. Special attention is given to contemporary issues, debates, and approaches in the context of museum anthropology and heritage studies. The term museum is used to include a wide range of heritage projects that do not rely only on the traditional institution established to collect, conserve and exhibit material culture, but includes intangible heritage, historic built environment and event natural environment that was used and marked by human action.

**ANTH 3850 We are Family: Anthropological Perspectives on Kinship and Relations (4 Credits)**

Anthropologists have long been fascinated with defining who is related to whom. In the first half of this course, we will read works by leading historical anthropologists in order to gain an understanding of the various ways kinship has been defined in anthropology and defined in a diversity of cultures. These works will help us understand various kinship systems throughout the world and explore how anthropologists have worked with the concept of relatedness. This course will then turn to contemporary issues and we will devote our time to investigating current kinship studies of relatedness and how this applies to new reproductive technologies (like surrogate mothers, IVF, etc), and adoption.

**ANTH 3875 Research Methods in Anthropology (4 Credits)**

This course offers an in-depth introduction to anthropological research methods with the aim of providing students with the tools necessary to design a coherent research proposal. Starting with the notion that anthropological research is a scientific endeavor, the course offers knowledge and skills that allow for a systematic application of qualitative and quantitative methods to respond to research questions. Students will learn when and how to use one method, as well as the implications of doing it. Students will also learn how to critically read research reports that use qualitative, quantitative, or mixed methods. The course is organized in two portions. The qualitative portion will focus on a detailed exploration of the continuum that goes from posing a research question, choosing a methodology, carrying it on, and reporting the results. The quantitative portion is concentrated on collecting numerical data, methods of which are often based on a qualitative understanding of people. Quantitative analysis will present tools used to take readings, acquire data, observations, and other information necessary to test hypotheses about people, cultures and how we can understand them from their material remains. The purpose of the quantitative part of the class is to determine what is statistically significant and what ideas about people are supportable using the scientific method. This course is required for all anthropology graduate students, and suggested for advanced undergraduates who are working on senior theses, and have an interest in anthropological research. The course is also open to non-anthropology students interested in anthropological research.

**ANTH 3880 Culture, Ecology, Adaptation (4 Credits)**

This course is organized around these concepts: "ecology," "adaptation," "landscape," "technology," "artifact," and "architecture." The course focuses on defining and examining adaptation and the role of culture and technology in achieving adaptations, or in not achieving them. This focus will be especially pursued with respect to the concept of landscape—that is, culturally defined physical space—and the cultural artifacts that interpret and modify it in the course of human adaptation to its ecological components.

**ANTH 3890 Context of Material Culture (4 Credits)**

Examines how material culture both reflects and actively structures political, economic and cultural life. Considers the relationship between people and their material culture (portable objects, non-portable objects, buildings, socially-created landscapes) in Western, non-Western, ancient, and contemporary cultural contexts. Reading materials draw from the fields of ethnology, archaeology, folklore, geography, history, art and architecture.

**ANTH 3981 Museum Internship (1-6 Credits)****ANTH 3990 Summer Field School-Archaeology (4-6 Credits)**

Archaeological excavation, survey and recordings; analysis and conservation of artifacts in the field.

**ANTH 3991 Independent Study (1-15 Credits)****ANTH 3995 Independent Research (1-10 Credits)****ANTH 4000 Advanced Anthropology (4 Credits)****ANTH 4040 Historical Archaeology: Theory and Method (4 Credits)**

Because it is the archaeology of periods for which there is also written history, historical archaeology is a dynamic and interdisciplinary field. It also has a distinct set of concerns and methods that builds upon, but does not replicate, those of prehistoric archaeology. This course is designed to engage students in the practice of historical archaeology through readings, discussions, and the hands-on analysis of archaeological materials. The first class of each week is a discussion of readings in historical archaeology. The readings introduce students to theoretical and methodological issues in the discipline, as well as important case studies. Many of the readings have a North American focus, but address international practice. The second class of each week has a hands-on focus. Backed by readings on historic materials analysis, we discuss and practice the types of research historical archaeologists perform on actual materials, focusing on different material types each week. Students in the course each process and analyze a set of materials excavated from a historic site. Cross-listed with ANTH 2040.

**ANTH 4070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Cross-listed with ANTH 3070.

**ANTH 4200 Native North America (4 Credits)**

Native American cultures north of Mexico. Cross-listed with ANTH 2200.

**ANTH 4220 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

**ANTH 4290 Art and Anthropology (4 Credits)**

This class introduces students to anthropological approaches to the study of art and visual culture. The first part of the course covers foundational work in the field, introducing key concepts as well as methods for viewing and understanding art from a cross-cultural/comparative and interdisciplinary perspective. We examine the relationships among art, technology and the environment, as well as the importance of form, function, style, meaning, and aesthetics in the study of art. The second part addresses issues of contemporary concern in art and anthropology, such as the influence of market forces and tourism on artistic traditions and cultural expressions; the intersection of art and identity; the politics of cultural representation. The course also explores the ethnographic turn in some forms of contemporary art as well as doing ethnography as art.

**ANTH 4320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 4360 Cross-Cultural Perspectives of Women (4 Credits)**

Cross-listed with ANTH 3360.

**ANTH 4370 Sex, Class and Race in Latin America (4 Credits)**

This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

**ANTH 4660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographic research.

**ANTH 4700 Readings in Anthropology (1-5 Credits)**

Directed readings in anthropology under faculty supervision. May be repeated for credit.



**ANTH 4701 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4702 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4703 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4704 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4740 Perspectives-Museum Studies (4 Credits)**

**ANTH 4744 Museum Anthropology (4 Credits)**

This course introduces students to museum anthropology and the ethnography of museums as well as the theoretical and practical sides of museum studies. The course is based on the following premises: Museum anthropology is a form of applied anthropology in which museums are a venue for making anthropological insights and knowledge accessible and relevant to the public; Museums, as institutions of public culture, are a forum for exploring contemporary social issues and concerns; The role of museums in society and civic engagement is at the core of contemporary museum anthropology and Museology.

**ANTH 4745 Museum Practicum (2 Credits)**

Individually designed practicum in student's area of interest.

**ANTH 4981 Museum Internship (1-6 Credits)**

**ANTH 4991 Independent Study (1-17 Credits)**

**ANTH 4995 Independent Research (1-17 Credits)**

## School of Art and Art History

Office: Shwayder Art Building

Mail Code: 2121 E. Asbury Ave., Denver, CO 80208

Phone: 303-871-2846 or 800-876-3323

Email: AboutArt@du.edu (saah-interest@du.edu)

Web Site: <http://du.edu/art> (<http://du.edu/art/>)

The School of Art and Art History offers two tracks in our Art History MA degree program: Art History and Art History with a Museum Studies concentration. Our program of about 20 students emphasizes a collegial student-faculty atmosphere. The Art History program offers courses in most areas of world art with special emphasis on the arts of Europe, the Americas, the Islamic tradition, and global contemporary art. In addition to our own Vicki Myhren Gallery, our partnerships with the Denver Art Museum and other cultural institutions in Denver provide opportunities for museum internships and exhibition-based courses.

Our graduates are competitive in sought-after positions. Some go on to doctoral studies in the United States or overseas; others hold respected jobs at distinguished art museums or take the road less traveled, entering careers with art-related nonprofit organizations.

At the School of Art and Art History, we offer many advantages:

- small classes and personal attention
- in-depth training in Art History and research methods
- an on-site art gallery
- practical museum training
- museum internships in local and national institutions
- a strong alumni network
- vibrant and diverse cultural activities in Denver

## Master of Arts in Art History

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Art History with a Concentration in Museum Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Art History

### Master of Arts in Art History

#### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Core coursework requirements</b>		<b>12</b>
Complete all of the following courses:		
ARTH 4301	Seminar in Art History Methods	
ARTH 4302	Research Practicum	
ARTH 4995	Independent Research	
<b>Art History courses</b>		<b>28</b>
Complete an additional 28 credits in ARTH courses		
<b>Art History seminars</b>		<b>16</b>
Complete an additional 16 credits in ARTH seminars		
<b>Total Credits</b>		<b>56</b>

Minimum credits required for degree: 56 credits

#### Non-coursework requirements:

- Qualifying Examination
- Language Requirement
- Comprehensive Examination
- Master's Research Paper

**Qualifying Examination**

A qualifying examination is used by the faculty to determine the newly admitted student's strengths and weaknesses and to facilitate program planning. The exam is normally taken on the Friday before the first week of classes. Incoming graduate students who graduated from the University of Denver with an Art History major within two years of entering the MA program are exempted from taking the Qualifying Exam.

**Language Requirement**

Demonstration of reading proficiency in one modern foreign language is required for all MA candidates. An exam is offered each quarter by the Department of Languages and Literatures, or the student may take the fourth semester (or sixth quarter) of a college language course and receive a grade of B+ or better to demonstrate reading proficiency. A language should be chosen, in consultation with the graduate adviser, that supports the student's research interests and career plans, keeping in mind that some PhD programs still require French and German. This requirement must be met before the student advances to candidacy.

**Comprehensive Examination**

The comprehensive examination is designed to evaluate the student's retention and synthesis of Art History course work taken at the University of Denver. Students are encouraged to take the test as soon as possible after the final quarter in which they are enrolled in course work. Planning for this examination takes place under supervision of the graduate adviser.

**Master's Research Paper**

MA degree students are required to write a research paper of publishable quality. Although work on the master's research paper should not begin prior to completion of the language requirement, students often choose subjects on which they have already conducted some research during prior seminars or lecture classes. Guidelines should be obtained from the School of Art and Art History.

## Master of Arts in Art History with a Concentration in Museum Studies

### Master of Arts in Art History with a Concentration in Museum Studies

**Degree requirements****Coursework requirements**

Code	Title	Credits
<b>Core coursework requirements</b>		<b>16</b>
ARTH 4301	Seminar in Art History Methods	
ARTH 4302	Research Practicum	
ARTH 4651	Museum Methods and Principles (required)	
ARTH 4995	Independent Research	
<b>Art History courses</b>		<b>12</b>
Complete an additional 12 credits in ARTH courses		
<b>Art History seminars</b>		<b>12</b>
Complete an additional 12 credits in ARTH seminar courses		
<b>Museum Studies courses</b>		<b>16</b>
Complete an additional 16 credits in museum studies courses		
<b>Total Credits</b>		<b>56</b>

Minimum number of credits required for degree: 56 credits

**Non-coursework requirements:**

- Qualifying Examination
- Language Requirement
- Comprehensive Examination
- Master's Research Paper

**Qualifying Examination**

A qualifying examination is used by the faculty to determine the newly admitted student's strengths and weaknesses and to facilitate program planning. The exam is normally taken on the Friday before the first week of classes. Incoming graduate students who graduated from the University of Denver with an Art History major within two years of entering the MA program are exempted from taking the Qualifying Exam.

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student's research interests and career plans, keeping in mind that some PhD programs still require French and German. This requirement must be met before the student advances to candidacy.

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### **ARTH 3656 Curatorial Practicum (4 Credits)**

Students will work in curatorial teams to plan and execute an effective exhibition of contemporary art. This process may include choosing a theme and selecting works of art, researching artists and themes, budgets, scheduling, developing an exhibition checklist, modeling the gallery, visual exhibition design, conservation and collections management factors, shipping, installation, educational outreach to the public, publicity and other issues related to exhibition planning.

### **ARTH 3661 Learning in Museums (4 Credits)**

Comprehensive introduction to museum education. Examines informal education, learning theories, interactive education, exhibits and programs. Cross-listed with ANTH 3661.

### **ARTH 3701 Topics in Art History (1-4 Credits)**

Selected themes and topics from the history of art. Content changes and course may be repeated to a maximum of 12 credits.

### **ARTH 3702 Topics in Contemporary Art (4 Credits)**

This course offers an in-depth exploration of contemporary art and critical theory from a cross-disciplinary, global perspective beginning in the 1960s. We couple intensive reading and writing assignments to meetings with guest creatives and thinkers, visits to local art spaces, and roundtable discussions about new research. The particular art historical topic varies from year to year.

### **ARTH 3813 Arts of the American West (4 Credits)**

This class covers a wide range of art objects and styles from the 17th century to the present in the West of the United States, from buffalo robe paintings and baskets to cowboy art and contemporary abstract landscapes. Particular attention is paid to the diversity of art traditions—Native American, Spanish and Mexican, European, Asian and Latin American—as they converge in this geographic space.

### **ARTH 3815 Puritan, Shaker, Hindu: Material Religion in North America (4 Credits)**

The diversity of religious experience and spirituality is emphasized in this historical examination of image and artifact in North America. Beginning with sacred indigenous arts and including Puritans, Shakers, Judaism, Mormons, Ghost Dance religion, Buddhists, Hindus, and others, this class considers the ways in which different spiritual worldviews are expressed through and shaped by the art and objects people create and the environments they build. It looks at the encounters between cultures in colonial and post-colonial contexts that result in ever changing material forms of religion. Students learn through slide-lecture-discussions, reading, small group discussions, research papers or presentations, and field trips.

### **ARTH 3817 Gothic Art (4 Credits)**

This course examines the art of the Late Middle Ages in Europe, from roughly 1140 to 1400. Gothic architecture, sculpture, painting, stained glass and the sumptuous arts (metal, textiles) are examined within their broader social, political and religious contexts. Particular attention is paid to the Gothic Cathedral - that quintessential window into the medieval world—its beliefs, aspirations, social and political realities.

### **ARTH 3818 Art of Renaissance Europe (4 Credits)**

This course provides an examination of the artistic cultures in Europe during the Renaissance (15th and 16th centuries). Depending upon the quarter, this course will be a general survey of European art during the Renaissance or a more focused exploration of a sub-period, such as painting in fifteenth-century Italy. Chronological and geographic factors determine the overall theme and structure of the course. Students gain both a sound knowledge of key artistic monuments of the period, as well as a conceptual framework according to which they may organize their knowledge. This class may be repeated for a maximum of 8 credits.

### **ARTH 3822 Northern Renaissance Art (4 Credits)**

This course explores the dramatic developments in the arts (particularly panel painting, manuscript illumination and sculpture) in Northern Europe from around 1350 to 1550. From lavishly decorated Books of Hours and the development of stunningly naturalistic oil paintings on panel in the early 15th century through the development of printing and the rise of self-portraiture, genre and landscape depictions, this class traces the important role played by Dutch, Flemish, German and French artists in the transition from late medieval to early modern artistic forms and practices. The role of art in shaping and expressing religious, civic, political and economic concepts are explored, as well as the rise of the social and intellectual standing of the artist. Among the artists examined include Jan van Eyck, Rogier van der Weyden, Albrecht Dürer, Hieronymus Bosch and Pieter Bruegel the Elder.

### **ARTH 3823 17th-Century European Art (4 Credits)**

This course considers European arts of the 17th century. Depending upon the quarter it may be a general survey of European art during the seventeenth century or a more focused exploration of a sub-period, such as Italian Baroque or the Old Dutch Masters: Rembrandt, Vermeer and Frans Hals. This class may be repeated for a maximum of 8 credits.

**ARTH 3825 Abstract Expressionism (4 Credits)**

In the years immediately following World War II, American art flourished through a generation of artists whose work successfully moved beyond (and at its best, matched) the substantial innovations of modern artists working in Europe around the time of World War I. From richly varied backgrounds and equipped with a deep understanding of art history, these artists forged careers during the Depression and, though fiercely independent, united in the late 1940s with the goal of establishing a new American modern art. Their monumental, highly singular, expressive abstractions (and near-abstractions) gave rise to the movement called Abstract Expressionism, which dominated American painting in the 1950s and beyond.

**ARTH 3832 19th-Century Art (4 Credits)**

This course surveys the major art movements in Europe from the late 18th century to the end of the 19th century. Major painters, sculptors, printmakers and architects of the following movements will be presented: Neo-classicism, Romanticism, Academic Painting, Realism, the Pre-Raphaelites, Impressionism, Post-Impressionism, Symbolism and Art Nouveau. Their works will be studied in light of the social, political and cultural milieu in which they appeared. Special attention will be paid to representations of race, class, gender and colonialism.

**ARTH 3834 Global Contemporary Art (4 Credits)**

This class explores contemporary art, including but not limited to painting, sculpture, performance art, installations, and new media, through the lenses of identity, the body, time, place, language, and spirituality. These narratives provide threads of continuity across time and place, but we will also focus on individual artistic interpretations as we delve deeper into cultural specificities and audience reception around the world. We will identify and analyze connections between recent art theoretical perspectives and the emergence of various art trends. This course considers the role of the international art market, global art fairs, artist retrospectives, and recent museum and gallery exhibitions as participatory elements in the construction and discussion of contemporary art.

**ARTH 3838 Connoisseurship (4 Credits)**

In this class the historical roots, theoretical and philosophical underpinnings, and actual practice of connoisseurship are studied using objects from the museum's collection.

**ARTH 3839 Topics in Modern Art (4 Credits)**

Selected themes and topics from the 18th century to the present. Topics change, and the course may be repeated to a maximum of 12 credits.

**ARTH 3840 Sacred Arts of Asia (4 Credits)**

This course explores the sacred art and architecture of Asia, including but not limited to India, China, and Japan. Major religious traditions, including Buddhism, Hinduism, and Islam, are viewed through the lens of artistic development; indigenous religious traditions and philosophical constructs, including Shintoism, Daoism, Confucianism, and Bon are also explored for their influence in art, architecture, and visual culture more broadly in and between Asian regions.

**ARTH 3862 Olmec to Aztec: Mesoamerica (4 Credits)**

This course is an introduction to the art and archaeology of the indigenous peoples of Mesoamerica from about 2000 BC to AD 1521. The course explores the early royal art of the Olmec, the colossal pyramids of Teotihuacan, the manuscripts of the Mixtec, and the imperial power of the Aztecs. This class presents a timeline of Mesoamerica and investigates how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. Students will be able to identify and discuss how these elements manifested in the art and architecture of Mesoamerican cultures. Furthermore, the course investigates issues of shamanism, kingship and power, warfare, gender, and human sacrifice.

**ARTH 3863 Kings and Cosmology: Maya Art (4 Credits)**

This course is an introduction to the art and archaeology of the Maya from about 300 BCE to 1200 CE, although the beliefs and traditions of the living Maya will inform this study of the past. The Maya are perhaps the most famous of the several cultures comprising what is known as Mesoamerica. A highly advanced culture, they built soaring temples, carved elaborate portraits of their kings and developed a complex writing system including a calendar. The course explores these things with a constant eye to understanding the Maya worldview, cosmology and daily life. By the conclusion of the class, students should be able to read their intricate pictures, discuss the strategies of powerful Maya rulers and understand how Maya art and architecture reflect their concepts of time and the cosmos.

**ARTH 3864 Buddhism(s) and Arts (4 Credits)**

This survey examines the history, practices, ritual contexts, aesthetics and artistic traditions of Buddhism including architecture, calligraphy, sculpture and painting, in terms of its social and historical context, political and religious functions, as well as issues including artistic production, changing techniques and symbols, and the market/audience. The primary goal is to understand Buddhism as reflected in art and culture.

**ARTH 3867 The Circle and the Four Corners: Native North American Art (4 Credits)**

This course is designed as an introduction to the art and architecture of the native peoples of North America from the earliest signs of humans in North America to the present. Cultures covered include those from the Southwest, the Northwest, the Southeast Ceremonial Complex, the Plains and contemporary Native American artists. By the conclusion of the class, students will understand the cultural sequence and geographic dispersion of native North America. Students will also understand how the various civilizations of North America shared aspects of world-view, cosmology and daily life, and be able to identify and discuss how these elements manifested in the art and architecture of native North American cultures.

**ARTH 3868 Art of the Andes (4 Credits)**

This course is designed as an introduction to the art and architecture of the native Pre-Columbian peoples of the Andes. Cultures covered include Chavin, Nasca, Wari and the Inca.

**ARTH 3871 Women in Art (4 Credits)**

This course considers the roles of women in art and explores the impact of race, class and gender on art produced from the Middle Ages to the present with discussions of women artists, women patrons and images of women. Cross listed with GWST 3871.

**ARTH 3872 Introduction to Conservation (4 Credits)**

This lecture course familiarizes the student with the concepts and challenges of conservation, its role in museums and the care of collections. Specific emphasis is given to the materials, structure, deterioration and preservation of material culture. Field trips to various museums and/or workshops to make appropriate display mounts and storage containers enhance the understanding gained from readings and lectures.

**ARTH 3875 History of Collections (4 Credits)**

This course traces the history of collections from the Renaissance to the present, addressing the interconnections between artists, patrons, dealers, art markets, provenance, connoisseurship and the historical development of museums and private collections. Each week's readings of journal articles and chapters focus on different types of collections or themes, including royal and imperial collections, cabinets of curiosities, excavating and transporting antiquities, British country estates and the Grand Tour, the establishment of national museums, the relationship between American collectors and dealers, ethnographic objects in Western collections, Nazi looting, restorers and forgers, and artists' collections, to name a few.

**ARTH 3880 Mosques and Aniconism: Islamic Art and Architecture 650-1250 (4 Credits)**

What is 'Islamic' in Islamic art? An introduction to art and architecture in the Islamic lands from the days of the Prophet Muhammad in the 7th century until the Mongol conquest of the Middle East in the mid-13th century. The course surveys mosques, palaces, madrasas, and tombs, and also calligraphy, sculpture, ceramics, and painting in historical and literary contexts. It covers a vast geographical area, from Spain in the west to Iran and Central Asia in the east, and discusses both common and unique characteristics of architecture and figurative representations in these regions. Emphasis will be given to the early Islamic period in Greater Syria and to artists' response to Byzantine and Sassanid (pre-Islamic Persian) art and architecture.

**ARTH 3881 Dragons and Sultans: Islamic Art and Architecture 1250-1600 (4 Credits)**

Art and architecture in the Islamic lands from Genghis Khan in the 13th century to the Ottoman Sultan Suleyman the Magnificent in the 16th century. The course consists of three parts. First, it examines the changes that occurred in Islamic art as a result of artists' acquaintance with East Asian art and culture (14th century). Second, it discusses art and architecture in Central Asia and Afghanistan under Timurid rule (late 14th-15th century), followed by an overview of the artistic achievements in the Early Modern Islamic lands under the Ottomans, Safavids, and Mughals (16th century). The course explores works of art in historical, cultural, and literary contexts, and points to the unique characteristics of each geographical region, as well as to pan-Islamic form and content. Among the topics that will be discussed: the architect Sinan and his legacy, the response of Islamic painting to European art, and representations of royal and religious concepts.

**ARTH 3910 Art History Travel (4 Credits)**

A travel course to selected locations to study major monuments and collections of art and architecture. Location and content change. This class may be repeated for a maximum of 8 credits. Prerequisite: instructor's permission.

**ARTH 3991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4301 Seminar in Art History Methods (4 Credits)**

This seminar considers the history of art history and the development of various methods that art historians use to interpret and understand art. Required of all MA candidates in art history.

**ARTH 4302 Research Practicum (4 Credits)**

The major goal of this course is to learn methods and resources for doing primary research in the history of art. In this practicum, students will gain practical research experience by carrying out original research on two projects: research on an object from the DU collection and research on a contemporary artist. Students will learn to track down biographical information, locate and examine works of art, and reconstruct historical context using archival, material, human, and electronic sources. Students will learn to develop research questions, create and follow through on a research strategy, organize research data, and document the research process. This course will help you prepare for many aspects of your graduate papers, including the Master's Research Paper. Required of all MA students in art history.

**ARTH 4312 Seminar: Indigenous American Art (4 Credits)**

Selected topics in Indigenous American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4313 Seminar in Islamic Art (4 Credits)**

Selected topics in Islamic Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4314 Seminar in Medieval Art (4 Credits)**

Selected topics in Medieval Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4321 Seminar in Renaissance Art (4 Credits)**

Selected topics in Renaissance Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4333 Seminar in 20th Century Art (4 Credits)**

Selected topics in 20th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4334 Selected Topics in Contemporary Art (4 Credits)**

Selected topics in contemporary art. Advanced research papers and presentations. Content changes. May be repeated for a maximum of 8 credits.

**ARTH 4336 Seminar in American Art (4 Credits)**

Selected topics in American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4651 Museum Methods and Principles (4 Credits)**

This class surveys the major activities, goals, and organization of the art museum within today's world. Students meet with a variety of museum professionals to discuss the changing dynamics within art museums, as well as ethical and practical issues of museum work. The class reads both classic and current literature on museum issues and practice, and participates in research, collection, and exhibition projects. Required of all M.A. art history students pursuing the Museum Studies option.

**ARTH 4652 Museum Internship (0-10 Credits)**

Arranged internship in student's area of specialization. Students should take ARTH 4651 Museum Methods and Principles first. Prerequisite: instructor's permission.

**ARTH 4801 World Art I for Graduates (0 Credits)**

Survey of World Art Prehistory-1000 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4802 World Art II for Graduates (0 Credits)**

Survey of World Art 1000-1700 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4803 World Art III for Graduates (0 Credits)**

Survey of World Art 1700-present for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4995 Independent Research (4 Credits)**

Students should see their advisor for guidelines regarding the Master's Research Paper class.

## Courses

**ARTH 3656 Curatorial Practicum (4 Credits)**

Students will work in curatorial teams to plan and execute an effective exhibition of contemporary art. This process may include choosing a theme and selecting works of art, researching artists and themes, budgets, scheduling, developing an exhibition checklist, modeling the gallery, visual exhibition design, conservation and collections management factors, shipping, installation, educational outreach to the public, publicity and other issues related to exhibition planning.

**ARTH 3661 Learning in Museums (4 Credits)**

Comprehensive introduction to museum education. Examines informal education, learning theories, interactive education, exhibits and programs. Cross-listed with ANTH 3661.

**ARTH 3701 Topics in Art History (1-4 Credits)**

Selected themes and topics from the history of art. Content changes and course may be repeated to a maximum of 12 credits.

**ARTH 3702 Topics in Contemporary Art (4 Credits)**

This course offers an in-depth exploration of contemporary art and critical theory from a cross-disciplinary, global perspective beginning in the 1960s. We couple intensive reading and writing assignments to meetings with guest creatives and thinkers, visits to local art spaces, and roundtable discussions about new research. The particular art historical topic varies from year to year.

**ARTH 3813 Arts of the American West (4 Credits)**

This class covers a wide range of art objects and styles from the 17th century to the present in the West of the United States, from buffalo robe paintings and baskets to cowboy art and contemporary abstract landscapes. Particular attention is paid to the diversity of art traditions—Native American, Spanish and Mexican, European, Asian and Latin American—as they converge in this geographic space.

**ARTH 3815 Puritan, Shaker, Hindu: Material Religion in North America (4 Credits)**

The diversity of religious experience and spirituality is emphasized in this historical examination of image and artifact in North America. Beginning with sacred indigenous arts and including Puritans, Shakers, Judaism, Mormons, Ghost Dance religion, Buddhists, Hindus, and others, this class considers the ways in which different spiritual worldviews are expressed through and shaped by the art and objects people create and the environments they build. It looks at the encounters between cultures in colonial and post-colonial contexts that result in ever changing material forms of religion. Students learn through slide-lecture-discussions, reading, small group discussions, research papers or presentations, and field trips.

**ARTH 3817 Gothic Art (4 Credits)**

This course examines the art of the Late Middle Ages in Europe, from roughly 1140 to 1400. Gothic architecture, sculpture, painting, stained glass and the sumptuous arts (metal, textiles) are examined within their broader social, political and religious contexts. Particular attention is paid to the Gothic Cathedral - that quintessential window into the medieval world—its beliefs, aspirations, social and political realities.

**ARTH 3818 Art of Renaissance Europe (4 Credits)**

This course provides an examination of the artistic cultures in Europe during the Renaissance (15th and 16th centuries). Depending upon the quarter, this course will be a general survey of European art during the Renaissance or a more focused exploration of a sub-period, such as painting in fifteenth-century Italy. Chronological and geographic factors determine the overall theme and structure of the course. Students gain both a sound knowledge of key artistic monuments of the period, as well as a conceptual framework according to which they may organize their knowledge. This class may be repeated for a maximum of 8 credits.

**ARTH 3822 Northern Renaissance Art (4 Credits)**

This course explores the dramatic developments in the arts (particularly panel painting, manuscript illumination and sculpture) in Northern Europe from around 1350 to 1550. From lavishly decorated Books of Hours and the development of stunningly naturalistic oil paintings on panel in the early 15th century through the development of printing and the rise of self-portraiture, genre and landscape depictions, this class traces the important role played by Dutch, Flemish, German and French artists in the transition from late medieval to early modern artistic forms and practices. The role of art in shaping and expressing religious, civic, political and economic concepts are explored, as well as the rise of the social and intellectual standing of the artist. Among the artists examined include Jan van Eyck, Rogier van der Weyden, Albrecht Dürer, Hieronymus Bosch and Pieter Bruegel the Elder.

**ARTH 3823 17th-Century European Art (4 Credits)**

This course considers European arts of the 17th century. Depending upon the quarter it may be a general survey of European art during the seventeenth century or a more focused exploration of a sub-period, such as Italian Baroque or the Old Dutch Masters: Rembrandt, Vermeer and Frans Hals. This class may be repeated for a maximum of 8 credits.

**ARTH 3825 Abstract Expressionism (4 Credits)**

In the years immediately following World War II, American art flourished through a generation of artists whose work successfully moved beyond (and at its best, matched) the substantial innovations of modern artists working in Europe around the time of World War I. From richly varied backgrounds and equipped with a deep understanding of art history, these artists forged careers during the Depression and, though fiercely independent, united in the late 1940s with the goal of establishing a new American modern art. Their monumental, highly singular, expressive abstractions (and near-abstractions) gave rise to the movement called Abstract Expressionism, which dominated American painting in the 1950s and beyond.

**ARTH 3832 19th-Century Art (4 Credits)**

This course surveys the major art movements in Europe from the late 18th century to the end of the 19th century. Major painters, sculptors, printmakers and architects of the following movements will be presented: Neo-classicism, Romanticism, Academic Painting, Realism, the Pre-Raphaelites, Impressionism, Post-Impressionism, Symbolism and Art Nouveau. Their works will be studied in light of the social, political and cultural milieu in which they appeared. Special attention will be paid to representations of race, class, gender and colonialism.

**ARTH 3834 Global Contemporary Art (4 Credits)**

This class explores contemporary art, including but not limited to painting, sculpture, performance art, installations, and new media, through the lenses of identity, the body, time, place, language, and spirituality. These narratives provide threads of continuity across time and place, but we will also focus on individual artistic interpretations as we delve deeper into cultural specificities and audience reception around the world. We will identify and analyze connections between recent art theoretical perspectives and the emergence of various art trends. This course considers the role of the international art market, global art fairs, artist retrospectives, and recent museum and gallery exhibitions as participatory elements in the construction and discussion of contemporary art.

**ARTH 3838 Connoisseurship (4 Credits)**

In this class the historical roots, theoretical and philosophical underpinnings, and actual practice of connoisseurship are studied using objects from the museum's collection.

**ARTH 3839 Topics in Modern Art (4 Credits)**

Selected themes and topics from the 18th century to the present. Topics change, and the course may be repeated to a maximum of 12 credits.

**ARTH 3840 Sacred Arts of Asia (4 Credits)**

This course explores the sacred art and architecture of Asia, including but not limited to India, China, and Japan. Major religious traditions, including Buddhism, Hinduism, and Islam, are viewed through the lens of artistic development; indigenous religious traditions and philosophical constructs, including Shintoism, Daoism, Confucianism, and Bon are also explored for their influence in art, architecture, and visual culture more broadly in and between Asian regions.

**ARTH 3862 Olmec to Aztec: Mesoamerica (4 Credits)**

This course is an introduction to the art and archaeology of the indigenous peoples of Mesoamerica from about 2000 BC to AD 1521. The course explores the early royal art of the Olmec, the colossal pyramids of Teotihuacan, the manuscripts of the Mixtec, and the imperial power of the Aztecs. This class presents a timeline of Mesoamerica and investigates how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. Students will be able to identify and discuss how these elements manifested in the art and architecture of Mesoamerican cultures. Furthermore, the course investigates issues of shamanism, kingship and power, warfare, gender, and human sacrifice.

**ARTH 3863 Kings and Cosmology: Maya Art (4 Credits)**

This course is an introduction to the art and archaeology of the Maya from about 300 BCE to 1200 CE, although the beliefs and traditions of the living Maya will inform this study of the past. The Maya are perhaps the most famous of the several cultures comprising what is known as Mesoamerica. A highly advanced culture, they built soaring temples, carved elaborate portraits of their kings and developed a complex writing system including a calendar. The course explores these things with a constant eye to understanding the Maya worldview, cosmology and daily life. By the conclusion of the class, students should be able to read their intricate pictures, discuss the strategies of powerful Maya rulers and understand how Maya art and architecture reflect their concepts of time and the cosmos.

**ARTH 3864 Buddhism(s) and Arts (4 Credits)**

This survey examines the history, practices, ritual contexts, aesthetics and artistic traditions of Buddhism including architecture, calligraphy, sculpture and painting, in terms of its social and historical context, political and religious functions, as well as issues including artistic production, changing techniques and symbols, and the market/audience. The primary goal is to understand Buddhism as reflected in art and culture.



**ARTH 3867 The Circle and the Four Corners: Native North American Art (4 Credits)**

This course is designed as an introduction to the art and architecture of the native peoples of North America from the earliest signs of humans in North America to the present. Cultures covered include those from the Southwest, the Northwest, the Southeast Ceremonial Complex, the Plains and contemporary Native American artists. By the conclusion of the class, students will understand the cultural sequence and geographic dispersion of native North America. Students will also understand how the various civilizations of North America shared aspects of world-view, cosmology and daily life, and be able to identify and discuss how these elements manifested in the art and architecture of native North American cultures.

**ARTH 3868 Art of the Andes (4 Credits)**

This course is designed as an introduction to the art and architecture of the native Pre-Columbian peoples of the Andes. Cultures covered include Chavin, Nasca, Wari and the Inca.

**ARTH 3871 Women in Art (4 Credits)**

This course considers the roles of women in art and explores the impact of race, class and gender on art produced from the Middle Ages to the present with discussions of women artists, women patrons and images of women. Cross listed with GWST 3871.

**ARTH 3872 Introduction to Conservation (4 Credits)**

This lecture course familiarizes the student with the concepts and challenges of conservation, its role in museums and the care of collections. Specific emphasis is given to the materials, structure, deterioration and preservation of material culture. Field trips to various museums and/or workshops to make appropriate display mounts and storage containers enhance the understanding gained from readings and lectures.

**ARTH 3875 History of Collections (4 Credits)**

This course traces the history of collections from the Renaissance to the present, addressing the interconnections between artists, patrons, dealers, art markets, provenance, connoisseurship and the historical development of museums and private collections. Each week's readings of journal articles and chapters focus on different types of collections or themes, including royal and imperial collections, cabinets of curiosities, excavating and transporting antiquities, British country estates and the Grand Tour, the establishment of national museums, the relationship between American collectors and dealers, ethnographic objects in Western collections, Nazi looting, restorers and forgers, and artists' collections, to name a few.

**ARTH 3880 Mosques and Aniconism: Islamic Art and Architecture 650-1250 (4 Credits)**

What is 'Islamic' in Islamic art? An introduction to art and architecture in the Islamic lands from the days of the Prophet Muhammad in the 7th century until the Mongol conquest of the Middle East in the mid-13th century. The course surveys mosques, palaces, madrasas, and tombs, and also calligraphy, sculpture, ceramics, and painting in historical and literary contexts. It covers a vast geographical area, from Spain in the west to Iran and Central Asia in the east, and discusses both common and unique characteristics of architecture and figurative representations in these regions. Emphasis will be given to the early Islamic period in Greater Syria and to artists' response to Byzantine and Sassanid (pre-Islamic Persian) art and architecture.

**ARTH 3881 Dragons and Sultans: Islamic Art and Architecture 1250-1600 (4 Credits)**

Art and architecture in the Islamic lands from Genghis Khan in the 13th century to the Ottoman Sultan Suleyman the Magnificent in the 16th century. The course consists of three parts. First, it examines the changes that occurred in Islamic art as a result of artists' acquaintance with East Asian art and culture (14th century). Second, it discusses art and architecture in Central Asia and Afghanistan under Timurid rule (late 14th-15th century), followed by an overview of the artistic achievements in the Early Modern Islamic lands under the Ottomans, Safavids, and Mughals (16th century). The course explores works of art in historical, cultural, and literary contexts, and points to the unique characteristics of each geographical region, as well as to pan-Islamic form and content. Among the topics that will be discussed: the architect Sinan and his legacy, the response of Islamic painting to European art, and representations of royal and religious concepts.

**ARTH 3910 Art History Travel (4 Credits)**

A travel course to selected locations to study major monuments and collections of art and architecture. Location and content change. This class may be repeated for a maximum of 8 credits. Prerequisite: instructor's permission.

**ARTH 3991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4301 Seminar in Art History Methods (4 Credits)**

This seminar considers the history of art history and the development of various methods that art historians use to interpret and understand art. Required of all MA candidates in art history.

**ARTH 4302 Research Practicum (4 Credits)**

The major goal of this course is to learn methods and resources for doing primary research in the history of art. In this practicum, students will gain practical research experience by carrying out original research on two projects: research on an object from the DU collection and research on a contemporary artist. Students will learn to track down biographical information, locate and examine works of art, and reconstruct historical context using archival, material, human, and electronic sources. Students will learn to develop research questions, create and follow through on a research strategy, organize research data, and document the research process. This course will help you prepare for many aspects of your graduate papers, including the Master's Research Paper. Required of all MA students in art history.

**ARTH 4312 Seminar: Indigenous American Art (4 Credits)**

Selected topics in Indigenous American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4313 Seminar in Islamic Art (4 Credits)**

Selected topics in Islamic Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4314 Seminar in Medieval Art (4 Credits)**

Selected topics in Medieval Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4321 Seminar in Renaissance Art (4 Credits)**

Selected topics in Renaissance Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4333 Seminar in 20th Century Art (4 Credits)**

Selected topics in 20th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4334 Selected Topics in Contemporary Art (4 Credits)**

Selected topics in contemporary art. Advanced research papers and presentations. Content changes. May be repeated for a maximum of 8 credits.

**ARTH 4336 Seminar in American Art (4 Credits)**

Selected topics in American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4651 Museum Methods and Principles (4 Credits)**

This class surveys the major activities, goals, and organization of the art museum within today's world. Students meet with a variety of museum professionals to discuss the changing dynamics within art museums, as well as ethical and practical issues of museum work. The class reads both classic and current literature on museum issues and practice, and participates in research, collection, and exhibition projects. Required of all M.A. art history students pursuing the Museum Studies option.

**ARTH 4652 Museum Internship (0-10 Credits)**

Arranged internship in student's area of specialization. Students should take ARTH 4651 Museum Methods and Principles first. Prerequisite: instructor's permission.

**ARTH 4801 World Art I for Graduates (0 Credits)**

Survey of World Art Prehistory-1000 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4802 World Art II for Graduates (0 Credits)**

Survey of World Art 1000-1700 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4803 World Art III for Graduates (0 Credits)**

Survey of World Art 1700-present for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4995 Independent Research (4 Credits)**

Students should see their advisor for guidelines regarding the Master's Research Paper class.

## Economics

Office: Sturm Hall, Room 246, 2000 E. Asbury Ave., Denver, CO 80208

Phone: 303-871-2685

Email: Economics@du.edu

### Graduate Education in Economics

If you're looking for a career as a business or government economist, the University of Denver's MA in Economics program offers excellent preparation.

Our MA program helps you build the solid skills and respected credentials that employers want. The degree also prepares students for doctoral studies, particularly if they want to explore alternative approaches and develop further insights about economics before entering doctoral programs.

We also offer a BA/MS dual-degree program ("4+1") for current undergraduate majors at DU. Students who meet the admissions requirements can start taking graduate-level ECON courses during their junior and senior years and will complete the MS in Economics and Social Policy during their fifth year at DU.

For individuals looking for a less committing entrance into graduate studies in Economics, we offer a Specialized Graduate Certificate.

Information for applicants to one of our graduate programs: <https://liberalarts.du.edu/economics/admission-aid/graduate-applicants> (<https://liberalarts.du.edu/economics/admission-aid/graduate-applicants/>)

### Our department's strengths

- Macroeconomics
- Economics of money, banking and finance
- Environmental economics

- Health economics
- International and development economics
- Alternative approaches to economics
- History of economic thought
- Econometrics
- Economics of gender / feminist economics
- Economics of technology and innovation
- Urban economics

## Master of Arts in Economics

- 45 credits of graduate coursework
- Thesis Required

## Masters of science in Economics and Social Policy

- Undergraduate-Graduate Dual-Degree Program for DU Economics Majors
- 45 credits of graduate coursework
- No Thesis Required

## Specialized Graduate Certificate in Economics

- 16 credits of graduate coursework
- No Thesis Required

### Master of Arts in Economics

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Specialized Graduate Certificate in Economics

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Arts in Economics

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Course requirements:</b>		
ECON 4670	Econometrics: Multivariate Regression Analysis for Economists	4
ECON 4020	Adv Macroeconomic Theory	4
ECON 4030	Advanced Microeconomic Theory	4
ECON 4050	Origins of Modern Economics	4
ECON 4993	Thesis Topic Development and Defense	4
ECON 4995	Independent Research	5
<b>Electives</b>		
Students choose 5 graduate-level elective courses (3000-level, if available at GR course, or 4000-level).		20
When considering a 3000-level ECON course, confirm with the instructor that the course can be taken for GR credit.		
<b>Total Credits</b>		<b>45</b>

Minimum number of credits required for the degree: 45

#### Non-coursework Requirements

- Thesis topic development and defense
- Independent research
- Oral defense -The student must defend a thesis in an oral exam and pass it, and then must complete whatever revisions the thesis committee suggests.

### Master of Science in Economics and Social Policy

#### Degree Requirements

Minimum number of credits required for the degree: 45

#### Coursework Requirements

Code	Title	Credits
<b>Course requirements:</b>		
ECON 3670/4670	Econometrics: Multivariate Regression Analysis for Economists <sup>1</sup>	4
ECON 3850/4850	Mathematics for Economists <sup>1</sup>	4
ECON 4020	Adv Macroeconomic Theory	4
ECON 4030	Advanced Microeconomic Theory	4
ECON 4050	Origins of Modern Economics	4
<b>Students take either a comprehensive exam or policy-oriented internship <sup>2</sup></b>		
ECON 4980 or ECON 4994	Internship Comprehensive Exam	1
<b>Electives</b>		
Students choose six graduate-level elective courses <sup>3</sup>		24
<b>Total Credits</b>		<b>45</b>

- <sup>1</sup> All 3000-level courses taken for credit towards the MS must be taken for GR credit: students must inform the instructor and the registrar that course is being taken for GR credit, and students must meet the graduate-level expectations set by the instructor. Student who take ECON 3670 or ECON 3850 for undergraduate (UG) credit meet the course requirement of the MS but need take an additional graduate-level (GR) course to meet the credit requirement.
- <sup>2</sup> The comprehensive exam / internship requirement will be graded P/F and will **not** affect the minimum GPA calculation.
- <sup>3</sup> Elective courses can be 3000-level ECON courses taken for graduate (GR) credit or or 4000-level ECON courses. When taking a 3000-level course, confirm with the instructor the course can be taken for GR credit.

### Non-coursework Requirements

- Demonstrated competency using the tools (including relevant quantitative approaches) and concepts of economics to analyze and assesses social policy options. This is assessed either via a comprehensive exam or a policy impact assessment that the student submits to the department after completion of a policy-oriented internship.

### Admissions Requirements

The MS in Economics and Social Policy is only available as a dual-degree program in combination with the BA in Economics.

- Current undergraduate student at the University of Denver pursuing the BA in Economics (declared first or second major must be economics).
- Completion of *at least* 20 credits worth of ECON courses with a GPA in the Economics major of 3.5 or greater.
- Application must be submitted before the end of first quarter as a senior (before the completion of 135 credits towards the BA degree).
- No GRE or other standardized test required.

## Specialized Graduate Certificate Program

### Specialized Graduate Certificate in Economics

This Specialized Graduate Certificate is earned by taking a combination of foundational theory courses and electives that allow some customization. It certifies that the recipient has graduate-level training in at least one core area of economics (microeconomics or macroeconomics), the historical context which lead to the development of contemporary economic theory and its alternatives, and up to two topical concentrations with current policy implications.

#### Required Coursework

Code	Title	Credits
<b>Required Courses</b>		<b>8</b>
ECON 4050	Origins of Modern Economics	
Choice of either:		
ECON 4020	Adv Macroeconomic Theory	
ECON 4030	Advanced Microeconomic Theory	
<b>Elective Courses</b>		<b>8</b>
Student chooses two (2) graduate-level elective courses. <sup>1</sup>		
<b>Total Credits</b>		<b>16</b>

- <sup>1</sup> 3000-level ECON courses taken for graduate-credit (GR) and 4000-level ECON courses can count as electives. When registering for a 3000-level course, confirm with the instructor that the course can be taken for GR credit.

### Non-Coursework Requirements

Must maintain a cumulative a GPA of 3.0 across ECON courses taken for graduate credit towards completion of the specialized graduate certificate.

### Degree Credits

- Undergraduate credit reduction with dual degree: 20 (163 total undergraduate credits required instead of 183)
- Graduate credits required: 45 (no reduction in graduate credits required for the MS)
- Minimum credits required with dual degree: 208 (total 79 ECON credits)

## Undergraduate Program (years 1-4)

### BA in Economics requirements

#### Course requirements:

ECON 1020	Economics: A Critical Introduction	4
ECON 1030	Introduction to Micro and Macroeconomics	4
ECON 2020	Intermediate Microeconomics	4
ECON 2030	Intermediate Macroeconomics	4

ECON 2050	History of Economic Thought	4
ECON 2670	Quantitative Methods	4
ECON 3990	Capstone: Research, Evaluate, and Report on Living in CO (Capstone: Research, Evaluate, and Report on Living in CO)	2

**Electives**

Two 2000-level (or above) ECON elective courses taken for undergraduate credit	8
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**Graduate-level Electives**

Two graduate-level ECON electives taken for GR credit (may include ECON 3670/ECON 4670 and / or ECON 3850/ECON 4850) Students must notify both the instructor and the registrar when taking a 3000-level course for GR credit.	8
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**Total Credits****42**

Course taken for graduate credit towards the MS requirements while completing the BA in Economics:

**Graduate-level Electives**

Three graduate-level ECON electives taken for GR credit (should include ECON 4670 and / or ECON 4850) Students must notify both the instructor and the registrar when taking a 3000-level course for GR credit.	12
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**Total Credits****12****Plus 1 Year****Remaining MS in Economics and Social Policy requirements****Course requirements:**

ECON 4020	Adv Macroeconomic Theory	4
ECON 4030	Advanced Microeconomic Theory	4
ECON 4050	Origins of Modern Economics	4

Students take either ECON 4670 or ECON 4850 if they have not previously done so	4
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Two graduate-level ECON electives	8
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Students take either a comprehensive exam or policy-oriented internship

ECON 4994 or ECON 4980	Comprehensive Exam Internship	1
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**Total Credits****25****ECON 3040 Marxian Political Economy (4 Credits)**

An exposition of Marx's theory of value through a detailed reading of Capital, vol. I. Excerpts from other readings by Marx, and some of the relevant secondary literature used. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Requires junior standing or above. Cross listed with PHIL 3075.

**ECON 3110 European Economic History (4 Credits)**

The emergence of capitalism from feudal society; the Industrial Revolution, English capitalism; European industrialization; state and economy in capitalism; 20th-century Europe and the global economy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3460 Monetary Theory and Policy (4 Credits)**

Studies the interaction between money and the economy. Examines the workings of the financial institutions and how they affect the economy. Looks at the questions of what serves as money, what determines interest rates, and how the central bank conducts monetary policy and its effect on the performance of the economy. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3480 Money & Financial Markets (4 Credits)**

Examines workings of the money and financial markets and their relation to the monetary system and to the macroeconomy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3500 Economic Development (4 Credits)**

Careful re-examination of the works of the prominent development economists of the immediate postwar decades to critically shed light on the treatment of topical development problems by modern economists. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3590 Urban Economics (4 Credits)**

Covers topics and issues of economic growth and decline in metropolitan areas, emphasizing urban economic issues. A broad range of policy areas is discussed, including labor market policy, welfare reform, housing policy, racial segregation, transportation, and environmental policy, among others. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3600 International Monetary Relations (4 Credits)**

Theory, policy, and history of international organization of money and finance; open-economy macroeconomics: balance of payments, exchange rate dynamics, monetary policy effectiveness. Cross-listed with INTS 3600. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3610 International Trade Theory & Policy (4 Credits)**

Examines topical trade issues confronting the United States, policies proposed to tackle them, and the theoretical underpinnings of these policies. Studies how those policies could affect the less developed countries as determined by the environment established under the World Trade Organization. Prerequisite: ECON 2020 or 2030. Recommended: ECON 2610.

**ECON 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**ECON 3701 Topics in Economics (4 Credits)**

Specialized topics in Economics. Check with the Department of Economics or the Schedule of Classes for further information.

**ECON 3740 Health Economics (4 Credits)**

This course is designed to study the nature of the organization of health care production, delivery and utilization according to economic theory. It introduces the up-to-date problems and issues in the U.S. health care system by studying demand for and supply of health care services, health care production and costs, and market analysis of health care industry. Important parties playing roles in health care industry such as private health insurance firms, physicians, pharmaceutical industry, and hospital services will be studied in detail. In addition, the course deals with the role of government in health care industry and various health care reforms proposed in the U.S. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3830 Topics in Macroeconomics (4 Credits)**

Coverage varies but may include advanced topics in monetary theory, the study of business cycles, or the works of important monetary and macroeconomic theorists. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3900 Growth, Technology and Economic Policy (4 Credits)**

This course will introduce students to innovation dynamics – technological change as the foundation for the growth of and structural changes in economic activity - through the lenses of 1) economic theory, as evolutionary economics, in particular original institutional economics and neo-Schumpeterian economics, as well as Marxian themes around dynamics of change in economies and societies; 2) economic history, to further underline the nature of innovation as a social phenomenon that has impacted technological capability and economic activity, in scope, reach, and level, in societies as well as societies themselves; and 3) economic policy, to emphasize focus areas for the successful support of innovation, and desired innovation, with examples drawing from the economic development process as well as national innovation systems concepts and the role of the public sector as an active participant in economic activity in general. The focus for the course under all three perspectives will be on changes to technological capability, from a social perspective that emphasizes systemic components in the processes of innovating and change. Prerequisite: ECON 2050.

**ECON 3970 Environmental Economics (4 Credits)**

This course examines economic perspectives of environmental and resource problems, ranging from peak oil, food crisis, and climate change. Topics include the property-rights basis of polluting problems, environmental ethics, benefit-cost analysis, regulatory policy, incentive-based regulation, clean technology, population growth and consumption, and sustainable development. Restriction: junior standing. Prerequisite: ECON 2020.

**ECON 3991 Independent Study (1-8 Credits)**

Prerequisites: ECON 1030.

**ECON 3995 Independent Research (1-4 Credits)**

This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor is assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what he/she has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

**ECON 4020 Adv Macroeconomic Theory (4 Credits)**

Determinants of national income and its components and of the level of employment and the general price level; also examines business cycles and alternative macroeconomic theories.

**ECON 4030 Advanced Microeconomic Theory (4 Credits)**

The course covers a broad range of topics in mainstream microeconomic theory, which is based on individual maximizing behavior under constraints. Topics include Games and the role of institutions, General Equilibrium Theory, Externalities, and Incomplete Contracts, and more. The focus of the class is twofold: to understand the modeling foundations and underlying assumptions, and the limitation they imply; and to gain competence working through microeconomic models to evaluate their implications in terms of economic efficiency, social welfare, and distribution.

**ECON 4050 Origins of Modern Economics (4 Credits)**

This course covers the development of economic theory from the decline of the classical school through the emergence of the Keynesian theory and investigates in detail the structure of the neoclassical theory and the degree to which Keynesian economics provides an alternative. We examine why economists thought that certain theoretical frameworks were better than others and what problems still remain.

**ECON 4670 Econometrics: Multivariate Regression Analysis for Economists (4 Credits)**

This course develops the theoretical foundations of ordinary least squares (OLS) regression analysis and teaches students how to specify, estimate, and interpret multivariate regression models. Students have to apply what they have learned using a popular software package used for econometrics and real data. Special topics also covered include regression models that include dummy variables, log-linear models, fixed effects models, a brief discussion of instrumental variables, and an introduction to time-series analysis and forecasting. Cross-listed with ECON 3670.

**ECON 4701 Topics in Economics (4 Credits)**

Specialized topics in Economics.

**ECON 4850 Mathematics for Economists (4 Credits)**

Graduate level equivalent of ECON 3850.

**ECON 4980 Internship (0-1 Credits)**

Students doing an internship and writing an impact assessment report based on their work to demonstrate their understanding of economic theory relevant to the analysis and assessment of social policy to satisfy a MS in Economics and Social Policy degree requirement take this course. This course may also be taken for zero credit by students enrolled in the MA in Economics program who do a degree-related internship. Students must complete one 3000-level ECON course with a passing grade prior to enrollment in ECON 4980.

**ECON 4991 Independent Study (1-10 Credits)****ECON 4993 Thesis Topic Development and Defense (4 Credits)**

This resembles an independent-study where a student will work under the supervision of a professor. The aim is to encourage the student, as s/he completes a certain number of hours of course work, to actively formulate and develop her/his thesis topic, and to formally present and defend it in a thesis workshop scheduled by the Department. A minimum of 20 credit hours of graduate-level course work must be completed. Instructor's permission required.

**ECON 4994 Comprehensive Exam (1 Credit)**

Students taking the comprehensive exam scheduled by the department that tests their understanding of economic theory relevant to the analysis and assessment of social policy to satisfy a MS in Economics and Social Policy degree requirement take this course.

**ECON 4995 Independent Research (1-10 Credits)****Courses****ECON 3040 Marxian Political Economy (4 Credits)**

An exposition of Marx's theory of value through a detailed reading of Capital, vol. I. Excerpts from other readings by Marx, and some of the relevant secondary literature used. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Requires junior standing or above. Cross listed with PHIL 3075.

**ECON 3110 European Economic History (4 Credits)**

The emergence of capitalism from feudal society; the Industrial Revolution, English capitalism; European industrialization; state and economy in capitalism; 20th-century Europe and the global economy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3460 Monetary Theory and Policy (4 Credits)**

Studies the interaction between money and the economy. Examines the workings of the financial institutions and how they affect the economy. Looks at the questions of what serves as money, what determines interest rates, and how the central bank conducts monetary policy and its effect on the performance of the economy. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3480 Money & Financial Markets (4 Credits)**

Examines workings of the money and financial markets and their relation to the monetary system and to the macroeconomy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3500 Economic Development (4 Credits)**

Careful re-examination of the works of the prominent development economists of the immediate postwar decades to critically shed light on the treatment of topical development problems by modern economists. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.



**ECON 3590 Urban Economics (4 Credits)**

Covers topics and issues of economic growth and decline in metropolitan areas, emphasizing urban economic issues. A broad range of policy areas is discussed, including labor market policy, welfare reform, housing policy, racial segregation, transportation, and environmental policy, among others. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3600 International Monetary Relations (4 Credits)**

Theory, policy, and history of international organization of money and finance; open-economy macroeconomics: balance of payments, exchange rate dynamics, monetary policy effectiveness. Cross-listed with INTS 3600. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3610 International Trade Theory & Policy (4 Credits)**

Examines topical trade issues confronting the United States, policies proposed to tackle them, and the theoretical underpinnings of these policies. Studies how those policies could affect the less developed countries as determined by the environment established under the World Trade Organization. Prerequisite: ECON 2020 or 2030. Recommended: ECON 2610.

**ECON 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**ECON 3701 Topics in Economics (4 Credits)**

Specialized topics in Economics. Check with the Department of Economics or the Schedule of Classes for further information.

**ECON 3740 Health Economics (4 Credits)**

This course is designed to study the nature of the organization of health care production, delivery and utilization according to economic theory. It introduces the up-to-date problems and issues in the U.S. health care system by studying demand for and supply of health care services, health care production and costs, and market analysis of health care industry. Important parties playing roles in health care industry such as private health insurance firms, physicians, pharmaceutical industry, and hospital services will be studied in detail. In addition, the course deals with the role of government in health care industry and various health care reforms proposed in the U.S. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

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**ECON 4995 Independent Research (1-10 Credits)**

## Emergent Digital Practices

Office: Sturm Hall, Room 216

Mail Code: 2000 E. Asbury Ave., Denver, CO 80208

Phone: 303-871-7716

Email: [edp@du.edu](mailto:edp@du.edu)

Web Site: [www.du.edu/ahss/edp](http://www.du.edu/ahss/edp) (<http://www.du.edu/ahss/edp/>)

The MA in Emergent Digital Practices combines the pursuit of advanced, investigatory technical media skill-sets with focused research agendas contextualized within a broad liberal arts and digital humanities framework. The MFA in Emergent Digital Practices emphasizes methods and production of creative scholarly research and works shaped by broader art historical and cultural contexts. Students in both of the graduate degree threads of the EDP program will share key critical, theoretical, and historical resources, will be expected to excel in areas of creative expression and hands-on media production, and will be asked to acquire specialized investigatory skills. Students will learn to work together by utilizing advanced technical platforms and facilities combined with opportunities for heightened critical reflection and dialog.

EDP graduate students should strive to develop critical awareness, to articulate deep media literacies, to sustain new creative practices, and to foster outlooks engaged with the world around us. While invested in participatory forms of creation, performance, and interactivity, EDP graduate students are expected to engage in technical experimentation outside the realm of industry standards and creative, as well as critical, undertakings that surpass the limits of single disciplines. Students are also expected to be able to articulate the critical underpinnings of the things they devise and create through writing, speaking, discussion, and critique.

Advanced study in EDP will add scholarly and professional depth to the multiple artistic and cultural practices—both mainstream and alternative—that have developed alongside the powerful, networked, and mobile computing technologies of the 21st century. Advanced research in EDP will provide students with an awareness of broad contexts as well as definitive, professional-level focus and in-depth knowledge of the strategies and collaborative processes for complex, interdisciplinary cultural engagement.

## Master of Arts in Emergent Digital Practices

The EDP MA degree at the University of Denver is unique in that it asks the student to balance the technical and the critical, the practical and the aesthetic. The MA degree is structured to build upon the body of knowledge each student already possesses from his/her undergraduate studies and expand and explore the consequence and possibilities that arise from the inclusion of technology into that field.

The MA student should be able to articulate and demonstrate advanced perspectives on emergent digital practices within interdisciplinary contexts. The MA student should also be able to synthesize knowledge of ideas and practices from across the spectrum of historical and contemporary contexts, focusing not just on making the new, but making the needed. And the MA student's work should demonstrate accomplished means and mechanisms for critically evaluating the cultural dynamics of emergent digital practices.

The MA degree is designed around a two-year coursework structure with two courses being taken during each of the three regular quarters per year and then students have up to three years to complete the non-coursework requirements. It is not unusual for students to be able to have a part-time job (up to 20 hours/week) and still be successful on the program.

## Master of Fine Arts in Emergent Digital Practices

Envisioning and actualizing artworks created with the latest technology – fueled by critical content – that's the EDP MFA program.

While also demonstrating an understanding of Emergent Digital Practices within interdisciplinary contexts, the MFA student should be able to articulate a deep understanding of the art historical and contemporary contexts of art making, especially as they are being shaped by technology and the sciences. The MFA student should be prepared for public engagement through knowledge of the significance of established cultural institutions and frameworks such as galleries, museums, festivals, and other public spaces.

The MFA degree is structured as three years of coursework with students taking an average of three courses during each of the three normal quarters per year and then having up to two years to complete the non-coursework requirements. It is recommended that students pursuing the MFA degree are able to focus full time on their studies without simultaneous employment. The MFA degree is considered a "terminal degree" providing the necessary credentials to teach at an institute of higher education.

## Master of Arts in Emergent Digital Practices

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Fine Arts in Emergent Digital Practices

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- The recommended undergraduate degree is a bachelor of fine arts degree (BFA) in design or studio arts practices with a strong foundation in both traditional and electronic practices. Students with a BA in art or design should have at least 24 credit hours of studio courses such as photography, electronic art, ceramics, painting, drawing, printmaking, sculpture, textiles, etc. as documented in their transcripts. Students with undergraduate degrees other than a BFA may be required to take prerequisite courses at the undergraduate level as a condition of admission.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Emergent Digital Practices

### Master of Arts in Emergent Digital Practices

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Graduate Foundations</b>		<b>12</b>
EDPX 4000	Digital Design Concepts	
EDPX 4010	Emergent Digital Tools	
EDPX 4020	Emergent Digital Cultures	
<b>EDP Electives</b>		<b>24</b>
Select at least 1 EDP Studio and at least 1 EDP Cultures		
Courses meeting Studio/Making requirement:		
EDPX 4100	Programming for Play	
EDPX 4112	Rapid Physical Game Design & Prototyping	
EDPX 4200	Data Visualization	
EDPX 4210	Typographic Landscapes	
EDPX 4250	Making Networks	
EDPX 4270	Making Networked Art	
EDPX 4310	Tangible Interactivity	
EDPX 4320	Interactive Art	
EDPX 4330	Advanced Coding	
EDPX 4340	Designing Social Good	
EDPX 4350	Sustainable Design	
EDPX 4400	Video Art	
EDPX 4410	Advanced Video Art	
EDPX 4430	2.5D Motion	
EDPX 4440	Site-Specific Installation	
EDPX 4450	Visual Programming	
EDPX 4460	Visual Programming II	
EDPX 4490	Expanded Cinema	
EDPX 4500	Sonic Arts	
EDPX 4510	Sonic Arts II	
EDPX 4600	3D Modeling	
EDPX 4610	3D Animation	
EDPX 4620	3D Spaces	
EDPX 4800	Topics in Digital Making	
EDPX 4991	Independent Study <sup>1</sup>	
EDPX 4992	Directed Study <sup>1</sup>	
EDPX 5100	Graduate Critique	

Courses meeting the Cultures requirement:

EDPX 4700	Topics in Digital Cultures	
EDPX 4710	Critical Game Studies	
EDPX 4730	21st Century Digital Art	
EDPX 4740	Performance Cultures	
EDPX 4750	Sound Cultures	
EDPX 4770	Cybercultures	
EDPX 4780	Science Fiction: Digital Culture	
EDPX 4991	Independent Study <sup>1</sup>	
EDPX 4992	Directed Study <sup>1</sup>	

**Research and Methods credits**

EDPX 5700	Research & Theoretical Methods	4
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**Other credits**

EDPX 5800	M.A. Thesis	4-8
or EDPX 5850	M.A. Project	

**Total Credits Required** **48**

<sup>1</sup> Depending on topic or focus

Minimum number of credits required for degree: 48

**Non-coursework Requirements**

- Thesis Requirement: The final form of the published thesis is a combination of a project and a thesis that are conceptually interconnected. Successful completion of the oral defense

OR

- Major Research Paper Requirement: The final form of the major research paper is a combination of a project and a major paper that are conceptually interconnected.

## Master of Fine Arts in Emergent Digital Practices

### Master of Fine Arts in Emergent Digital Practices

**Degree Requirements**

**Coursework Requirements**

Code	Title	Credits
<b>Graduate Foundations</b>		<b>12</b>
EDPX 4000	Digital Design Concepts	
EDPX 4010	Emergent Digital Tools	
EDPX 4020	Emergent Digital Cultures	
<b>Art History/Grad Seminar/Grad EDP Cultures</b>		<b>24</b>
12 hours of ARTH maximum		
EDPX 5000	Graduate Seminar	
ARTH 3834	Global Contemporary Art	
EDP Cultures courses:		
EDPX 4700	Topics in Digital Cultures	
EDPX 4740	Performance Cultures	
EDPX 4750	Sound Cultures	
EDPX 4770	Cybercultures	
EDPX 4710	Critical Game Studies	
EDPX 4730	21st Century Digital Art	
EDPX 4780	Science Fiction: Digital Culture	
EDPX 4991	Independent Study <sup>1</sup>	
EDPX 4992	Directed Study <sup>1</sup>	
<b>Research Methods credits</b>		<b>4</b>
EDPX 5700	Research & Theoretical Methods	

<b>Grad Critique credits</b>		<b>20</b>
EDPX 5100	Graduate Critique	
EDPX 5100	Graduate Critique	
EDPX 5100	Graduate Critique	
EDPX 5100	Graduate Critique	
EDPX 5100	Graduate Critique	
<b>EDP Studio/Make credits</b>		<b>20</b>
EDPX 4100	Programming for Play	
EDPX 4200	Data Visualization	
EDPX 4210	Typographic Landscapes	
EDPX 4250	Making Networks	
EDPX 4270	Making Networked Art	
EDPX 4310	Tangible Interactivity	
EDPX 4320	Interactive Art	
EDPX 4340	Designing Social Good	
EDPX 4350	Sustainable Design	
EDPX 4400	Video Art	
EDPX 4410	Advanced Video Art	
EDPX 4430	2.5D Motion	
EDPX 4440	Site-Specific Installation	
EDPX 4450	Visual Programming	
EDPX 4460	Visual Programming II	
EDPX 4490	Expanded Cinema	
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EDPX 4620	3D Spaces	
EDPX 4800	Topics in Digital Making	
EDPX 4991	Independent Study <sup>1</sup>	
EDPX 4992	Directed Study <sup>1</sup>	
<b>Exhibition credits</b>		<b>12</b>
EDPX 5900	MFA Exhibition	

**Total Credits** **92**

<sup>1</sup> Depending on topic or focus

Minimum number of credits required for the degree: 92

### Non-coursework Requirement

**Exhibition:** Additionally the MFA graduate student should be prepared for the development and organization of emerging venues for the exhibition of, and public engagement through, digital art works and new media. The final form of the MFA exhibition is the creation and public off-campus showcase of a significant body of work coupled with a written analysis of the past present and future of connected ideas, inspirations and critical theories.

### EDPX 4000 Digital Design Concepts (4 Credits)

An introductory course requiring conceptual, perceptual and manual skills to meet rigorous studio research into the history of mark-making, letter forms and layout designs as reflective of cultural, social, political and psychological contexts of interpretation. This class also emphasizes 2-D principles of design, including form, structure, conceptual understanding, visual aesthetics, semiotics, organizational systems, relationships of typography and imagery. Lab fee.

### EDPX 4010 Emergent Digital Tools (4 Credits)

This course serves as a primer on the tools essential to expression, sharing, and creation in digital mediums. This includes knowledge of web technologies, creative coding, video, audio, and the basic historical and theoretical contexts of each. Lab fee.

**EDPX 4020 Emergent Digital Cultures (4 Credits)**

This course familiarizes students with current crucial approaches to understanding digital media and the impacts these media have in personal, community, cultural, social, institutional and international life. The course pays particular attention to cultural constructions of emergent digital media and practices. This course introduces graduate students to a variety of disciplinary lenses and conceptual practices, with readings and research ranging from media theory and studies, philosophy of technology, media archaeology and history, to science fiction studies as approaches to digital media and cultures.

**EDPX 4100 Programming for Play (4 Credits)**

This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Cross listed with EDPX 3100. Prerequisites: EDPX 4000 and EDPX 4010, or permission of the instructor.

**EDPX 4112 Rapid Physical Game Design & Prototyping (4 Credits)**

This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, "Big Games." The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 4000. Lab fee.

**EDPX 4200 Data Visualization (4 Credits)**

This course explores the creation of informational graphics for visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations is also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 3200. Prerequisites: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4210 Typographic Landscapes (4 Credits)**

This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media. This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4270 Making Networked Art (4 Credits)**

In Making Networked Art, students will develop technical skills for creating interactive works that live online. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will work with HTML, CSS, and JavaScript to develop experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 4010, or permission of the instructor. Lab fee. Crosslisted with EDPX 3270.

**EDPX 4310 Tangible Interactivity (4 Credits)**

Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4320 Interactive Art (4 Credits)**

This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta-data/multimedia asset acquisition and authoring environments. While utilizing students' skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 3320. Prerequisites EDPX 4310 or EDPX 4450.

**EDPX 4330 Advanced Coding (4 Credits)**

This course is focused on text-based creative coding for multiple purposes. Specific applications change each quarter and can include mobile apps, computer vision, machine learning, generative art, programming reactive spaces, web animation, and other emerging ideas, all driven by creative coding. Prerequisite: EDPX 4010.

**EDPX 4340 Designing Social Good (4 Credits)**

This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and to then make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross listed with EDPX 3340. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4350 Sustainable Design (4 Credits)**

This course reviews and implements advanced sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/pedagogy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure, among others. Lab fee. Prerequisite: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4370 Biomedica in Emergent Digital Practices (4 Credits)**

The graduate section of Biomedica is an EDP advanced art-science course that will survey and investigate the interplay between new media, biological systems/ technologies and bioethics as they relate to creative inquiry at the juncture of life sciences, digital media and contemporary technoculture. The course will build upon the basic paradigms and platforms of biosemiotics and biomimetics to expand into a coverage of our framing of corporeality, biological/environmental sensibilities and our perceptions and interconnections with biomaterials and lifeforms that we exist thru and within. Course topics will adapt to significant developments in biological sciences, emergent media and bioethics. The course can be repeated for credit with offering of new course topics. EDPX 4370 Graduate students will lead collaborative group projects. Additional graduate assignments will undertake individual biomedica research projects for adding experimental depth to course topics i.e. development of creative tools for transcoding, modeling or bioethics critique. Tools will be demonstrated and made usable in group projects. Cross Listed with EDPX 3370.

**EDPX 4400 Video Art (4 Credits)**

This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor. Cross listed with EDPX 3400.

**EDPX 4410 Advanced Video Art (4 Credits)**

This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on "off-screen" time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into spaces, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 4400 or permission of instructor.

**EDPX 4440 Site-Specific Installation (4 Credits)**

This class produces projects investigating physical space, virtual space and site-specific public installations. Lab fee. Cross listed with EDPX 3440. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4450 Visual Programming (4 Credits)**

This course introduces intuitive visual "programming" that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 3450. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4460 Visual Programming II (4 Credits)**

This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 3460. Prerequisite: EDPX 4450.

**EDPX 4490 Expanded Cinema (4 Credits)**

This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student's multitrack video and audio mixing skills to an emphasis on both performance and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 3490. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4500 Sonic Arts (4 Credits)**

This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 3500. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4600 3D Modeling (4 Credits)**

This course serves as an introduction to 3D modeling, texturing, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of compositing in creating final pieces. Current trends in the field are address through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 3600, MFJS 3600. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4610 3D Animation (4 Credits)**

This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class progresses. Lab fee. Cross listed with EDPX 3610. Prerequisite: EDPX 4600.

**EDPX 4620 3D Spaces (4 Credits)**

An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisites: EDPX 4010 and EDPX 4600, or permission of the instructor.



**EDPX 4700 Topics in Digital Cultures (4 Credits)**

This course provides an in-depth exploration of the emergent digital practices of a particular culture and unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. Prerequisite: varies with topic.

**EDPX 4701 Topics in Emergent Digital Practices (1-4 Credits)**

Topics in Emergent Digital Practices.

**EDPX 4710 Critical Game Studies (4 Credits)**

This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course partially satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee.

**EDPX 4730 21st Century Digital Art (4 Credits)**

An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.

**EDPX 4740 Performance Cultures (4 Credits)**

This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, VJing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enriched performance. Students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab Fee. Prerequisites: EDPX 4010 and EDPX 4020, or permission of the instructor.

**EDPX 4750 Sound Cultures (4 Credits)**

This course explores the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course's emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 4010 and 4020.

**EDPX 4770 Cybercultures (4 Credits)**

This course encompasses a variety of lenses through which to view, evaluate and critique ideas of 'community' and communities in cyberspace (cyber culture). The course covers such issues as: identity and race in cyberspace (including 'identity and racial tourism'); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are 'good' for you and your communities. Cross listed with EDPX 3770. Prerequisite: EDPX 4020.

**EDPX 4780 Science Fiction: Digital Culture (4 Credits)**

This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). Students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 3780. Prerequisite: EDPX 4020 or permission of the instructor.

**EDPX 4800 Topics in Digital Making (4 Credits)**

This course provides an in-depth explorations of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. Lab Fee. Prerequisite: varies with topic.

**EDPX 4980 Internship (0-8 Credits)**

Instructor approval required.

**EDPX 4991 Independent Study (1-8 Credits)**

Independent Study form required.

**EDPX 5000 Graduate Seminar (4 Credits)**

Topics vary. Reading and discussion of critical theory. May include project(s) related to the topic. Course may be repeated up to six times.

**EDPX 5100 Graduate Critique (4 Credits)**

The course focuses on student's creative production. Critiques are moderated by a different faculty member each quarter. Conceptual, methodological and theoretical concerns are stressed. Critiques are designed to assist in the experimentation, preparation and construction of individual art projects. Time is also spent on preparing students for a professional practice in the Arts. Course may be repeated up to six times.

**EDPX 5700 Research & Theoretical Methods (4 Credits)**

This course provides graduate students with the strategies and techniques of research in the area of digital media studies.

**EDPX 5800 M.A. Thesis (4-8 Credits)**

Independent work toward completion of the MA Thesis. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5850 M.A. Project (1-4 Credits)**

Independent work toward completion of the MA Project. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5900 MFA Exhibition (1-12 Credits)**

Independent work toward completion of the MFA Thesis Exhibition. May only be taken with the permission of the Graduate Director. May be taken for up to 12 credit hours.

## Faculty

**Christopher Coleman**, Professor, MFA, University at Buffalo - State University of New York

**William H. Depper**, Teaching Professor, MA, University of Denver

**Rafael A. Fajardo**, Associate Professor, MFA, Rhode Island School of Design

**Kate Hollenbach**, Assistant Professor, MFA, University of California Los Angeles

**Laleh Mehran**, Professor, MFA, Carnegie Mellon University

**Trace E. Reddell**, Professor and Director, PhD, University of Colorado-Boulder

**Timothy Weaver**, Professor, MFA, University of Colorado-Boulder

## Courses

**EDPX 4000 Digital Design Concepts (4 Credits)**

An introductory course requiring conceptual, perceptual and manual skills to meet rigorous studio research into the history of mark-making, letter forms and layout designs as reflective of cultural, social, political and psychological contexts of interpretation. This class also emphasizes 2-D principles of design, including form, structure, conceptual understanding, visual aesthetics, semiotics, organizational systems, relationships of typography and imagery. Lab fee.

**EDPX 4010 Emergent Digital Tools (4 Credits)**

This course serves as a primer on the tools essential to expression, sharing, and creation in digital mediums. This includes knowledge of web technologies, creative coding, video, audio, and the basic historical and theoretical contexts of each. Lab fee.

**EDPX 4020 Emergent Digital Cultures (4 Credits)**

This course familiarizes students with current crucial approaches to understanding digital media and the impacts these media have in personal, community, cultural, social, institutional and international life. The course pays particular attention to cultural constructions of emergent digital media and practices. This course introduces graduate students to a variety of disciplinary lenses and conceptual practices, with readings and research ranging from media theory and studies, philosophy of technology, media archaeology and history, to science fiction studies as approaches to digital media and cultures.

**EDPX 4100 Programming for Play (4 Credits)**

This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Cross listed with EDPX 3100. Prerequisites: EDPX 4000 and EDPX 4010, or permission of the instructor.

**EDPX 4112 Rapid Physical Game Design & Prototyping (4 Credits)**

This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, "Big Games." The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 4000. Lab fee.

**EDPX 4200 Data Visualization (4 Credits)**

This course explores the creation of informational graphics for visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations is also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 3200.

Prerequisites: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4210 Typographic Landscapes (4 Credits)**

This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media.

This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4270 Making Networked Art (4 Credits)**

In Making Networked Art, students will develop technical skills for creating interactive works that live online. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will work with HTML, CSS, and JavaScript to develop experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 4010, or permission of the instructor. Lab fee. Crosslisted with EDPX 3270.

**EDPX 4310 Tangible Interactivity (4 Credits)**

Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4320 Interactive Art (4 Credits)**

This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta-data/multimedia asset acquisition and authoring environments. While utilizing students' skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 3320. Prerequisites EDPX 4310 or EDPX 4450.

**EDPX 4330 Advanced Coding (4 Credits)**

This course is focused on text-based creative coding for multiple purposes. Specific applications change each quarter and can include mobile apps, computer vision, machine learning, generative art, programming reactive spaces, web animation, and other emerging ideas, all driven by creative coding. Prerequisite: EDPX 4010.

**EDPX 4340 Designing Social Good (4 Credits)**

This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and to then make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross listed with EDPX 3340. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4350 Sustainable Design (4 Credits)**

This course reviews and implements advanced sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/pedagogy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure, among others. Lab fee. Prerequisite: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4370 Biomedial in Emergent Digital Practices (4 Credits)**

The graduate section of Biomedial is an EDP advanced art-science course that will survey and investigate the interplay between new media, biological systems/ technologies and bioethics as they relate to creative inquiry at the juncture of life sciences, digital media and contemporary technoculture. The course will build upon the basic paradigms and platforms of biosemiotics and biomimetics to expand into a coverage of our framing of corporeality, biological/environmental sensibilities and our perceptions and interconnections with biomaterials and lifeforms that we exist thru and within. Course topics will adapt to significant developments in biological sciences, emergent media and bioethics. The course can be repeated for credit with offering of new course topics. EDPX 4370 Graduate students will lead collaborative group projects. Additional graduate assignments will undertake individual biomedical research projects for adding experimental depth to course topics i.e. development of creative tools for transcoding, modeling or bioethics critique. Tools will be demonstrated and made usable in group projects. Cross Listed with EDPX 3370.

**EDPX 4400 Video Art (4 Credits)**

This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor. Cross listed with EDPX 3400.

**EDPX 4410 Advanced Video Art (4 Credits)**

This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on "off-screen" time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into spaces, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 4400 or permission of instructor.

**EDPX 4440 Site-Specific Installation (4 Credits)**

This class produces projects investigating physical space, virtual space and site-specific public installations. Lab fee. Cross listed with EDPX 3440. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4450 Visual Programming (4 Credits)**

This course introduces intuitive visual "programming" that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 3450. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4460 Visual Programming II (4 Credits)**

This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 3460. Prerequisite: EDPX 4450.

**EDPX 4490 Expanded Cinema (4 Credits)**

This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student's multitrack video and audio mixing skills to an emphasis on both performance and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 3490. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4500 Sonic Arts (4 Credits)**

This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 3500. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4600 3D Modeling (4 Credits)**

This course serves as an introduction to 3D modeling, texturing, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of compositing in creating final pieces. Current trends in the field are addressed through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 3600, MFJS 3600. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4610 3D Animation (4 Credits)**

This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class progresses. Lab fee. Cross listed with EDPX 3610. Prerequisite: EDPX 4600.

**EDPX 4620 3D Spaces (4 Credits)**

An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisites: EDPX 4010 and EDPX 4600, or permission of the instructor.

**EDPX 4700 Topics in Digital Cultures (4 Credits)**

This course provides an in-depth exploration of the emergent digital practices of a particular culture and unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. Prerequisite: varies with topic.

**EDPX 4701 Topics in Emergent Digital Practices (1-4 Credits)**

Topics in Emergent Digital Practices.

**EDPX 4710 Critical Game Studies (4 Credits)**

This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course partially satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee.

**EDPX 4730 21st Century Digital Art (4 Credits)**

An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.

**EDPX 4740 Performance Cultures (4 Credits)**

This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, VJing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enriched performance. Students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab Fee. Prerequisites: EDPX 4010 and EDPX 4020, or permission of the instructor.

**EDPX 4750 Sound Cultures (4 Credits)**

This course explores the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course's emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 4010 and 4020.

**EDPX 4770 Cybercultures (4 Credits)**

This course encompasses a variety of lenses through which to view, evaluate and critique ideas of 'community' and communities in cyberspace (cyber culture). The course covers such issues as: identity and race in cyberspace (including 'identity and racial tourism'); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are 'good' for you and your communities. Cross listed with EDPX 3770. Prerequisite: EDPX 4020.

**EDPX 4780 Science Fiction: Digital Culture (4 Credits)**

This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). Students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 3780. Prerequisite: EDPX 4020 or permission of the instructor.

**EDPX 4800 Topics in Digital Making (4 Credits)**

This course provides an in-depth exploration of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. Lab Fee. Prerequisite: varies with topic.

**EDPX 4980 Internship (0-8 Credits)**

Instructor approval required.

**EDPX 4991 Independent Study (1-8 Credits)**

Independent Study form required.

**EDPX 5000 Graduate Seminar (4 Credits)**

Topics vary. Reading and discussion of critical theory. May include project(s) related to the topic. Course may be repeated up to six times.

**EDPX 5100 Graduate Critique (4 Credits)**

The course focuses on student's creative production. Critiques are moderated by a different faculty member each quarter. Conceptual, methodological and theoretical concerns are stressed. Critiques are designed to assist in the experimentation, preparation and construction of individual art projects. Time is also spent on preparing students for a professional practice in the Arts. Course may be repeated up to six times.

**EDPX 5700 Research & Theoretical Methods (4 Credits)**

This course provides graduate students with the strategies and techniques of research in the area of digital media studies.

**EDPX 5800 M.A. Thesis (4-8 Credits)**

Independent work toward completion of the MA Thesis. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5850 M.A. Project (1-4 Credits)**

Independent work toward completion of the MA Project. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5900 MFA Exhibition (1-12 Credits)**

Independent work toward completion of the MFA Thesis Exhibition. May only be taken with the permission of the Graduate Director. May be taken for up to 12 credit hours.

# English and Literary Arts

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The Department of English and Literary Arts offers a PhD in English and Literary Arts with concentrations in creative writing and literary studies, as well as an MA with a concentration in literary studies.

Our major areas for dissertation research include creative writing; modern and contemporary British literature; American literature; American multicultural literature and Anglophone literatures; genre studies; and literary theory and rhetoric. We also offer course work in traditional literary fields, cultural studies, ethnic literatures and gender studies.

The University of Denver's Department of English and Literary Arts is small and intimate, with 21 faculty members, all of whom publish widely and seek to translate their expertise into shared learning experiences in and out of the classroom.

Our distinctive curriculum allows students to tailor their degrees to their specific talents and interests. We offer not only typical graduate seminars but also writing workshops, individually designed tutorials and colloquia devoted to teaching and professional development. Such a curriculum encourages students to cross genre boundaries in their writing, to relate theory to practice and to work creatively with scholarly projects.

## Doctor of Philosophy in English and Literary Arts with a Concentration in Creative Writing

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Doctor of Philosophy in English and Literary Arts with a Concentration in Literary Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
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### English Language Proficiency Test Score Requirements

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## Master of Arts in English and Literary Arts with a Concentration in Literary Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Philosophy in English and Literary Arts with a Concentration in Creative Writing

### Degree Requirements

#### Course Requirements

At least 48 hours of foundational course work must be taken as formal ENGL classes, excluding Independent Research (ENGL 4995, ENGL 5995), Independent Study (ENGL 4991, ENGL 5991), and tutorials (ENGL 4100).

Five courses distributed over three literary periods. Students must take at least one course in one period and at least two courses in the other two periods. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee.

Workshops. Students on the Creative Writing track must take three workshops.

Code	Title	Credits
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#### Coursework Requirements

Courses listed below are representative examples. Students may consult the department for additional course options.

##### Before 1700

ENGL 4125	Old English	
ENGL 4150	Special Topics in Medieval Lit	
ENGL 4200	Special Topics-Early Mod Lit	
ENGL 4213	Advanced Studies in Early Modern Literature	
ENGL 4220	Seminar-Studies in Shakespeare	

##### 1700-1900

ENGL 4300	Advanced Studies in 18th Century Literature	
ENGL 4424	Topics in English: 19th Century Literature	
ENGL 4700	Antebellum American Literature	
ENGL 4730	American Romanticism	
ENGL 4732	Spc Tpc: Antebellum Amer Lit	

**After 1900**

ENGL 4600	Adv Studies -20th Cent Lit	
ENGL 4621	Adv Studies-20th C. Literature	
ENGL 4650	Special Topics: 20th Cent Lit	

**Graduate Tutorials (Students may take up to 5 tutorials, 10 credits total)**

ENGL 4100	Graduate Tutorial	
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**Three Graduate Professional Seminars (count towards the 48 hours of course work) 6**

ENGL 4050	The Critical Imagination	2
ENGL 4830	Seminar: Teaching and Writing Literature	
ENGL 4000	Colloquium	

**Three writing workshops 12**

ENGL 4001	Sem Creative Writing-Poetry	
ENGL 4011	Sem Creative Writing-Fiction (ENGL 4011 Sem Creative Writing-Prose)	
or ENGL 4011	Sem Creative Writing-Fiction	
ENGL 4017	Travel Writing	
ENGL 4650	Special Topics: 20th Cent Lit (Translation)	

**Total Credits 90****Minimum number of credits required for the degree: 90 graduate-level quarter hours beyond the master's degree****Non-Course Requirements:**

- Preliminary advancement to candidacy
- Advancement to candidacy
- A dissertation of publishable quality that makes a significant contribution to its field. This will take the form of an extended scholarly and critical work (usually between 150 and 250 pages) OR a creative work (fiction or poetry). The creative dissertation must include a critical preface that situates the dissertation in its literary context.
- Oral defense. When the dissertation is completed, it must be defended by the candidate. For spring quarter graduates, the defense should take place by April 30. Typically no dissertation defenses will be held during the summer quarter. The candidate is therefore advised to set the defense date as far in advance as possible. The defense takes the form of a discussion with the committee concerning the content, context and implications of the work.
- Tool proficiency may be established by completing any one of the following:
  - Successful completion of ENGL 3800 Bibliography and Research Methods class in the Department of English.
  - Successful completion of ENGL 3982 (Writers in the Schools).
  - Successful completion of a graduate translation class (students must secure approval of instructor).
  - Successful completion of Old English (4 credits).
  - Selection and successful completion of a cognate course in another department that will augment specific skills. This course must be approved by the Graduate Committee.

Students may also consult the department for additional Tool proficiency options. The Tool requirement must be completed one quarter before graduation.

- Proposal & Prospectus review. By the end of the Fall quarter of the third year, students must submit a Dissertation Area Proposal to the director of graduate studies. This proposal is a brief description (250-300 words) of the proposed area of the dissertation; it must be signed by at least two dissertation committee members. Before the end of the Winter quarter of the third year of study, all students should complete the prospectus review, which is an oral discussion based on the written dissertation prospectus. The prospectus review is conducted by a committee consisting of the first two readers of the dissertation. The prospectus should be approximately 2,500–3,000 words and should be presented to the faculty readers well in advance of the review. For students concentrating in Creative Writing, the prospectus should discuss the theoretical and generic origins of the project, its methodology and artistic goals.
- Written comprehensive exam. After completing 60 credit hours, including the 48 hours of foundational coursework, doctoral students will take written comprehensive examinations during the week prior to the start of Fall Quarter of their third year of study. Students will be examined in three (out of four) areas of study: (1) an author or major figure; (2) a genre; (3) a period; and (4) a second period or special topic. Students will prepare a reading list for each examination area in consultation with two faculty examiners; the scope of each exam must be approved by the faculty examiners and the graduate director. All lists must be signed by both examiners and submitted to the graduate director by the date published in the department's Graduate Handbook (typically during the first week of May) or the student will not be allowed to take the exam the following fall.



# Doctor of Philosophy in English and Literary Arts with a Concentration in Literary Studies

## Doctor of Philosophy in English and Literary Arts with a Concentration in Literary Studies

### Degree Requirements

#### Course Requirements

At least 48 hours of foundational course work must be taken as formal ENGL classes, excluding Independent Research (ENGL 4995, ENGL 5995), Independent Study (ENGL 4991, ENGL 5991), and tutorials (ENGL 4100).

Five courses distributed over three literary periods. Students must take at least one course in one period and at least two courses in the other two periods. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee.

Code	Title	Credits
<b>Coursework Requirements</b>		
Courses listed below are representative examples. Students may consult the department for additional course options.		
<b>Before 1700</b>		
ENGL 4125	Old English	
ENGL 4150	Special Topics in Medieval Lit	
ENGL 4200	Special Topics-Early Mod Lit	
ENGL 4213	Advanced Studies in Early Modern Literature	
ENGL 4220	Seminar-Studies in Shakespeare	
<b>1700-1900</b>		
ENGL 4300	Advanced Studies in 18th Century Literature	
ENGL 4424	Topics in English: 19th Century Literature	
ENGL 4700	Antebellum American Literature	
ENGL 4730	American Romanticism	
ENGL 4732	Spc Tpc: Antebellum Amer Lit	
<b>After 1900</b>		
ENGL 4600	Adv Studies -20th Cent Lit	
ENGL 4621	Adv Studies-20th C. Literature	
ENGL 4650	Special Topics: 20th Cent Lit	
<b>Graduate Tutorials (Students may take up to 5 tutorials, 10 credits total)</b>		
ENGL 4100	Graduate Tutorial	
<b>Three Graduate Professional Seminars (count towards the 48 hours of course work)</b>		<b>6</b>
ENGL 4050	The Critical Imagination	2
ENGL 4000	Colloquium	
ENGL 4830	Seminar: Teaching and Writing Literature	
<b>Total Credits</b>		<b>90</b>

Minimum number of credits required for the degree: 90 graduate-level quarter hours beyond the master's degree

#### Non-Course Requirements:

- Preliminary advancement to candidacy
- Advancement to candidacy
- A dissertation of publishable quality that makes a significant contribution to its field. This will take the form of an extended scholarly and critical work (usually between 150 and 250 pages).
- Oral defense. When the dissertation is completed, it must be defended by the candidate. For spring quarter graduates, the defense should take place no later than April 30. Typically no dissertation defenses will be held during the summer quarter. The candidate is therefore advised to set the defense date as far in advance as possible. The defense takes the form of a discussion with the committee concerning the content, context and implications of the work.
- Tool proficiency may be established by completing one of the following:
  - Successful completion of ENGL 3800 Bibliography and Research Methods class in the Department of English.
  - Successful completion of ENGL 3982 (Writers in the Schools).
  - Successful completion of a graduate translation class (students must secure approval of instructor).
  - Successful completion of Old English (4 credits).

- Selection and successful completion of a cognate course in another department that will augment specific skills. This course must be approved by the Graduate Committee.

Students may also consult the department for additional Tool proficiency options. The Tool requirement must be completed one quarter before graduation.

- Proposal & Prospectus review. By the end of the Fall quarter of the third year, students must submit a Dissertation Area Proposal to the director of graduate studies. This proposal is a brief description (250-300 words) of the proposed area of the dissertation; it must be signed by at least two dissertation committee members. Before the end of the Winter quarter of the third year of study, all students should complete the prospectus review, which is an oral discussion based on the written dissertation prospectus. The prospectus review is conducted by a committee consisting of the first two readers of the dissertation. The prospectus should be approximately 2,500–3,000 words and should be presented to the faculty readers well in advance of the review.
- Written comprehensive exam. After completing 60 credit hours, including the 48 hours of foundational coursework, doctoral students will take written comprehensive examinations during the week prior to the start of Fall Quarter of their third year of study. Students will be examined in three (out of four) areas of study: (1) an author or major figure; (2) a genre; (3) a period; and (4) a second period or special topic. Students will prepare a reading list for each examination area in consultation with two faculty examiners; the scope of each exam must be approved by the faculty examiners and the graduate director. All lists must be signed by both examiners and submitted to the graduate director by the date published in the department's Graduate Handbook (typically during the first week of May) or the student will not be allowed to take the exam the following fall.

## Master of Arts in English and Literary arts with a Concentration in Literary Studies

### Master of Arts in English and Literary arts with a Concentration in Literary Studies

#### Degree Requirements

##### Course Requirements

- 45 hours of course credit, up to 13 hours of which may be taken in graduate tutorials (ENGL 4100), independent research (ENGL 4995) and/or cognate courses outside the department.
- All course work for the MA should be taken at the University of Denver, but, in rare exceptions, a maximum of 10 credit hours may be transferred to count for the requirements if approved by the director of graduate studies and meet the University's transfer of credit policy.
- While students have no specific course requirements beyond the 32-hour minimum within the Department of English and the 13 hours of tutorials or cognate courses, they are advised to work closely with an adviser to determine a balance between coverage and focus. Students may only take two approved 3000 level courses (ENGL 3800 and 3982) in the Department of English. Registration for any other ENGL 3000 level class must be made by special petition to be approved by the full Graduate Committee. Courses must be completed within three years of enrollment (excluding ENGL 4995).

Code	Title	Credits
<b>Coursework Requirements</b>		
Minimum of 32 classroom hours (eight courses) is required.		
Up to 13 credits may be taken in graduate tutorials (ENGL 4100), independent research (ENGL 4995) and/or cognate courses outside the department.		
<b>Total Credits</b>		<b>45</b>

Minimum number of credits required for the degree: 45

#### Non-Course Requirements

- Advancement to candidacy
- A thesis of at least 18,000 words. The thesis for an MA in literary studies is either a single scholarly/critical essay or two 30-page scholarly/critical essays. The thesis adviser must approve a prospectus for the thesis.
- Oral Defense. The defense takes the form of a discussion on the content, context and implications of the work.

#### ENGL 3000 Advanced Creative Writing-Poetry (4 Credits)

Technique, writing practice and criticism.

#### ENGL 3001 Advanced Creative Writing-Poetry (4 Credits)

Technique, writing practice and criticism.

#### ENGL 3002 Advanced Creative Writing-Poetry (4 Credits)

Technique, writing practice and criticism.

#### ENGL 3003 Advanced Creative Writing-Poetry (4 Credits)

Technique, writing practice and criticism.

#### ENGL 3010 Advanced Creative Writing-Fiction (4 Credits)

Technique, writing practice and criticism.

**ENGL 3011 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3012 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3013 Adv Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3015 Advanced Creative Writing: Non-Fiction (4 Credits)****ENGL 3017 Travel Writing-Fiction & Fact (4 Credits)**

A study of European, American and other narratives of travel. This course examines relevant postcolonial and literary theories of travel and nationhood.

**ENGL 3040 Introduction to Publishing (4 Credits)**

Cross listed with ENGL 2040, MFJS 3140.

**ENGL 3121 Chaucer: Canterbury Tales (4 Credits)**

Life, culture, language and literary trends of Chaucer's age as reflected in "The Canterbury Tales".

**ENGL 3320 Oral Literature and Orality in Literature (4 Credits)**

The term "oral literature" generally refers to narratives and poems (including songs) performed and disseminated orally from one generation to the other. Oral literature is, in some respects, the foundational 'text' of written literature. The questions that we explore in this course include: How did oral literature develop, and what are the characteristics? How has oral literature been shaped by time and place? How is it distinct from as well as related to written literature? To answer these questions, we explore different forms of oral literature and also study the use of orality in written literature. Our studies involve the examination of material and texts from different parts of the world.

**ENGL 3402 Early Romantics (4 Credits)****ENGL 3405 Postmodern Visions of Israel (4 Credits)**

This course investigates how representation of Israel as a modernist utopia have been replaced in contemporary literature with images of Israel as a dystopia. The class discusses the historical context that gave rise to visions of an idealized Israel, and the role the Hebrew language played in consolidating and connecting narration to nation. Next the class considers how belles-lettres from recent decades have reimagined Israel as a series of multilingual "multiverses." A selection of fiction translated from Hebrew forms the core of class reading. Theoretical exploration of postmodernism help us conceptualize the poetics of postmodern literature. No knowledge of Israeli history or Jewish culture is necessary to succeed in this course. Cross listed with JUST 3405.

**ENGL 3706 Writing the American West (4 Credits)**

Explores historical and contemporary writing produced in and about the American West.

**ENGL 3711 20th-Century American Fiction (4 Credits)**

Fiction, poetry, drama, and non-fiction on selected themes by 20th and 21st century American writers. Topics for study may include issues related to regionalism, ethnicity and gender, as well as specific social and historical concerns.

**ENGL 3730 Literature and Medicine: Addiction and Modernity (4 Credits)**

This course introduces students to accounts of substance use and addiction from the nineteenth century through the present day. We will examine canonical and contemporary literary texts, medical writings, visual representations, smartphone applications, and films alongside topics such as liberalism, inequality, imperial expansion, consumerism, "digital drugs," and the pathologization of addiction. We will consider our readings in light of the following questions: What role do substance use and addiction play in constructing the modern self and society? What can representations of addiction teach us about our relationship with the external world? How does addiction act as a metaphor, a narrative device, or even a political sign? How do gender, class, and race affect narratives of addiction? How do accounts of addiction interact with philosophical texts, medical treatises, and imperial and colonial discourses? In addition to writing critical essays, students will evaluate smartphone addiction treatment apps and devise a creative project on a topic relevant to this course.

**ENGL 3731 Topics in English (1-4 Credits)****ENGL 3732 Topics in English (1-4 Credits)****ENGL 3733 Topics in English (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**ENGL 3742 Jesus in Jewish Literature (4 Credits)**

This course surveys literary depictions of Jesus in Jewish literature. Readers are often surprised to learn that throughout the twentieth century and into the twenty-first century, major Jewish writers have incorporated the figure of Jesus of Nazareth into their work. This class explores the historical, aesthetic, and spiritual reasons for the many Jewish literary representations of Jesus and of his literary foil, Judas. A selection of materials including short stories, poems, novels, scholarly essays and polemics in English and in translation from Hebrew and Yiddish demonstrate the depth of Jewish literary culture's engagement with Jesus' life and teachings. Among the many writers we will read are: S.Y. Agnon, Sholem Asch, Uri Zvi Greenberg, Haim Hazaz, Emma Lazarus, Amos Oz, Philip Roth, and L. Shapiro. Ultimately, this class will consider how literary representations of Jesus can destabilize perceived distinctions between Jews and Christians. While helpful, no knowledge of Jewish languages, religious tradition, or cultural practice is necessary to succeed in this course. This course is cross-listed as JUST 3742.

**ENGL 3743 Modern Jewish Literature (4 Credits)**

Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with JUST 3743.

**ENGL 3744 African American Literature (4 Credits)**

This course examines fiction, poetry, autobiography, and drama by African American writers, with strong consideration on the socio-historical conditions that gave rise to and continue to inform this literary tradition.

**ENGL 3800 Bibliography/Research Method (4 Credits)****ENGL 3803 Modernism/Postmodernism (4 Credits)****ENGL 3813 History and Structure of the English Language (4 Credits)**

A composite course studying both the structure of modern English and the history of the English language.

**ENGL 3815 Studies in Rhetoric (4 Credits)**

This course will examine the history and principles of rhetoric and how they pertain to theory and practice in the field of composition and rhetoric.

**ENGL 3817 History of Rhetoric (4 Credits)****ENGL 3818 Composition Theory (4 Credits)****ENGL 3819 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 3200.

**ENGL 3821 Literary Criticism: 19th Century-Present (4 Credits)****ENGL 3822 Literary Criticism: 20th Century (4 Credits)**

Critical methods and philosophies of 20th-century critics; their relationship to traditions.

**ENGL 3823 Interpretation Theory (4 Credits)****ENGL 3825 Cultural Criticism (4 Credits)**

Cross listed with ENGL 2835.

**ENGL 3852 Topics in Poetics (4 Credits)****ENGL 3982 Writers in the Schools (2,4 Credits)**

This course operates mostly "in the field." Following the models of California Poets in the Schools and Teachers & Writers Collaborative, students are in training with a poet-in-residence, observing him as he conducts a residency in a public school. In addition, we have our own meetings to discuss pedagogy, classroom practices and management, teacher-writer relations, and all other necessary logistical planning. Placement in public schools is facilitated by Denver SCORES, an education program dedicated to increasing literacy in Denver's at-risk school population. For those wishing to work with middle or high school students, or in other community settings (e.g., homeless or women's shelters), special arrangements can be made. This course is a collaborative effort between CO Humanities, Denver SCORES, and the University of Denver.

**ENGL 3991 Independent Study (1-17 Credits)****ENGL 3995 Independent Research (1-10 Credits)****ENGL 4000 Colloquium (2 Credits)****ENGL 4001 Sem Creative Writing-Poetry (4 Credits)****ENGL 4009 Seminar -- Creative Nonfiction (4 Credits)**

Advanced writing and study of creative nonfiction, including prose development and structure.

**ENGL 4011 Sem Creative Writing-Fiction (4 Credits)****ENGL 4012 History/Theory of Genre-Poetry (4 Credits)****ENGL 4017 Travel Writing (4 Credits)****ENGL 4050 The Critical Imagination (2 Credits)**

This graduate level course explores poetry, fiction, and criticism as different facets of the imagination. This is a large and a necessarily vaguely defined topic. But in the world of literary studies, creativity and criticism are clearly symbiotic. Reading and writing are connected activities. The poet or fiction writer is often a critic, and there are numerous treatments of interpretation in the critical canon suggesting that the act of reading and interpreting is itself an imaginative and creative act. The course explores genre signatures and possibilities, as well as provides an introduction to some of the analytics through which texts, literary and otherwise, are interpreted.

**ENGL 4100 Graduate Tutorial (2-4 Credits)****ENGL 4120 Beowulf (4 Credits)**

Reading and translation of the Old English Beowulf. Prerequisite: ENGL 4125.

**ENGL 4125 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 4120.

**ENGL 4150 Special Topics in Medieval Lit (4 Credits)****ENGL 4200 Special Topics-Early Mod Lit (4 Credits)****ENGL 4210 Holocaust Literature (4 Credits)**

This seminar presents a multidisciplinary and transnational approach to literature of the Holocaust. Students consider memoir, fiction, and poetry drawn from a variety of national literatures and linguistic traditions. Works written by victims, survivors and 'witnesses through the imagination' are all considered. These readings are supplemented by secondary texts, including historical and philosophical materials, as well as relevant works from the social sciences.

**ENGL 4213 Advanced Studies in Early Modern Literature (4 Credits)****ENGL 4220 Seminar-Studies in Shakespeare (4 Credits)****ENGL 4300 Advanced Studies in 18th Century Literature (4 Credits)****ENGL 4424 Topics in English: 19th Century Literature (4 Credits)**

Special Topics courses will explore specific topics within historical periods, single authors, or theoretical/critical/ scholarly issues.

**ENGL 4510 ISL Dharamsala: Tibet, Global Citizenship, & Community Literacies (4 Credits)**

ISL Dharamsala presents DU students with the unique opportunity to study international community literacies as a practical component of global citizenship through service-learning placements and study in Dharamsala, India. Home of the Dalai Lama and the Tibetan government-in-exile, Dharamsala is a multi-generational community located in the northern Indian foothills of the Himalayas. During fall quarter, students will study community literacies in the practice of global citizenship and service while immersed in the geo-political, religious, and other contexts experienced by Tibetans in exile. During their time in Dharamsala, cultural immersion and a service-learning placement will give students insight into the complexities of social justice issues and cultural nuances they have been studying and provide opportunities to contribute to local and global society through informed and reflective practice.

**ENGL 4511 Translingualism and Multilingualism (4 Credits)**

The course starts with an introduction to the field of Translation Studies and Practice but continues to focus on two particular aspects of the field: translingualism and multilingualism. We delve into the various phenomena of language porousness, such as linguistic elements existing in and moving across multiple languages as well as language users morphing multiple languages or navigating between several. We discuss theoretical debates about these phenomena and their impact on the praxis of translating and writing, in the context of language pedagogy and creative practices. We also study examples of creative work that embody translingualism and multilingualism to different extents using various methodologies. Students write critically in conversation with the theoretical material and create their own works implementing and exploring linguistic porousness offered by translingualism and multilingualism.

**ENGL 4600 Adv Studies -20th Cent Lit (4 Credits)****ENGL 4621 Adv Studies-20th C. Literature (2-4 Credits)**

This course will offer (and be required of) graduate students an advanced foundation in 20th century literature; the primary texts and their cultural/historical/ theoretical contexts.

**ENGL 4650 Special Topics: 20th Cent Lit (4 Credits)****ENGL 4660 The Black Imagination (4 Credits)**

Focusing mainly on Africa, Asia, Europe, and the Americas (especially the USA and the Caribbean/Latin America), this course explores and connects aspects of the black imagination. These aspects include oral performances, thought systems, literature, art, cinema, and critical discourses in different eras and in various places. Studied together, these existential and intellectual signposts provide an expanded insight into black (African and African diasporic) aesthetics from an intercontinental and an interdisciplinary perspective.

**ENGL 4675 Theories of Narrative: Formalism, Narratology, Cybertext (4 Credits)**

This class traces developments in narrative theory from Russian Formalism through "classical" narratology and on to examine the border between traditional narrative texts and texts that require a higher degree of interactivity, sometimes called "cyber texts." The goal is to identify significant contributions to narrative theory and to suggest the possibilities for the future of the field. Seminal articles, key works, and critical introductions survey key advances in narrative theory to present an overview of the field from its inception to contemporary trends.

**ENGL 4700 Antebellum American Literature (4 Credits)****ENGL 4701 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4702 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4730 American Romanticism (4 Credits)****ENGL 4732 Spc Tpc: Antebellum Amer Lit (4 Credits)****ENGL 4743 Black Feminist Criticism (4 Credits)**

This course examines the discursive reach of black feminist criticism by journeying into the creative terrain of literature, visual art, music, and performance produced by black women in the United States and throughout the black diaspora, from the nineteenth century to the present.

**ENGL 4830 Seminar: Teaching and Writing Literature (2-4 Credits)****ENGL 4840 Topics in Composition Studies (2-4 Credits)**

Each offering of this course focuses on specific issues in theory, research, or pedagogy within the broad field of composition studies. Examples of topics include the development of writing abilities; genre theory and composing; multimodal texts and their intersections and disjunctions of rhetoric and composition; the history of composing theories and practices; realms of composing, including the academic, civic, vocational, aesthetic, and interpersonal; institutional formations and settings of composing; discourse theories; stylistics; race, gender, class and composing; and so on.

**ENGL 4851 Publishing Institute (6 Credits)****ENGL 4852 Dissertation Colloquium (2 Credits)**

This two-credit dissertation colloquium is offered in the winter and spring for third-year PhD students in English who are in the process of researching and writing their dissertations. In addition to having weekly presentations and discussions of work in progress, the group will peruse prefaces and introductions to former English Department dissertations, write and abstract for their own dissertation, and possibly revise and send out a piece from their dissertation. The class is open to both literary studies and creative writing students. Restricted to doctoral students in English.

**ENGL 4991 Independent Study (1-17 Credits)****ENGL 4995 Independent Research (1-17 Credits)****ENGL 5991 Independent Study (1-17 Credits)****ENGL 5995 Independent Research (1-17 Credits)****ENGL 5999 American Literary Marketplace (0-2 Credits)**

"American Literary Marketplace" bridges the culture of writing within the Department of English and Literary Arts with the culture of publishing in the United States. As an experiential learning course, it offers graduate students a formal, structured opportunity—as an internship, externship, or cooperative educational experience, depending on the student's need—to deepen their writing practice and enact curricular learning outside and beyond the literary classroom.

**Courses****ENGL 3000 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3001 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3002 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3003 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3010 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3011 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3012 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3013 Adv Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3015 Advanced Creative Writing: Non-Fiction (4 Credits)****ENGL 3017 Travel Writing-Fiction & Fact (4 Credits)**

A study of European, American and other narratives of travel. This course examines relevant postcolonial and literary theories of travel and nationhood.

**ENGL 3040 Introduction to Publishing (4 Credits)**

Cross listed with ENGL 2040, MFJS 3140.

**ENGL 3121 Chaucer: Canterbury Tales (4 Credits)**

Life, culture, language and literary trends of Chaucer's age as reflected in "The Canterbury Tales".

**ENGL 3320 Oral Literature and Orality in Literature (4 Credits)**

The term "oral literature" generally refers to narratives and poems (including songs) performed and disseminated orally from one generation to the other. Oral literature is, in some respects, the foundational 'text' of written literature. The questions that we explore in this course include: How did oral literature develop, and what are the characteristics? How has oral literature been shaped by time and place? How is it distinct from as well as related to written literature? To answer these questions, we explore different forms of oral literature and also study the use of orality in written literature. Our studies involve the examination of material and texts from different parts of the world.

**ENGL 3402 Early Romantics (4 Credits)****ENGL 3405 Postmodern Visions of Israel (4 Credits)**

This course investigates how representation of Israel as a modernist utopia have been replaced in contemporary literature with images of Israel as a dystopia. The class discusses the historical context that gave rise to visions of an idealized Israel, and the role the Hebrew language played in consolidating and connecting narration to nation. Next the class considers how belles-lettres from recent decades have reimagined Israel as a series of multilingual "multiverses." A selection of fiction translated from Hebrew forms the core of class reading. Theoretical exploration of postmodernism help us conceptualize the poetics of postmodern literature. No knowledge of Israeli history or Jewish culture is necessary to succeed in this course. Cross listed with JUST 3405.

**ENGL 3706 Writing the American West (4 Credits)**

Explores historical and contemporary writing produced in and about the American West.

**ENGL 3711 20th-Century American Fiction (4 Credits)**

Fiction, poetry, drama, and non-fiction on selected themes by 20th and 21st century American writers. Topics for study may include issues related to regionalism, ethnicity and gender, as well as specific social and historical concerns.

**ENGL 3730 Literature and Medicine: Addiction and Modernity (4 Credits)**

This course introduces students to accounts of substance use and addiction from the nineteenth century through the present day. We will examine canonical and contemporary literary texts, medical writings, visual representations, smartphone applications, and films alongside topics such as liberalism, inequality, imperial expansion, consumerism, "digital drugs," and the pathologization of addiction. We will consider our readings in light of the following questions: What role do substance use and addiction play in constructing the modern self and society? What can representations of addiction teach us about our relationship with the external world? How does addiction act as a metaphor, a narrative device, or even a political sign? How do gender, class, and race affect narratives of addiction? How do accounts of addiction interact with philosophical texts, medical treatises, and imperial and colonial discourses? In addition to writing critical essays, students will evaluate smartphone addiction treatment apps and devise a creative project on a topic relevant to this course.

**ENGL 3731 Topics in English (1-4 Credits)****ENGL 3732 Topics in English (1-4 Credits)****ENGL 3733 Topics in English (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**ENGL 3742 Jesus in Jewish Literature (4 Credits)**

This course surveys literary depictions of Jesus in Jewish literature. Readers are often surprised to learn that throughout the twentieth century and into the twenty-first century, major Jewish writers have incorporated the figure of Jesus of Nazareth into their work. This class explores the historical, aesthetic, and spiritual reasons for the many Jewish literary representations of Jesus and of his literary foil, Judas. A selection of materials including short stories, poems, novels, scholarly essays and polemics in English and in translation from Hebrew and Yiddish demonstrate the depth of Jewish literary culture's engagement with Jesus' life and teachings. Among the many writers we will read are: S.Y. Agnon, Sholem Asch, Uri Zvi Greenberg, Haim Hazaz, Emma Lazarus, Amos Oz, Philip Roth, and L. Shapiro. Ultimately, this class will consider how literary representations of Jesus can destabilize perceived distinctions between Jews and Christians. While helpful, no knowledge of Jewish languages, religious tradition, or cultural practice is necessary to succeed in this course. This course is cross-listed as JUST 3742.

**ENGL 3743 Modern Jewish Literature (4 Credits)**

Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with JUST 3743.

**ENGL 3744 African American Literature (4 Credits)**

This course examines fiction, poetry, autobiography, and drama by African American writers, with strong consideration on the socio-historical conditions that gave rise to and continue to inform this literary tradition.

**ENGL 3800 Bibliography/Research Method (4 Credits)****ENGL 3803 Modernism/Postmodernism (4 Credits)****ENGL 3813 History and Structure of the English Language (4 Credits)**

A composite course studying both the structure of modern English and the history of the English language.

**ENGL 3815 Studies in Rhetoric (4 Credits)**

This course will examine the history and principles of rhetoric and how they pertain to theory and practice in the field of composition and rhetoric.

**ENGL 3817 History of Rhetoric (4 Credits)****ENGL 3818 Composition Theory (4 Credits)****ENGL 3819 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 3200.

**ENGL 3821 Literary Criticism: 19th Century-Present (4 Credits)****ENGL 3822 Literary Criticism: 20th Century (4 Credits)**

Critical methods and philosophies of 20th-century critics; their relationship to traditions.

**ENGL 3823 Interpretation Theory (4 Credits)****ENGL 3825 Cultural Criticism (4 Credits)**

Cross listed with ENGL 2835.

**ENGL 3852 Topics in Poetics (4 Credits)****ENGL 3982 Writers in the Schools (2,4 Credits)**

This course operates mostly "in the field." Following the models of California Poets in the Schools and Teachers & Writers Collaborative, students are in training with a poet-in-residence, observing him as he conducts a residency in a public school. In addition, we have our own meetings to discuss pedagogy, classroom practices and management, teacher-writer relations, and all other necessary logistical planning. Placement in public schools is facilitated by Denver SCORES, an education program dedicated to increasing literacy in Denver's at-risk school population. For those wishing to work with middle or high school students, or in other community settings (e.g., homeless or women's shelters), special arrangements can be made. This course is a collaborative effort between CO Humanities, Denver SCORES, and the University of Denver.

**ENGL 3991 Independent Study (1-17 Credits)****ENGL 3995 Independent Research (1-10 Credits)****ENGL 4000 Colloquium (2 Credits)****ENGL 4001 Sem Creative Writing-Poetry (4 Credits)****ENGL 4009 Seminar -- Creative Nonfiction (4 Credits)**

Advanced writing and study of creative nonfiction, including prose development and structure.

**ENGL 4011 Sem Creative Writing-Fiction (4 Credits)****ENGL 4012 History/Theory of Genre-Poetry (4 Credits)****ENGL 4017 Travel Writing (4 Credits)****ENGL 4050 The Critical Imagination (2 Credits)**

This graduate level course explores poetry, fiction, and criticism as different facets of the imagination. This is a large and a necessarily vaguely defined topic. But in the world of literary studies, creativity and criticism are clearly symbiotic. Reading and writing are connected activities. The poet or fiction writer is often a critic, and there are numerous treatments of interpretation in the critical canon suggesting that the act of reading and interpreting is itself an imaginative and creative act. The course explores genre signatures and possibilities, as well as provides an introduction to some of the analytics through which texts, literary and otherwise, are interpreted.

**ENGL 4100 Graduate Tutorial (2-4 Credits)****ENGL 4120 Beowulf (4 Credits)**

Reading and translation of the Old English Beowulf. Prerequisite: ENGL 4125.

**ENGL 4125 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 4120.

**ENGL 4150 Special Topics in Medieval Lit (4 Credits)****ENGL 4200 Special Topics-Early Mod Lit (4 Credits)****ENGL 4210 Holocaust Literature (4 Credits)**

This seminar presents a multidisciplinary and transnational approach to literature of the Holocaust. Students consider memoir, fiction, and poetry drawn from a variety of national literatures and linguistic traditions. Works written by victims, survivors and 'witnesses through the imagination' are all considered. These readings are supplemented by secondary texts, including historical and philosophical materials, as well as relevant works from the social sciences.

**ENGL 4213 Advanced Studies in Early Modern Literature (4 Credits)****ENGL 4220 Seminar-Studies in Shakespeare (4 Credits)****ENGL 4300 Advanced Studies in 18th Century Literature (4 Credits)****ENGL 4424 Topics in English: 19th Century Literature (4 Credits)**

Special Topics courses will explore specific topics within historical periods, single authors, or theoretical/critical/ scholarly issues.

**ENGL 4510 ISL Dharamsala: Tibet, Global Citizenship, & Community Literacies (4 Credits)**

ISL Dharamsala presents DU students with the unique opportunity to study international community literacies as a practical component of global citizenship through service-learning placements and study in Dharamsala, India. Home of the Dalai Lama and the Tibetan government-in-exile, Dharamsala is a multi-generational community located in the northern Indian foothills of the Himalayas. During fall quarter, students will study community literacies in the practice of global citizenship and service while immersed in the geo-political, religious, and other contexts experienced by Tibetans in exile. During their time in Dharamsala, cultural immersion and a service-learning placement will give students insight into the complexities of social justice issues and cultural nuances they have been studying and provide opportunities to contribute to local and global society through informed and reflective practice.



**ENGL 4511 Translingualism and Multilingualism (4 Credits)**

The course starts with an introduction to the field of Translation Studies and Practice but continues to focus on two particular aspects of the field: translingualism and multilingualism. We delve into the various phenomena of language porousness, such as linguistic elements existing in and moving across multiple languages as well as language users morphing multiple languages or navigating between several. We discuss theoretical debates about these phenomena and their impact on the praxis of translating and writing, in the context of language pedagogy and creative practices. We also study examples of creative work that embody translingualism and multilingualism to different extents using various methodologies. Students write critically in conversation with the theoretical material and create their own works implementing and exploring linguistic porousness offered by translingualism and multilingualism.

**ENGL 4600 Adv Studies -20th Cent Lit (4 Credits)****ENGL 4621 Adv Studies-20th C. Literature (2-4 Credits)**

This course will offer (and be required of) graduate students an advanced foundation in 20th century literature; the primary texts and their cultural/historical/ theoretical contexts.

**ENGL 4650 Special Topics: 20th Cent Lit (4 Credits)****ENGL 4660 The Black Imagination (4 Credits)**

Focusing mainly on Africa, Asia, Europe, and the Americas (especially the USA and the Caribbean/Latin America), this course explores and connects aspects of the black imagination. These aspects include oral performances, thought systems, literature, art, cinema, and critical discourses in different eras and in various places. Studied together, these existential and intellectual signposts provide an expanded insight into black (African and African diasporic) aesthetics from an intercontinental and an interdisciplinary perspective.

**ENGL 4675 Theories of Narrative: Formalism, Narratology, Cybertext (4 Credits)**

This class traces developments in narrative theory from Russian Formalism through "classical" narratology and on to examine the border between traditional narrative texts and texts that require a higher degree of interactivity, sometimes called "cyber texts." The goal is to identify significant contributions to narrative theory and to suggest the possibilities for the future of the field. Seminal articles, key works, and critical introductions survey key advances in narrative theory to present an overview of the field from its inception to contemporary trends.

**ENGL 4700 Antebellum American Literature (4 Credits)****ENGL 4701 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4702 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4730 American Romanticism (4 Credits)****ENGL 4732 Spc Tpc: Antebellum Amer Lit (4 Credits)****ENGL 4743 Black Feminist Criticism (4 Credits)**

This course examines the discursive reach of black feminist criticism by journeying into the creative terrain of literature, visual art, music, and performance produced by black women in the United States and throughout the black diaspora, from the nineteenth century to the present.

**ENGL 4830 Seminar: Teaching and Writing Literature (2-4 Credits)****ENGL 4840 Topics in Composition Studies (2-4 Credits)**

Each offering of this course focuses on specific issues in theory, research, or pedagogy within the broad field of composition studies. Examples of topics include the development of writing abilities; genre theory and composing; multimodal texts and their intersections and disjunctions of rhetoric and composition; the history of composing theories and practices; realms of composing, including the academic, civic, vocational, aesthetic, and interpersonal; institutional formations and settings of composing; discourse theories; stylistics; race, gender, class and composing; and so on.

**ENGL 4851 Publishing Institute (6 Credits)****ENGL 4852 Dissertation Colloquium (2 Credits)**

This two-credit dissertation colloquium is offered in the winter and spring for third-year PhD students in English who are in the process of researching and writing their dissertations. In addition to having weekly presentations and discussions of work in progress, the group will peruse prefaces and introductions to former English Department dissertations, write and abstract for their own dissertation, and possibly revise and send out a piece from their dissertation. The class is open to both literary studies and creative writing students. Restricted to doctoral students in English.

**ENGL 4991 Independent Study (1-17 Credits)****ENGL 4995 Independent Research (1-17 Credits)****ENGL 5991 Independent Study (1-17 Credits)****ENGL 5995 Independent Research (1-17 Credits)****ENGL 5999 American Literary Marketplace (0-2 Credits)**

"American Literary Marketplace" bridges the culture of writing within the Department of English and Literary Arts with the culture of publishing in the United States. As an experiential learning course, it offers graduate students a formal, structured opportunity—as an internship, externship, or cooperative educational experience, depending on the student's need—to deepen their writing practice and enact curricular learning outside and beyond the literary classroom.

# Lamont School of Music

Office: Robert & Judi Newman Center for the Performing Arts

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Phone: 303-871-6400

Email: [musicadmissions@du.edu](mailto:musicadmissions@du.edu)

Web Site: <http://www.du.edu/lamont> (<http://www.du.edu/lamont/>)

With its wide array of degrees and certificates, outstanding faculty, and superior facilities, the Lamont School of Music is one of the most distinguished music programs in the United States.

If the words dedication, discipline, enthusiasm, and desire define your musical aspirations, then you'll find exciting opportunities at the University of Denver. The Lamont School of Music will lend resonance to your musical career, as well as surrounding you with other talented students and a rich cultural environment in Denver.

The Lamont School of Music offers MM programs with concentrations in composition, conducting, pedagogy, and performance, as well as MA programs in music theory and musicology. We offer certificates with concentrations in conducting, jazz studies, music entrepreneurship, music theory pedagogy, orchestral studies, performance, piano pedagogy, and Suzuki pedagogy. Online certificates include performance & recording and production, performance & composition, and performance & orchestral audition preparation. We also offer artist diploma programs with a concentrations in conducting and performance.

The faculty is composed of professors and instructors who actively perform, compose, publish, and lecture worldwide. The Lamont School of Music is located in the Robert and Judi Newman Center for the Performing Arts, a 186,000-square-foot state-of-the-art facility opened in 2002 and officially inaugurated in 2003. The Newman Center includes an academic building, a 225-seat recital hall, a 1,000-seat concert/opera hall, and a 250-seat flexible theater. The academic building is replete with teaching studios, practice rooms (some of which are digitally enhanced as "virtual" acoustic practice rooms), large rehearsal spaces, a music library, a digital keyboard laboratory, two recording studios, an electronic music lab, classrooms with smart-to-the-seat technology, and an 80-seat recital salon.

## Master of Arts in Music with a Concentration in Music Theory

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites:

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### Other Required Materials

- To be considered for a Theory GTA, please submit the syllabi from your undergraduate theory courses and ask your recommenders to comment on your teaching abilities, or potential. Please upload the syllabi to your application as a miscellaneous document. Note that we may ask candidates for GTA positions to take a keyboard and sight-reading test via Zoom.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Music with a Concentration in Musicology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Music in Music with a Concentration in Composition

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### Other Required Materials

- Classical Emphasis: Portfolio requirements for classical composition can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/composition-studio/>).
- Jazz Emphasis: Audition and portfolio requirements for jazz composition can be found on the **Lamont School of Music website** (<https://liberalarts.du.edu/lamont/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Music with a Concentration in Conducting

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### Other Required Materials

- Orchestral conducting applicants must submit a pre-screening audition through the online application by December 15, 2023. Those who advance to the final round will complete a live audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/conducting-studio/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Music with a Concentration in Pedagogy

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### Other Required Materials

- All applicants must schedule and complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/content/string/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Music with a Concentration in Performance

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: [musicadmission@du.edu](mailto:musicadmission@du.edu), phone: 303.871.6973).

### Other Required Materials

- All applicants must complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music (Artist Diploma Program) with a Concentration in Conducting

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- Orchestral conducting applicants must submit a pre-screening audition through the online application by December 15, 2023. Those who advance to the final round will complete a live audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/conducting-studio/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music (Artist Diploma Program) with a Concentration in Performance

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- Applicants must submit a pre-screening video (25 minutes of performance, unedited) by December 15, 2023.

If accepted to the final round, candidates will be invited to campus to give a live mini-recital, open to public, on Sunday, February 11, 2024. The program should be 25 minutes in length and the applicant must briefly introduce one item on their program to the audience (accommodations can be requested for this requirement).

Both the pre-screening audition video and the live audition should consist of a program that accurately represents the full scope of your abilities.

For more information, click here (<https://liberalarts.du.edu/lamont/academics-admissions/programs-gr/certificate-artist-diploma-performance/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music with a Concentration in Conducting

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- Orchestral conducting applicants must submit a pre-screening audition through the online application by December 15, 2023. Those who advance to the final round will complete a live audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/conducting-studio/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Jazz Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must schedule and complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/jazz-studio/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music with a Concentration in Orchestral Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must schedule and complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 60
- Minimum IELTS Score: 6.0
- Minimum C1 Advanced Score: 169
- Minimum Duolingo English Test Score: 95

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music with a Concentration in Performance

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must schedule and complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 60
- Minimum IELTS Score: 6.0
- Minimum C1 Advanced Score: 169
- Minimum Duolingo English Test Score: 95

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Music Theory Pedagogy

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must have an undergraduate degree with a major in music, including Music Theory and Aural Skills coursework.

### Other Required Materials

- Copies of your undergraduate theory syllabi, including the undergraduate theory core and any advanced courses. Current or former DU undergraduate students are exempt from this requirement.
- Applicants must schedule the Graduate Music Theory Proficiency Exam. Current or former DU students can meet this requirement by having previously received a qualifying score on this exam OR having completed MUAC 3935 Graduate Music Theory Review.
- All applicants must schedule an interview with the Theory Department faculty.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Suzuki Pedagogy

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.



- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must schedule and complete an audition. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/content/string/>).
- Applicants applying for the University of Denver Suzuki Cello or Violin Certificate program, are required to receive acceptance for teaching training through the Suzuki Association of the Americas guidelines. The Suzuki Association is responsible for all Suzuki teacher training that takes place in the Americas and approves and supports the University of Denver Lamont School of Music as a university long-term training center for Suzuki Method Violin and Cello. A video of your performance must be sent in to the Suzuki Association. For audition guidelines, please visit the Suzuki Association Website (<http://suzukiassociation.org/teachers/guides/audition/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate in Performance and Composition

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must submit a recorded video audition and schedule a live Zoom audition. Audition requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).
- You are encouraged, but not required, to submit a portfolio of 1-3 original compositions.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 60
- Minimum IELTS Score: 6.0
- Minimum CAE Score: 169
- Minimum Duolingo English Test Score: 95

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate in Performance and Orchestral Audition Preparation

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the

baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must submit a recorded video audition and schedule a live Zoom interview. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 60
- Minimum IELTS Score: 6.0
- Minimum CAE Score: 169
- Minimum Duolingo English Test Score: 95

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Performance and Recording and Production

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Required Materials

- All applicants must submit a recorded video audition and schedule a live Zoom interview. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).
- You are encouraged, but not required, to submit an audio recording that you have engineered or produced. Include a written explanation of the production techniques you used.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 60
- Minimum IELTS Score: 6.0
- Minimum CAE Score: 169
- Minimum Duolingo English Test Score: 95

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Specialized Graduate Certificate in Piano Pedagogy

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Applicants without an undergraduate degree in music must complete additional requirements. Please contact the Lamont Admission Office for details (email: musicadmission@du.edu, phone: 303.871.6973).

**Other Required Materials**

- All applicants must complete an audition. Applicants may choose to either audition in person in Denver OR submit a recorded video audition and complete a Zoom interview. Audition information and requirements can be found on the Lamont School of Music website (<https://liberalarts.du.edu/lamont/academics/studios/>).
- Applicants must also submit a 20-minute video of their teaching and complete an interview with the piano pedagogy faculty.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Specialized Certificate in Music Entrepreneurship****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Specialized Certificate in Music Theory Pedagogy****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Applicants must have an undergraduate degree with a major in music, including Music Theory and Aural Skills coursework.

**Other Requirements**

- Copies of your undergraduate theory syllabi, including the undergraduate theory core and any advanced courses. Current or former DU undergraduate students are exempt from this requirement.

- Applicants must schedule the Graduate Music Theory Proficiency Exam. Current or former DU students can meet this requirement by having previously received a qualifying score on this exam OR having completed MUAC 3935 Graduate Music Theory Review.
- All applicants must schedule an interview with the Theory Department faculty.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts Degree Programs

### Master of Arts in Music with a Concentration in Music Theory

#### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Concentration Area</b>		
Music Theory courses (One course in Music Theory or Musicology/Ethnomusicology must be at the 4XXX level.)		12
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4121	Seminar in Music Theory	
MUAC 4801	Introduction to Schenkerian Analysis	
Other courses as approved by department		
MUAC 4995	Independent Research	5
<b>Other Studies in Music</b>		
MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
Musicology/Ethnomusicology courses (One course in Music Theory or Musicology/Ethnomusicology must be at the 4XXX level.)		8
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 4161	Topics in Modern Opera	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	

MUAC 4512	Stories of Music History
MUAC 4513	Wagner and the Ideology of the Artwork
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon
MUAC 4519	Social Justice and Community Music Making
MUAC 4520	Topics in Hindustani Music
MUAC 4521	Topics in Baroque Music
MUAC 4535	Baroque Opera on Stage
MUAC 4536	Musics of the African Diaspora
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship
MUAC 4538	Cultural and Psychological History of the African American Spiritual
MUAC 4539	Music, Politics, and Policy
MUAC 4540	Music and Activism
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s
Other courses as approved by the department	

**Electives** **16**

3XXX or 4XXX courses

Note: Students may complete a maximum of 8 credits in graduate departments outside of the Lamont School of Music.

**Total Credits** **45**

Minimum number of credits required for degree: 45 credits

**Non-coursework requirements (see below and the Lamont Student Handbook for more details)**

- Proficiency Examinations:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of superior graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.
- Thesis: A scholarly paper of publishable quality.
- Final Oral Comprehensive Examination, including defense of the thesis.

## Master of Music Degree Programs

### Master of Music with a Concentration in Composition

A Master of Music in Music with a concentration in Composition has two emphases: Classical or Jazz.

Degree requirements

**Coursework requirements**

Code	Title	Credits
<b>Concentration Area</b>		
Complete the following course each quarter until 12 credits are met.		
MUPR 4920 & 4920 & 4920 & 4920 & 4920 & 4920	Composition and Composition and Composition and Composition and Composition and Composition	12
<b>Emphases</b>		
Students must select one of two emphases (Classical or Jazz):		
<b>A. Classical Emphasis</b>		
MUAC 3124 & 3124 & 3124 & 3124 & 3124 & 3124	Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar and Composition Seminar	6

Music Theory or Composition courses (At least four credits must be at the 4XXX level.)		12
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 3578	Advanced Composition	
MUAC 3910	Orchestration	
MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4090	Model Composition	
MUAC 4121	Seminar in Music Theory	
MUAC 4801	Introduction to Schenkerian Analysis	
Other courses as approved by the department		
MUEN 3XXX	Ensembles (Must register/participate in one per quarter as assigned. See Lamont Student Handbook for details.)	0
B. Jazz Emphasis		
MUEN 3XXX	Ensembles (Must register/participate in two per quarter as assigned. See Lamont Student Handbook for details.)	6
MUAC, MUEN, MUPR 3XXX or 4XXX	Courses from the Jazz Studies curriculum, selected in consultation with the student's faculty advisor.	12
<b>Other Studies in Music</b>		
Both emphases complete all of the following courses:		
MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
Musicology/Ethnomusicology course		4
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 3521	Topics in World Music	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4350	Talam: Rhythmic Form and Process in South Indian Music	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	

MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
Other courses as approved by the department		
MUAC 3XXX or MUAC 4XXX	Music Theory course	4
<b>Electives</b>		
Select either a Classical or Jazz emphasis.		
Classical Emphasis		
3XXX or 4XXX courses		8
Note: Students may complete a maximum of 8 credits in graduate departments outside of the Lamont School of Music.		
Jazz Emphasis		
MUAC 3XXX or MUAC 4XXX	Musicology/Ethnomusicology/Music Theory/Composition courses	4
3XXX or 4XXX course		4
Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.		
<b>Total Credits</b>		<b>50</b>

Minimum number of credits required for degree: 50 credits

#### Non-coursework requirements

- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.
- Composer's Series Concerts (Classical Emphasis Only): Submission of at least one composition for every end-of-quarter Composer's Series concert.
- Composition Portfolio (Jazz Emphasis Only): Submission of a final composition portfolio.
- Final Examination:
  - Classical Emphasis: Final Written Examination and Final Oral Comprehensive Examination.
  - Jazz Emphasis: Final Written Project and Final Oral Comprehensive Examination.

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## Master of Music with a Concentration in Conducting

The Master of Music with a concentration in Conducting degree has three emphases: Choral, Orchestral, or Wind.

### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Concentration Area</b>		
Complete the following course each quarter until 12 credits are met.		
MUPR 4930 & 4930 & 4930 & 4930 & 4930 & 4930	Conducting and Conducting and Conducting and Conducting and Conducting and Conducting	12
<b>Emphasis</b>		
Students must select one of the three emphases (Choral, Orchestral or Wind):		
A. Choral Emphasis		

Complete all of the following courses:

MUAC 3960	Advanced Orchestral Conducting	2
MUAC 3962	Advanced Wind Conducting	2
MUAC 3684	Choral Literature I	2
MUAC 3689	Choral Literature II	2
MUEN 3712 & 3712 & 3712 & 3712 & 3712	Lamont Chorale and Lamont Chorale and Lamont Chorale and Lamont Chorale and Lamont Chorale	6

Select either the Choral Pedagogy sequence or the Vocal Pedagogy sequence: 4

MUAC 3686 & MUAC 3688	Choral Pedagogy I and Choral Pedagogy II	
MUAC 3240 & MUAC 3241	Vocal Pedagogy I and Vocal Pedagogy II (& 2 credits of upper-division area electives approved by faculty advisor)	

#### B. Orchestral Emphasis

Complete all of the following courses:

MUAC 3961	Advanced Choral Conducting	2
MUAC 3962	Advanced Wind Conducting	2
MUAC 3959	Movement and Expression for Conductors	4
MUAC 3XXX or 4XXX	Course in orchestral literature	4
MUEN 3760 & 3760 & 3760 & 3760 & 3760 & 3760	Lamont Symphony Orchestra and Lamont Symphony Orchestra and Lamont Symphony Orchestra and Lamont Symphony Orchestra and Lamont Symphony Orchestra and Lamont Symphony Orchestra	6

#### C. Wind Emphasis

Complete all of the following courses:

MUAC 3960	Advanced Orchestral Conducting	2
MUAC 3961	Advanced Choral Conducting	2
MUAC 3959	Movement and Expression for Conductors	4
MUAC 3973	Advanced Wind Literature I	2
MUAC 3974	Advanced Wind Literature II	2
MUEN 3752 & 3752 & 3752 & 3752 & 3752 & 3752	Lamont Wind Ensemble and Lamont Wind Ensemble and Lamont Wind Ensemble and Lamont Wind Ensemble and Lamont Wind Ensemble and Lamont Wind Ensemble	6

#### Other Studies in Music

All emphases complete all of the following courses:

MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
Musicology/Ethnomusicology course		4
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 3521	Topics in World Music	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4350	Talam: Rhythmic Form and Process in South Indian Music	



MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond
MUAC 4493	Approaches to American Popular Music
MUAC 4494	Music and Belief in World Cultures
MUAC 4498	Music, Dance, and Everyday Life in South Asia
MUAC 4499	Topics in Musicology
MUAC 4511	Mahler and Musical Culture
MUAC 4512	Stories of Music History
MUAC 4513	Wagner and the Ideology of the Artwork
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon
MUAC 4519	Social Justice and Community Music Making
MUAC 4520	Topics in Hindustani Music
MUAC 4521	Topics in Baroque Music
MUAC 4535	Baroque Opera on Stage
MUAC 4536	Musics of the African Diaspora
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship
MUAC 4538	Cultural and Psychological History of the African American Spiritual
MUAC 4539	Music, Politics, and Policy
MUAC 4540	Music and Activism
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s
Other courses as approved by the department	
Music Theory course	
MUAC 3023	Rhythm & Meter in Music
MUAC 3025	Topics in Analysis: Brahms
MUAC 3026	Sonata Form: Performance, Analysis, and History
MUAC 3027	Arranging for the Classical Musician
MUAC 4002	Form and Analysis
MUAC 4006	Post-Tonal Theory: Mode/Rhythm
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style
MUAC 4009	Tonal Counterpoint
MUAC 4010	Pedagogy of Music Theory
MUAC 4014	Music-Theoretical Approaches to Popular Music
MUAC 4121	Seminar in Music Theory
MUAC 4801	Introduction to Schenkerian Analysis
Other courses as approved by department	
<b>Electives</b>	
All emphases complete all of the following courses:	
MUAC 3XXX or MUAC 4XXX	Musicology/Ethnomusicology/Music Theory/Composition course
MUAC 3023	Rhythm & Meter in Music
MUAC 3025	Topics in Analysis: Brahms
MUAC 3026	Sonata Form: Performance, Analysis, and History
MUAC 3027	Arranging for the Classical Musician
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology
MUAC 3502	Gender & Genre in World Music
MUAC 3521	Topics in World Music
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music
MUAC 3578	Advanced Composition
MUAC 3847	Hip-Hop: Theory and Practice
MUAC 3910	Orchestration
MUAC 4002	Form and Analysis
MUAC 4006	Post-Tonal Theory: Mode/Rhythm
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism

MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4090	Model Composition	
MUAC 4121	Seminar in Music Theory	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
MUAC 4801	Introduction to Schenkerian Analysis	
3XXX or 4XXX	Course	4

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

**Total Credits** **50**

Minimum number of credits required for degree: 50 credits

**Non-coursework requirements (see below and the Lamont Student Handbook for more details)**

- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.
- Recital: One full-length conducting recital. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.
- Final Written Examination.
- Final Oral Comprehensive Examination.

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## Master of Music with a Concentration in Pedagogy

The Master of Music in Music with a concentration in Pedagogy has two emphases: Suzuki Cello or Suzuki Violin.

**Degree requirements****Coursework requirements**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Emphasis</b>		
Select either the Suzuki Cello or Suzuki Violin emphasis.		
1. Suzuki Cello Pedagogy Emphasis		
Students will register for MUPR 4270 each quarter until 12 credits are met.		
MUPR 4270 & 4270 & 4270 & 4270 & 4270 & 4270	Violoncello and Violoncello and Violoncello and Violoncello and Violoncello and Violoncello	12
MUAC 3463 & MUAC 3464 & MUAC 3465	Suzuki Cello Seminar I and Suzuki Cello Seminar I and Suzuki Cello Seminar I	6
MUAC 3466 & MUAC 3467 & MUAC 3468	Suzuki Cello Seminar II and Suzuki Cello Seminar II and Suzuki Cello Seminar II	6
MUAC 3439	Teaching Note Reading	2
MUAC 3460 & 3460 & 3460	Suzuki Cello Practicum and Suzuki Cello Practicum and Suzuki Cello Practicum	3
MUEN 3XXX	Ensembles (Must register/participate in two ensembles per quarter as assigned. See Lamont Student Handbook for details.)	6
2. Suzuki Violin Pedagogy Emphasis		
Students will register for MUPR 4250 each quarter until 12 credits are met.		
MUPR 4250 & 4250 & 4250 & 4250 & 4250 & 4250	Violin and Violin and Violin and Violin and Violin and Violin	12
MUAC 3470 & MUAC 3471 & MUAC 3472	Suzuki Violin Seminar I and Suzuki Violin Seminar I and Suzuki Violin Seminar I	6
MUAC 3282 & MUAC 3283 & MUAC 3284	Suzuki Violin Seminar II and Suzuki Violin Seminar II and Suzuki Violin Seminar II	6
MUAC 3439	Teaching Note Reading	2
MUAC 3477 & 3477 & 3477	Suzuki Violin Practicum and Suzuki Violin Practicum and Suzuki Violin Practicum	3
MUEN 3XXX	Ensembles (Must register/participate in two ensembles per quarter as assigned. See Lamont Student Handbook for details.)	6
<b>Other Studies in Music</b>		
All emphases complete all of the following courses:		
MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
Musicology/Ethnomusicology course		4
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 4160	Issues in Opera History and Adaptation	

MUAC 4161	Topics in Modern Opera
MUAC 4300	Topics in Jazz History
MUAC 4519	Social Justice and Community Music Making
MUAC 4350	Talam: Rhythmic Form and Process in South Indian Music
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond
MUAC 4493	Approaches to American Popular Music
MUAC 4494	Music and Belief in World Cultures
MUAC 4498	Music, Dance, and Everyday Life in South Asia
MUAC 4499	Topics in Musicology
MUAC 4511	Mahler and Musical Culture
MUAC 4512	Stories of Music History
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon
MUAC 4513	Wagner and the Ideology of the Artwork
MUAC 4520	Topics in Hindustani Music
MUAC 4521	Topics in Baroque Music
MUAC 4535	Baroque Opera on Stage
MUAC 4536	Musics of the African Diaspora
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship
MUAC 4538	Cultural and Psychological History of the African American Spiritual
MUAC 4539	Music, Politics, and Policy
MUAC 4540	Music and Activism
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s
Other courses as approved by the department	

## Music Theory course

4

MUAC 3023	Rhythm & Meter in Music
MUAC 3025	Topics in Analysis: Brahms
MUAC 3026	Sonata Form: Performance, Analysis, and History
MUAC 3027	Arranging for the Classical Musician
MUAC 4002	Form and Analysis
MUAC 4006	Post-Tonal Theory: Mode/Rhythm
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style
MUAC 4009	Tonal Counterpoint
MUAC 4010	Pedagogy of Music Theory
MUAC 4014	Music-Theoretical Approaches to Popular Music
MUAC 4121	Seminar in Music Theory
MUAC 4801	Introduction to Schenkerian Analysis
Other courses as approved by the department	

**Electives**

All emphases complete all of the following courses:

MUAC 3XXX or MUAC 4XXX	Musicology/Ethnomusicology/Music Theory/Composition course	4
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3578	Advanced Composition	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 3910	Orchestration	

MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4090	Model Composition	
MUAC 4121	Seminar in Music Theory	
MUAC 4801	Introduction to Schenkerian Analysis	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
3XXX or 4XXX	Course	4
Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.		
<b>Total Credits</b>		<b>55</b>

Minimum number of credits required for the degree: 55 credits

**Non-coursework requirements (see below and the Lamont Student Handbook for more details)**

- Proficiency Exams:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.
- Recital: One full-length performance recital. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.
- Final Teaching Demonstration.
- Final Oral Comprehensive Exam.

## Master of Music with a Concentration in Performance

The Master of Music in Music with a concentration in Performance has several emphases: Bassoon, Carillon, Cello, Clarinet, Double Bass, Flute, Guitar, Harp, Horn, Jazz (Double Bass, Drums, Guitar, Piano, Trombone, Trumpet, Voice, or Woodwinds), Oboe, Organ, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, or Voice.

### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Concentration Area</b>		
All emphases must complete all of the following courses:		
MUPR 4XXX	Applied Lessons (students will register for applied lessons each quarter until 12 credits are met.)	12
MUEN 3XXX	Ensembles (Must register/participate in ensembles per quarter as assigned. See Lamont Student Handbook for details.)	6
Select one of the instrument emphases.		12
<b>A. Bassoon</b>		
MUAC 3761 & MUAC 3762	Pedagogy & Repertoire Bassoon and Pedagogy & Repertoire Bassoon	
3XXX or 4XXX: Area elective		
<b>B. Carillon</b>		
MUAC 3698	Carillon History and Mechanics	
MUAC 3700	Carillon Repertoire	
MUAC 3700	Carillon Repertoire	
<b>C. Cello</b>		
MUAC 3730 or MUAC 3463 & MUAC 3464	Pedagogy & Repertoire Cello Suzuki Cello Seminar I and Suzuki Cello Seminar I	
MUAC 3650 or MUAC 3465 & MUAC 3466	Orchestral Excerpts-Cello Suzuki Cello Seminar I and Suzuki Cello Seminar II	
3XXX or 4XXX: Area elective		
<b>D. Clarinet</b>		
MUAC 3751 & MUAC 3752	Pedagogy & Repertoire Clarinet and Pedagogy & Repertoire Clarinet	
3XXX or 4XXX: Area elective		
<b>E. Double Bass</b>		
MUAC 3655	Orchestral Excerpts-Bass	
MUAC 3733	Pedagogy & Rep Double Bass	
3XXX or 4XXX: Area elective		
<b>F. Flute</b>		
MUAC 3748 & MUAC 3749	Pedagogy & Repertoire Flute and Pedagogy & Repertoire Flute	
3XXX or 4XXX: Area elective		
<b>G. Guitar</b>		
Select one of the following options:		
MUAC 3724 & 3724	Pedagogy & Repertoire Guitar and Pedagogy & Repertoire Guitar	
3XXX or 4XXX: Area elective		
<b>OR</b>		
MUAC 4050 & MUAC 4051 & MUAC 4052	Major Adv Repertoire Guitar and Major Adv Repertoire Guitar and Major Adv Repertoire Guitar	
3XXX or 4XXX: Area elective		
<b>H. Harp</b>		
MUAC 3736 & MUAC 3737	Pedagogy & Repertoire Harp and Pedagogy & Repertoire Harp	

3XXX or 4XXX: Area elective

## I. Horn

MUAC 3662                      Orchestral Studies for Brass

MUAC 3708                      Pedagogy &amp; Repertoire Horn

MUAC 3765                      Professional Brass Techniques

3XXX or 4XXX: Area elective

## J. Jazz

Jazz emphasis in Double Bass, Drums, Guitar, Piano, Trombone, Trumpet, Voice, or Woodwinds

Courses from the Jazz Studies curriculum selected in consultation with student's faculty advisor.

## K. Oboe

MUAC 3757                      Pedagogy & Repertoire Oboe  
& MUAC 3758                      and Pedagogy & Repertoire Oboe

3XXX or 4XXX: Area elective

## L. Organ

MUPR 3350                      Organ Improvisation  
& 3350                              and Organ Improvisation  
& 3350                              and Organ ImprovisationMUAC 3738                      Pedagogy & Repertoire Organ  
& MUAC 3739                      and Pedagogy & Repertoire Organ  
& MUAC 3740                      and Pedagogy & Repertoire Organ

## M. Percussion

MUAC 3718                      Pedagogy & Repertoire Percussion  
& MUAC 3719                      and Pedagogy & Repertoire Percussion

3XXX or 4XXX: Area elective

## N. Piano

Select one of the following options:

MUAC 3822                      Piano Repertoire I  
& MUAC 3823                      and Piano Repertoire II  
& MUAC 3824                      and Piano Repertoire III

Sequence required if equivalent courses were not completed in the undergraduate degree.

MUAC 3XXX or 4XXX           Advanced Keyboard Repertoire course

## OR

MUAC 3XXX or MUAC 4XXX   Advanced Keyboard Repertoire courses

3XXX or 4XXX: Area elective

## O. Saxophone

MUAC 3754                      Pedagogy & Repertoire Saxophone  
& MUAC 3755                      and Pedagogy & Repertoire Saxophone

3XXX or 4XXX: Area elective

## P. Trombone

MUAC 3662                      Orchestral Studies for Brass

MUAC 3712                      Pedagogy &amp; Repertoire Trombone

MUAC 3765                      Professional Brass Techniques

3XXX or 4XXX: Area elective

## Q. Trumpet

MUAC 3662                      Orchestral Studies for Brass

MUAC 3742                      Pedagogy &amp; Repertoire Trumpet

MUAC 3765                      Professional Brass Techniques

3XXX or 4XXX: Area elective

## R. Tuba

MUAC 3662                      Orchestral Studies for Brass

MUAC 3706                      Pedagogy &amp; Repertoire Tuba

MUAC 3765                      Professional Brass Techniques

3XXX or 4XXX: Area elective

## S. Viola

MUAC 3661 & MUAC 3663	Orchestral Excerpts Viola and Orchestral Excerpts, Viola II	
3XXX or 4XXX: Area elective		
T. Violin		
MUAC 3470 & MUAC 3471	Suzuki Violin Seminar I and Suzuki Violin Seminar I	
MUAC 3660 or MUAC 3472 & MUAC 3282	Orchestral Excerpts-Violin Suzuki Violin Seminar I and Suzuki Violin Seminar II	
3XXX or 4XXX: Area elective		
U. Voice		
MUAC 3810 & MUAC 3811 & MUAC 3812	Voice Repertoire and Voice Repertoire and Voice Repertoire	
MUAC 4200	Diction-Graduate Voice Majors	
3XXX or 4XXX: Area elective		
<b>Other Studies in Music</b>		
Complete all of the following courses:		
MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
Musicology/Ethnomusicology course		4
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4350	Talam: Rhythmic Form and Process in South Indian Music	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
Other courses as approved by the department		
Music Theory course		4
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	



MUAC 3026	Sonata Form: Performance, Analysis, and History
MUAC 3027	Arranging for the Classical Musician
MUAC 4002	Form and Analysis
MUAC 4006	Post-Tonal Theory: Mode/Rhythm
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style
MUAC 4009	Tonal Counterpoint
MUAC 4010	Pedagogy of Music Theory
MUAC 4014	Music-Theoretical Approaches to Popular Music
MUAC 4121	Seminar in Music Theory
MUAC 4801	Introduction to Schenkerian Analysis
Other courses as approved by the department	

**Electives**

Complete all of the following courses:

MUAC 3XXX or MUAC 4XXX	Musicology/Ethnomusicology/Music Theory/Composition course	4
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3578	Advanced Composition	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 3910	Orchestration	
MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4090	Model Composition	
MUAC 4121	Seminar in Music Theory	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	

MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
MUAC 4801	Introduction to Schenkerian Analysis	
3XXX or 4XXX	Course	4

Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.

Voice emphasis candidates must take MUAC 3240 & 3241 Vocal Pedagogy I-II if equivalent coursework was not completed in the undergraduate degree.

**Total credits** **50**

Minimum number of credits required for the degree: 50 credits

#### Non-coursework requirements (see below and the Lamont Student Handbook)

- Proficiency Exam:
  - Demonstration of graduate-level proficiency in Musicology by examination.
  - Demonstration of graduate-level proficiencies in Music Theory and Aural Skills by examination.
- Convocation: Attendance requirements as specified in the Lamont Student Handbook.
- Recital: One full-length performance recital. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.
- Final Written Project.
- Final Oral Comprehensive Examination.

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## Master of Music Dual Concentration

### Degree requirements

### Coursework requirements

Code	Title	Credits
<b>Concentration Areas</b>		
All course requirements listed under Concentration Area in the Bulletin for each of the two concentrations selected.		
<b>Other Studies in Music</b>		
MUAC 4000	Introduction to Graduate Study	2
MUAC 4000	Introduction to Graduate Study	2
MUAC 3XXX or MUAC 4XXX: Musicology/Ethnomusicology course		4
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 4160	Issues in Opera History and Adaptation	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	
MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	

MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
MUAC 3XXX or MUAC 4XXX: Music Theory course		4
MUAC 3023	Rhythm & Meter in Music	
MUAC 3024	Introduction to Tonal Analysis	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4121	Seminar in Music Theory	
MUAC 4801	Introduction to Schenkerian Analysis	
<b>Electives</b>		
MUAC 3XXX or MUAC 4XXX: Musicology/Ethnomusicology/Music Theory/Composition course		4
MUAC 3023	Rhythm & Meter in Music	
MUAC 3025	Topics in Analysis: Brahms	
MUAC 3026	Sonata Form: Performance, Analysis, and History	
MUAC 3027	Arranging for the Classical Musician	
MUAC 3497	Studying Music in the Field: Theory and Method in Ethnomusicology	
MUAC 3502	Gender & Genre in World Music	
MUAC 3521	Topics in World Music	
MUAC 3537	Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music	
MUAC 3578	Advanced Composition	
MUAC 3847	Hip-Hop: Theory and Practice	
MUAC 3910	Orchestration	
MUAC 4002	Form and Analysis	
MUAC 4006	Post-Tonal Theory: Mode/Rhythm	
MUAC 4007	Post-Tonal Theory and Analysis: Set-Theory and Serialism	
MUAC 4008	Modal Counterpoint, Renaissance Vocal Style	
MUAC 4009	Tonal Counterpoint	
MUAC 4010	Pedagogy of Music Theory	
MUAC 4014	Music-Theoretical Approaches to Popular Music	
MUAC 4090	Model Composition	
MUAC 4121	Seminar in Music Theory	
MUAC 4161	Topics in Modern Opera	
MUAC 4300	Topics in Jazz History	
MUAC 4492	History of Opera: From Monteverdi to Minimalism and Beyond	

MUAC 4493	Approaches to American Popular Music	
MUAC 4494	Music and Belief in World Cultures	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4498	Music, Dance, and Everyday Life in South Asia	
MUAC 4499	Topics in Musicology	
MUAC 4511	Mahler and Musical Culture	
MUAC 4512	Stories of Music History	
MUAC 4513	Wagner and the Ideology of the Artwork	
MUAC 4518	Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon	
MUAC 4519	Social Justice and Community Music Making	
MUAC 4520	Topics in Hindustani Music	
MUAC 4521	Topics in Baroque Music	
MUAC 4535	Baroque Opera on Stage	
MUAC 4536	Musics of the African Diaspora	
MUAC 4537	Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship	
MUAC 4538	Cultural and Psychological History of the African American Spiritual	
MUAC 4539	Music, Politics, and Policy	
MUAC 4540	Music and Activism	
MUAC 4545	The Making of Romantic Music: Paris and Leipzig in the 1830s	
MUAC 4801	Introduction to Schenkerian Analysis	
3XXX or 4XXX		4
Note: Students may complete a maximum of 4 credits in graduate departments outside of the Lamont School of Music.		
Voice majors must take MUAC 3240 & MUAC 3241 Vocal Pedagogy I-II if equivalent was not completed during undergraduate study.		
MUEN 3XXX	Ensembles (Consult Lamont Student Handbook for specific requirements. Not necessary if credits are required in the Concentration Area.)	6

**Minimum Number of Credits Required** **75**

Minimum number of credits required for degree: At least 75 credits

### Non-coursework requirements

Students must complete all non-coursework requirements for both concentrations. See Lamont Student Handbook for details.

## Artist Diploma Programs

### Certificate in Music (Artist Diploma Program) with a Concentration in Conducting

The Artist Diploma with a Concentration in Conducting has three emphases: Choral, Orchestral or Wind

Certificate requirements

#### Coursework requirements

Code	Title	Credits
<b>Core coursework requirements</b>		
Complete all of the following courses:		
MUAC, MUPR, MUEN 3XXX or 4XXX	Upper-division Music electives	9
MUPR 4930	Conducting (2 credits each quarter)	12
Students will complete MUAC 4600 for 0-2 credits each quarter, earning a minimum of 6 credits prior to program completion.		
MUAC 4600 & 4600 & 4600 & 4600 & 4600	Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director	6
<b>Total Credits</b>		<b>27</b>

Minimum number of credits required for the certificate: 27 credits

**Non-coursework requirements:**

- Candidates will be enrolled in the Artist Diploma program for two years.
- Candidates will make four concert appearances with an appropriate major ensemble, which will be evaluated.
- Candidates will successfully perform one full-length conducting recital while enrolled in the program. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.

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## Certificate in Music (Artist Diploma) with a Concentration in Performance

**Certificate requirements****Coursework requirements**

Code	Title	Credits
<b>Core coursework requirements</b>		
Complete all of the following courses:		
MUAC, MUPR, MUEN 3XXX or 4XXX	Upper-division Music electives	9
MUPR 4XXX	Applied Lessons (2 credits each quarter)	12
MUEN 3XXX	Ensembles/Chamber Music (Must audition for and participate in two ensembles per quarter, at least one of which must be an appropriate major ensemble, if so assigned. See Lamont Student Handbook for details.)	6

Note: These are minimum hours required. Candidates must enroll for at least one credit hour per quarter for each quarter of study and participate in at least two ensembles per quarter of study.

**Total Credits** **27**

Minimum number of credits required for the certificate: 27 credits

**Non-coursework requirements:**

- Candidates will be enrolled in the Artist Diploma program for two years.
- Candidates will successfully perform three (3) juried, full-length solo recitals while enrolled in the [program. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.](#)
- [Participate in the Lamont Honors Competitions \(concerto and chamber music\) at least once during enrollment in the program.](#)

## Graduate Certificate Programs

### Graduate Certificate in Music with a Concentration in Conducting

The Certificate in Music with a concentration in Conducting has three emphases: Choral, Orchestral, or Wind.

**Certificate requirements****Coursework requirements**

Code	Title	Credits
<b>Core coursework requirements</b>		
MUPR 4930	Conducting (2 credits each quarter)	12
Students will complete MUAC 4600 for 0-2 credits each quarter, earning a minimum of 6 credits prior to program completion.		
MUAC 4600 & 4600 & 4600 & 4600 & 4600 & 4600	Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director and Extra-Musical Roles of the Music Director	6
MUEN 3XXX	Ensembles	6

Candidates will enroll in the appropriate major ensemble for 1 credit hour per quarter for each quarter of study. They must audition for, and if so assigned, play/sing in said ensemble each quarter. Candidates who do not play an appropriate instrument or who are not accepted into the ensemble for any given quarter will fulfill the credit and requirement by attending all rehearsals and concerts, following along in their scores during rehearsals.

Select the two courses outside your emphasis from the following:

MUAC 3960	Advanced Orchestral Conducting	2
MUAC 3961	Advanced Choral Conducting	2

MUAC 3962	Advanced Wind Conducting	2
<b>Total Credits</b>		<b>28</b>

Minimum number of credits required for the certificate: 28 credits

**Non-coursework requirements:**

- Candidates will be enrolled in the Certificate program for two years.
- Candidates will successfully perform one full-length conducting recital while enrolled in the program. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.

## Graduate Certificate in Music with a Concentration in Orchestral Studies

### Coursework requirements

Code	Title	Credits
MUPR 4XXX	Applied Lessons on major instrument (2 credits each quarter)	6
MUPR 4XXX	Applied Lessons on orchestral repertoire (2 credits each quarter)	6
MUEN 3XXX	Chamber Ensembles	3
	Lamont Symphony Orchestra	3
MUEN 3760	Lamont Symphony Orchestra	
<b>Total Credits</b>		<b>18</b>

Minimum number of credits required for the certificate: 18

**Non-coursework requirements:**

- One solo recital consisting of orchestral audition solo repertoire. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.
- Two orchestral audition juries in audition format (winter and spring quarters).
- Candidates will normally be enrolled for one year. However, one may request to remain in school longer with the stipulation that the candidate must enroll in orchestra every quarter during which they are on campus.

## Graduate Certificate in Music with a Concentration in Piano Pedagogy

Code	Title	Credits
MUPR 4210 & 4210 & 4210	Piano and Piano and Piano	6
MUAC 4840	Piano Teaching Practicum (Students must enroll in MUAC 4840 Piano Teaching Practicum each quarter, for 0-2 credits per quarter.)	2
MUAC 4000	Introduction to Graduate Study (Fall quarter; applicants who have completed a similar requirement through a master's degree at DU or another institution may request to substitute these credits for 2 credits of 3000- or 4000-level Music electives.)	2
MUAC 4850	Elementary Piano Pedagogy I	2
MUAC 4852	Group Piano Teaching Techniques	2
MUAC 4831	Current Trends in Piano Pedagogy	2
MUAC 4853	Intermediate Piano Pedagogy I	2
MUAC 4020	Introduction to Research in Piano Pedagogy	2
MUAC 4547	Topics in Advanced Keyboard Repertoire	4
<b>Total Credits</b>		<b>24</b>

12-20 credits of the above coursework may overlap with the degree requirements for students currently pursuing the MM in Music with a concentration in Performance.

**Non-coursework requirements (see below and the Lamont Student Handbook for more details):**

- Pedagogy written comprehensive exam at the completion of the certificate.
- Juries, as required by the performance area, outlined in the Lamont Student Handbook.
- Candidates will normally be enrolled in the Pedagogy Certificate program for one year. A candidate may, however, request to remain in the program longer with the stipulation that they must enroll in MUAC 4840 Piano Teaching Practicum for the duration of their time in the program.

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**Graduate Certificate in Suzuki Pedagogy**

The Certificate in Music with a concentration in Suzuki Pedagogy has two emphases: cello and violin.

Code	Title	Credits
<b>Cello</b>		
Suzuki Seminars: 2 credits each quarter		12
MUAC 3463	Suzuki Cello Seminar I	
MUAC 3464	Suzuki Cello Seminar I	
MUAC 3465	Suzuki Cello Seminar I	
MUAC 3466	Suzuki Cello Seminar II	
MUAC 3467	Suzuki Cello Seminar II	
MUAC 3468	Suzuki Cello Seminar II	
MUAC 3439	Teaching Note Reading	2
MUAC 3460 & 3460 & 3460	Suzuki Cello Practicum and Suzuki Cello Practicum and Suzuki Cello Practicum	3
MUAC 4450	Suzuki Group Lesson Practicum	1
<b>Violin</b>		
Suzuki Seminars: 2 credits each quarter		12
MUAC 3470	Suzuki Violin Seminar I	
MUAC 3471	Suzuki Violin Seminar I	
MUAC 3472	Suzuki Violin Seminar I	
MUAC 3282	Suzuki Violin Seminar II	
MUAC 3283	Suzuki Violin Seminar II	
MUAC 3284	Suzuki Violin Seminar II	
MUAC 3439	Teaching Note Reading	2
MUAC 3477 & 3477 & 3477	Suzuki Violin Practicum and Suzuki Violin Practicum and Suzuki Violin Practicum	3
MUAC 4450	Suzuki Group Lesson Practicum	1
<b>Total Credits</b>		<b>18</b>

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**Specialized Graduate Certificate Programs****Specialized Certificate in Music with a Concentration in Jazz Studies****Coursework requirements**

Code	Title	Credits
MUPR 4XXX	Applied Lessons on major instrument (2 credits each quarter)	6
MUEN 3XXX	Ensembles, as assigned by department chair	3
3000- and 4000-level	elective courses, as advised by department chair. Students may fulfill this requirement with MUAC 4991 Independent Study.	3
<b>Total Credits</b>		<b>12</b>

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**Specialized Certificate in Music with a Concentration in Music Entrepreneurship**

The Music Entrepreneurship Specialized Graduate Certificate offers students the opportunity to develop and manage their careers as working artists in the field of music. They will gain the background, practical skills, and critical perspectives necessary to develop an entrepreneurial career in their

chosen area of expertise. The certificate combines expertise in 21st-century approaches to marketing with specialized coursework in the Lamont School of Music. It provides a streamlined way for music professionals in the early-to-mid stages of their career to gain the expertise necessary to promote themselves and their work.

This is a 16-credit program that can be completed in one academic year. Students will earn 8 credits offered by the Daniels College of Business, combined with 8 credits in the Lamont School of Music.

### Coursework requirements

Code	Title	Credits
<b>Music courses</b>		<b>8</b>
MUAC 3092	The Business Side of Music	
MUAC 3844	The Artist Entrepreneur	
MUAC 3990	Internship in Music (Complete 2 credits.)	
<b>Business courses (Choose 8 credits from the following):</b>		<b>8</b>
MKTG 4100	Marketing Concepts	
MKTG 4805	Foundations of Digital Marketing	
MKTG 4815	Social Media Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
Students may also choose four 1-credit "Business Sprints" below in lieu of one of the above courses.		
EVM 4407	The Perfect Pitch	
EVM 4409	Financial Statement for Entrepreneurs	
EVM 4413	Design Thinking	
EVM 4414	Market Discovery & Product Market Fit	
EVM 4417	Branding & Messaging	
EVM 4421	Intellectual Property Issues for Startup Businesses	
EVM 4432	Getting to Know Your Customer	
EVM 4440	How to Effectively Negotiate in Business	
EVM 4441	How To Create A Business Startup Budget & Forecast	
<b>Total Credits</b>		<b>16</b>

Students will also complete a final portfolio of course projects, resume, artist statement, biographical sketch, and business plan.

## Specialized Certificate in Music Theory Pedagogy

The Certificate in Music Theory Pedagogy allows a conductor, composer, musicologist, pedagogue, or performer to develop the skills and knowledge required to teach basic music theory at the high school or possibly college level. The program balances theoretic and analytic skills with practical applications for the classroom. It is designed to be concurrent with an MM degree or an MA in Musicology, but students may also apply to begin the program upon completion of a previous degree in music.

Complete a minimum of 16 credits as follows:

Code	Title	Credits
<b>MUAC 4000-level Music Theory Courses</b>		<b>8</b>
(Often includes MUAC 4006 or MUAC 4007 Post-Tonal Theory and MUAC 4801 Introduction to Schenkerian Analysis; students with other preferences should discuss them with the Chair of Music Theory.)		
MUAC 4010	Pedagogy of Music Theory	4
MUAC 4991	Independent Study (Complete 4 credits of Music Theory Pedagogy Portfolio independent study coursework. Students may choose from a variety of topics for inclusion in the Portfolio, including technology, curricular development, instructional design, inclusive excellence, history of theory pedagogy, or performance/analysis methods, etc. These credits may be taken during a single quarter or split across quarters.)	4
<b>Total Credits</b>		<b>16</b>

Many of these credits may be used to fulfill requirements for the MA in Musicology or MM programs.

Students also will complete a Final Oral Comprehensive Exam, including the defense of Music Theory Pedagogy Portfolio.



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## Specialized Certificate in Music with a Concentration in Performance

### Coursework requirements

Code	Title	Credits
MUPR 4XXX	Applied lessons on major instrument (2 credits per quarter)	6
MUEN 3XXX	Ensembles, as assigned by department chair based on the guidelines in the Lamont Student Handbook	3
MUEN 3XXX	Chamber Ensembles or MUAC 4991 Independent Study for voice students	3
<b>Total Credits</b>		<b>12</b>

Minimum number of credits required for the certificate: 12

### Non-coursework requirements:

- One solo recital consisting of solo repertoire. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation.
- Juries, as required by the performance area.
- Candidates will normally be enrolled in the Performance Certificate program for one year. A candidate may, however, request to remain in school longer with the stipulation that they must enroll in applied lessons, assigned ensembles, and chamber music every quarter, even after the required number of credits have been met.
- Please refer to the Lamont Student Handbook for additional details regarding ensemble requirements.

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## Online Specialized Certificate in Music with a Concentration in Performance and Composition

In this online certificate, performers develop their virtuosity on their major instrument while cultivating skills in original composition. Modules consist primarily of individual lessons in both performance and composition. Live remote meetings are enhanced with flexible tools such as video recordings, asynchronous discussions, online masterclasses, and more.

On their major instrument, students are expected to meet the same high standards as other graduate majors. In composition, faculty meet students where they are—beginning or professional—helping them to develop compelling and substantial projects.

In this online certificate, performers develop their virtuosity on their major instrument while cultivating skills in original composition. Modules consist primarily of individual lessons in both performance and composition. Live remote meetings are enhanced with flexible tools such as video recordings, asynchronous discussions, online masterclasses, and more.

On their major instrument, students are expected to meet the same high standards as other graduate majors. In composition, faculty meet students where they are—beginning or professional—helping them to develop compelling and substantial projects.

### Coursework Requirements

Code	Title	Credits
MUPR 4XXX	Applied lessons on major instrument (2 credits per quarter)	6
MUPR 4920 & 4920 & 4920	Composition and Composition and Composition	6
<b>Total Credits</b>		<b>12</b>

Minimum number of credits required for the certificate: 12

### Non-coursework requirements:

- Traditional solo recital or innovative performance project. If recital preparation continues beyond the completion of coursework, students must perform on or off campus during each additional quarter of recital preparation
- Juries, as required by the performance area.
- Culminating project in the secondary area (may be combined with solo recital).
- Candidates will normally be enrolled in the Online Certificate program for one year. A candidate may, however, request to remain in school longer with the stipulation that they must enroll in applied performance and composition lessons every quarter, even after the required number of credits have been met.

## online certificate in music with a concentration in performance and orchestral audition preparation

With two hours of one-on-one faculty instruction per week, students in the program refine their orchestral repertoire and gain a more thorough understanding of the challenges of performing orchestral music at the professional level. Students will take a weekly one-hour lesson focusing on solo repertoire as well as a second weekly lesson focusing on orchestral repertoire. Graduates leave with refined performance abilities that provide a foothold in the competitive world of orchestral auditions.

### Coursework Requirements

Code	Title	Credits
MUPR 4XXX	Applied Lessons on major instrument (2 credits per quarter)	6
MUPR 4XXX	Applied Lessons on orchestral repertoire (2 credits per quarter)	6
<b>Total Credits</b>		<b>12</b>

### Minimum number of credits required for the certificate: 12

#### Non-coursework requirements:

- Traditional solo recital or innovative performance project.
- Juries, as required by the performance area.
- Two Orchestral Audition Juries in Audition Format (Winter and Spring Quarters)
- Candidates will normally be enrolled in the Online Certificate program for one year. A candidate may, however, request to remain in school longer with the stipulation that they must enroll in applied performance and composition lessons every quarter, even after the required number of credits have been met.

## Online Specialized Certificate in Music with a Concentration in Performance and Recording and Production

In this online certificate, performers develop their virtuosity on their major instrument while cultivating skills in recording/production. Modules consist primarily of individual lessons in both performance and recording/production. The recording/production component can be closely customized to the needs of the individual student and may include topics such as classical/acoustic recording techniques, live concert recording, electro-acoustic production (popular crossover as well as classical tradition), and performance/improvisation with live electronics. Live remote meetings are enhanced with flexible tools such as video recordings, asynchronous discussions, online masterclasses, and more.

On their major instrument, students are expected to meet the same high standards as other graduate majors. In the recording and production modules, faculty meet students where they are—beginning or professional—helping them to develop exciting and substantial projects.

### Coursework Requirements

Code	Title	Credits
MUPR 4XXX	Applied Lessons on major instrument (2 credits per quarter)	6
MUPR 4040 & 4040 & 4040	Music Production and Music Production and Music Production	6
<b>Total Credits</b>		<b>12</b>

Minimum number of credits required for the certificate: 12

#### Non-coursework requirements:

- Traditional solo recital or innovative performance project.
- Juries, as required by the performance area.
- Culminating project in the secondary area (may be combined with solo recital).
- Candidates will normally be enrolled in the Online Certificate program for one year. A candidate may, however, request to remain in school longer with the stipulation that they must enroll in applied performance and composition lessons every quarter, even after the required number of credits have been met.

## Music: Academic Classes (MUAC)

### **MUAC 3002 Form and Analysis (4 Credits)**

Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

### **MUAC 3006 Post-Tonal Theory: Mode/Rhythm (4 Credits)**

Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

### **MUAC 3023 Rhythm & Meter in Music (4 Credits)**

Rhythm pertains to experienced or measured durations in music. Meter pertains to the cyclic organization of music's durations. A hegemonic view of meter emerged in music theory and related disciplines in the mid-20th century, one most appropriate to Western classical music and, to a lesser extent, Anglo-American popular music. This view holds that meter "in music" consists of (1) hierarchically arranged beats (2) whose durations are nominally equivalent and (3) whose onsets among coordinated musicians are nominally aligned. This course examines rhythm and meter by interrogating three components of the standard view of the topic. Looking at Western classical music, but also traditional and commercial music from Africa and the African diaspora, we will explore the nature of meter and rhythm in music where durations might not be arranged hierarchically, of equal length, or aligned.

### **MUAC 3024 Introduction to Tonal Analysis (4 Credits)**

This course introduces students to various types of musical analysis for tonal music that are more advanced than what is introduced in first- and second-year music theory. Prerequisites: MUAC 2006 and MUAC 2022.

### **MUAC 3025 Topics in Analysis: Brahms (4 Credits)**

This course explores a variety of analytical techniques used to understand the compositions of Brahms. We examine works by musicologists and theorists such as Allen Forte, Walter, Frisch, Arnold Schoenberg, Carl Schachter, and David Lewin. Issues discussed include developing variations, rhythm, form, and ambiguity in Brahms. We cover a wide range of repertoire, ranging from piano works to choral works to symphonies.

### **MUAC 3026 Sonata Form (4 Credits)**

This is a team-taught course on the topic of "sonata form," one of the central musical structures in classical Western art music, from Mozart to Brahms and beyond. The course will feature a dialogue between history, analysis, and performance, reflected in class activities at multiple levels.

### **MUAC 3027 Arranging for the Classical Musician (4 Credits)**

Music initially created for one context becomes music for a new context through the art of arranging. How much of your professional life will you spend performing or teaching arrangements? Have you ever thought about writing your own? Is an arrangement automatically less worthwhile, or can it ever surpass the quality of the original? Class sessions will be spent studying arrangements of music by Bach, Björk, Chopin, Michael Jackson, Mahler, et al. as arranged by Brahms, Jacob Collier, Gil Evans, The Piano Guys, Ravel, and others. Students will also receive individual guidance as they plan, write, and perform arrangements of pieces and songs of their choice.

### **MUAC 3030 Seminar-Performance Psychology (2 Credits)**

### **MUAC 3059 Audio Production II (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the first sequence in the audio production concentration.

### **MUAC 3060 Extra-Musical Roles of the Music Director (1 Credit)**

Under the supervision and guidance of the director of orchestral studies, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. These experiences will include managing orchestra personnel, librarian activities, running auditions, and recruiting. Open only to Artist Diploma in orchestral conducting students.

### **MUAC 3061 Audio Production I (4 Credits)**

An introduction to analog and digital synthesis, MIDI sequencing, and DAW software.

### **MUAC 3064 Audio Production IV (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the third sequence in the audio production concentration.

### **MUAC 3065 Audio Production V (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as onsite training at Lamont School of Music performances. This is the fourth sequence in the audio production concentration.

### **MUAC 3092 The Business Side of Music (4 Credits)**

A personal and clinical approach to developing music business skills and strategies.

**MUAC 3106 The Dynamic Body: Foundations in Movement Methods and Body Awareness Principles (2 Credits)**

An introduction to fundamental body awareness principles in relationship to physical performance skills for vocal performance majors. Methods for heightening kinesthetic awareness will be learned in the form of movement explorations, improvisations, structures, and learned phrases to gain somatic insight into the performer's sense of verticality in all places and dimensions of space. The concepts of the body in motion will be a primary context and focus for the progression of studies or 'études,' and for the reflective and analytical processes that include observation, journaling, discussion and peer commentary. Studio activities in solo, partnering, and group work will further the student's knowledge of how to become more responsive, expressive, and communicative when interacting with the surrounding environment and with others. Integrated with the body-mind practice and theoretical study, students will be encouraged to inquire, examine and articulate possible philosophies regarding why the mastery of the performer's physical body requires an essential sense of discipline that is cultivated in the performing arts, and how the somatic practices being investigated can serve his/her performance presence and support one's vocal training and health for the long-term.

**MUAC 3124 Composition Seminar (1 Credit)**

Composition Seminar focuses on the reading and performance of modern scores by Lamont and recognized composers. Any student composing music or wishing to perform new compositions at Lamont may register and participate. Requirements for composers include the completion, rehearsal and performance of a piece of music at the New Music Ensemble concert each quarter. Non-composers are required to rehearse and perform at the New Music Ensemble concert. Composers enrolled in the ensemble may be required to play compositions submitted as well.

**MUAC 3161 Topics in Modern Opera (4 Credits)**

This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

**MUAC 3165 Music Theater Survey (2 Credits)**

A historical overview of the American Broadway musical, performance technique, audition preparation and repertoire. Must be prepared to sing and perform.

**MUAC 3166 Music Theater Survey II (2 Credits)**

Fundamentals of music theater performance will be addressed through readings of the text, "Acting in Music Theater" by Joe Dee and Rocco dal Vera. Application of these techniques through performance of musical theater literature will be incorporated during the last number of weeks. Additionally, we will highlight prominent composers and their works throughout the quarter.

**MUAC 3212 Digital Music Creation (4 Credits)**

In this course, students will create, produce, and present their own digital music. Using one of the industry's leading digital music creation platforms (such as Ableton Live), students will learn the history of electronic music creation, create their own digital music portfolios, become familiar with relevant copyright issues, and oversee public performances of their music.

**MUAC 3240 Vocal Pedagogy I (1 Credit)**

Psychological and physical aspects of teaching of singing.

**MUAC 3241 Vocal Pedagogy II (1 Credit)**

Psychological and physical aspects of teaching of singing.

**MUAC 3243 Recitative in Opera (2 Credits)**

Working as a professional singer your proficiency with recitative should be high. Though a major part of many operas recitative is still often overlooked as a skill set. Through this course we will explore several different approaches to recitative from various compositional styles and time periods.

**MUAC 3282 Suzuki Violin Seminar II (2 Credits)****MUAC 3283 Suzuki Violin Seminar II (2 Credits)****MUAC 3284 Suzuki Violin Seminar II (2 Credits)****MUAC 3439 Teaching Note Reading (2 Credits)****MUAC 3460 Suzuki Cello Practicum (1 Credit)**

The Suzuki Cello Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and philosophy covered in the seminar classes. The course will also include some lecture and discussion on developing teaching strategies for effective technical development and communication in lessons.

**MUAC 3463 Suzuki Cello Seminar I (2 Credits)****MUAC 3464 Suzuki Cello Seminar I (2 Credits)****MUAC 3465 Suzuki Cello Seminar I (2 Credits)****MUAC 3466 Suzuki Cello Seminar II (2 Credits)****MUAC 3467 Suzuki Cello Seminar II (2 Credits)****MUAC 3468 Suzuki Cello Seminar II (2 Credits)****MUAC 3470 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3471 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3472 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3477 Suzuki Violin Practicum (1 Credit)**

The Suzuki Violin Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and teaching philosophy covered in the seminar classes. The course will include some lecture focusing on teaching strategies for effective technical development and effective communication in the lessons. Prerequisite: MUAC 3470.

**MUAC 3492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)**

This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3493 Approaches to American Popular Music (4 Credits)**

We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3494 Music and Belief in World Cultures (4 Credits)**

How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world's religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops. Prerequisite: Junior or senior standing required; sophomores allowed with instructor approval.

**MUAC 3497 Studying Music in the Field: Theory and Method in Ethnomusicology (4 Credits)**

This course introduces issues that motivate ethnomusicological research and techniques for carrying out fieldwork, the ethnographic method which has largely come to define the discipline. Our primary texts include Bruno Nettl's classic text, *The Study of Ethnomusicology*, and *Shadows in the Field*, a seminal volume of essays discussing ethnomusicological fieldwork. This course also involves hands-on experience in some of the major fieldwork techniques, including field observation and writing fieldnotes, musical transcription and interviewing. This course culminates in a field research project in a Denver musical community determined in consultation with the professor. Note: this course is not open to freshman; sophomores with permission of instructor.

**MUAC 3498 Music, Dance, and Everyday Life in South Asia (4 Credits)**

This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged. This course is not open to first-year students. Sophomores allowed with instructor approval.

**MUAC 3499 Topics in Musicology (4 Credits)**

This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project. Prerequisite: Junior standing.

**MUAC 3502 Gender & Genre in World Music (4 Credits)**

How are concepts of "maleness," "femaleness" and other gendered categories constructed, maintained, and contested through musical performance? This course examines the issues explored and debated in recent studies of gender relation to music of various cultures including Western art music, popular music, and other world genres. We focus on reading and discussion of ethno-musicological and anthropological ethnographies, musicological studies focusing on gender and theoretical writings from gender and women's studies. Lectures and discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops. This course is not open to freshman. Sophomores can register with instructor approval.

**MUAC 3511 Mahler and Musical Culture (4 Credits)**

We explore Gustav Mahler's life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3512 Stories of Music History (4 Credits)****MUAC 3513 Wagner and the Ideology of the Artwork (4 Credits)**

We explore Richard Wagner's music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3515 Introduction to Baroque Performance Practice (2 Credits)**

This class serves to familiarize musicians with the stylistic parameters, aesthetic principles, and performing techniques common in Western art music of the Baroque era (ca. 1600–1750), as well as the historical and cultural context of the period. Students will learn how to apply these performance guidelines to their own interpretation of Baroque music.

**MUAC 3520 Topics in Baroque Music (4 Credits)**

Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3521 Topics in World Music (4 Credits)****MUAC 3536 Topics in Hindustani Music (4 Credits)**

This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course is developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, each class incorporates hands-on music-making through singing, rhythmic exercises, and/or dance. By the end of the term, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting). Must be at least junior standing or obtain instructor approval.

**MUAC 3537 Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music (4 Credits)**

Andraé Crouch, Walter Hawkins, and Richard Smallwood have each influenced the course of black gospel music for the last 50 years. Through listening to recordings, watching video performances, score analysis, readings, performance, and improvisation, this course will examine the music of these unique composer/performers and how their contributions have impacted black gospel music. Rather than simply read about and analyze the music, students will play the music of these composers and literally have hands-on experience with the colors and textures of the music that has shaped church music and the gospel music industry for the last five decades.

**MUAC 3545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)**

With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3578 Advanced Composition (4 Credits)**

Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression.

**MUAC 3590 Guitar History (4 Credits)****MUAC 3630 Basic Jazz Arranging (2 Credits)**

A study and practical analysis of the foundational techniques involved with composing and orchestrating for small group jazz ensembles. This course will cover the basics of form, notation, and orchestration in the small group jazz idiom, consisting of one to four horns and/or vocals, guitar, piano, bass, and drums.

**MUAC 3650 Orchestral Excerpts-Cello (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3655 Orchestral Excerpts-Bass (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock audition and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3660 Orchestral Excerpts-Violin (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3661 Orchestral Excerpts Viola (4 Credits)**

This course explores excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students are given a list of excerpts and coached on how to prepare them. They participate in mock auditions and receive feedback. This course also addresses the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3662 Orchestral Studies for Brass (2 Credits)**

Study of orchestral literature brass players are likely to be asked to play at auditions for professional orchestras. Undergraduate participants should have passed their Sophomore Proficiency jury with distinction.

**MUAC 3663 Orchestral Excerpts, Viola II (4 Credits)**

Companion course to Orchestral Excerpts Viola I, this section expands the repertoire list beyond the standard works used for auditions today. In addition to further honing basic requisite material from section I, students study and prepare less frequently required works and principle viola solo repertoire. There is more extensive discussion of the audition process and mock auditions as a part of the course. While it is advised and preferable that students complete the first section of this course it is possible to take the course with the approval of the instructor.

**MUAC 3677 Bow Art Ensemble (0-1 Credits)**

The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

**MUAC 3682 Topics-Orchestral Repertoire (4 Credits)**

We explore the history of the orchestra and orchestral literature from the baroque through modern eras, and examine a number of test cases in which conventional understanding has been challenged in recent years. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3684 Choral Literature I (2 Credits)**

This course is an analysis of the development of choral repertoire from the Middle Ages through the Baroque era.

**MUAC 3686 Choral Pedagogy I (2 Credits)**

The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

**MUAC 3688 Choral Pedagogy II (2 Credits)**

The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

**MUAC 3689 Choral Literature II (2 Credits)**

This course is an analysis of the development of choral repertoire from the Classical period until the present day. This course is meant to be taken in sequence after Choral Literature I.

**MUAC 3698 Carillon History and Mechanics (4 Credits)**

A survey of the evolution of signal bells into the musical instrument known as the carillon. This subject is often called "campanology." The history will be traced from the 16th century in the Low Countries through modern times in Europe, North America, Australia/New Zealand and Japan. Topics will include bell foundries, bell casting and tuning, bell chambers, playing actions, carillonneurs, carillon schools, carillon organizations, the use of the carillon in its various regions and basic carillon maintenance.

**MUAC 3700 Carillon Repertoire (4 Credits)**

A survey of the music expressly produced for carillon from the earliest times through the present. Categories include automatic music (e.g., De Sany, Wyckaert, Eggert), the earliest compositions for manual play (Van den Gheyn and the Louvain manuscripts of the 18th century), and the 20th-century categories: Flemish, Dutch, French and North American. Mainstream publishers as well as incidental publications will be covered. The labs will focus on analysis through recordings and live performances by participants.

**MUAC 3706 Pedagogy & Repertoire Tuba (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the tuba.

**MUAC 3708 Pedagogy & Repertoire Horn (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the horn.

**MUAC 3710 Carillon Pedagogy I (2 Credits)**

An exploration of the physical and psychological elements that can lead to effective carillon teaching: technique, handling/pedaling ("fingering" on the piano), and developing an attitude that fosters successful performance.

**MUAC 3712 Pedagogy & Repertoire Trombone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the trombone.

**MUAC 3717 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3718 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3719 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3724 Pedagogy & Repertoire Guitar (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the guitar.

**MUAC 3726 Pedagogy & Repertoire Viola (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the viola.

**MUAC 3727 Pedagogy & Repertoire Viola (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the viola.

**MUAC 3730 Pedagogy & Repertoire Cello (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the cello.

**MUAC 3733 Pedagogy & Rep Double Bass (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the double bass.

**MUAC 3736 Pedagogy & Repertoire Harp (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the harp.

**MUAC 3737 Pedagogy & Repertoire Harp (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the harp.

**MUAC 3738 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3739 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3740 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3742 Pedagogy & Repertoire Trumpet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the trumpet.

**MUAC 3747 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3748 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3749 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3751 Pedagogy & Repertoire Clarinet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the clarinet.

**MUAC 3752 Pedagogy & Repertoire Clarinet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the clarinet.

**MUAC 3753 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3754 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3755 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3757 Pedagogy & Repertoire Oboe (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the oboe.



**MUAC 3758 Pedagogy & Repertoire Oboe (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the oboe.

**MUAC 3761 Pedagogy & Repertoire Bassoon (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the bassoon.

**MUAC 3762 Pedagogy & Repertoire Bassoon (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the bassoon.

**MUAC 3765 Professional Brass Techniques (4 Credits)**

This 4-hour per week course will be divided into a lecture/seminar for two hours and performance practicum for two hours. Topics discussed and performed include orchestral playing, sight reading, practice, solo performance, jazz survival, ornamentation, transposition, and warm-up/maintenance routine.

**MUAC 3801 Introduction to Schenkerian Analysis (4 Credits)****MUAC 3804 Topics in Music (1-5 Credits)****MUAC 3810 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3811 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3812 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3822 Piano Repertoire I (2 Credits)**

Performance and analysis.

**MUAC 3823 Piano Repertoire II (3 Credits)**

Performance and analysis.

**MUAC 3824 Piano Repertoire III (3 Credits)**

Performance and analysis.

**MUAC 3828 Songwriting Exploration I: Pop, R&B, & Hip hop (2 Credits)**

Songwriting Exploration I is an intermediate to advanced level course for songwriting Pop, R&B, and Hip hop styles. This course focuses on developing the skills necessary for writing thought provoking, creative, and fun songs to compete in today's popular music market. Students will learn song forms and creative lyric writing techniques used by successful songwriters to create hit songs. Students will also learn instrumentation, chord progressions, and the importance of rhythms that are commonly heard in the Pop, R&B, and Hip hop genres. This course will involve video and listening examples of classic and modern songs, in-class discussions, online assignments, student collaboration projects, and in-class presentations/performances of original works. Students will also receive online resources on music technology (electronic instruments) and software that current songwriters/producers are using to create basic recordings at home using a computer and DAW (Digital Audio Workstation). During the final week of the course, students will have an opportunity to record their songs in the Lamont recording studio on a pre-scheduled date or record at home.

**MUAC 3829 Songwriting Exploration II (2 Credits)**

MUAC 3829 is an intermediate to advanced level course for songwriting in Contemporary Jazz/Fusion, World, Pop, Rock, and R&B styles. This course focuses on developing the skills necessary for writing thought-provoking and creative songs to compete in today's contemporary and jazz market. Students will analyze more complex song forms, harmony, and creative lyric writing techniques used by successful songwriters. Students will also learn instrumentation, advanced chord progressions, and the importance of rhythms that are commonly heard in the Jazz, World, Pop, Rock and R&B genres. This course will involve video and listening examples of classic and modern songs, in-class discussions, transcription assignments, student collaboration projects, and in-class presentations/performances of original works. Students will also receive online resources on music technology (electronic instruments) and software that current songwriters/producers are using to create basic recordings at home using a computer and DAW (Digital Audio Workstation). During the final week of the course, students will have an opportunity to record their songs in the Lamont recording studio on a pre-scheduled date or record at home. Course Objectives and Relationship to Total Departmental Offerings • Establish and build upon techniques to write creative and compelling lyrics to compete in the modern contemporary music industry • Traditional and modern approaches to songwriting • How to write compelling melodies for lyrics • How to apply advanced harmonic devices and chord progressions to accompany lyrics • Techniques used by successful songwriters past and present • Collaborating with other writers, composers, and producers for projects through interaction with classmates and discussions • Perform works for an audience through in-class performance and other potential performance opportunities • Basic recording techniques for a professional recording studio or home studio • Compose and perform/record 4 songs (undergrad) or 5 songs (graduate) This is a new course being offered by a new faculty member in their area of expertise. This faculty member already offers a 2000 level class in songwriting and recently added the first part of a Songwriting sequence for Winter quarter (covering different writing styles and serving as the prerequisite for this new course). This class is an upper-division class exploring more advanced songwriting techniques and additional styles compared to what was covered in Songwriting Exploration I.

**MUAC 3830 Advanced Jazz Arranging I (2 Credits)**

A study and practical analysis of small to medium jazz ensemble writing with extended instrumentation. Consisting of nonette-style orchestration including orchestral instruments such as horn, tuba, woodwinds, and voice along with extended electronic textures, this course will cover the basics of form, notation and orchestration in the 21st Century hybrid small to medium size jazz ensemble idiom.

**MUAC 3831 Advanced Jazz Arranging II (2 Credits)**

A study and practical analysis of large "studio orchestra" type jazz writing with extended instrumentation. Consisting of medium to full orchestral string section, woodwinds, harp, percussion, brass plus jazz rhythm section, voices, and soloists. Exemplified by such modern ensembles as Snarky Puppy with the Metropole Orchestra, this will be a full studio orchestra with modern 21st Century jazz, rock, and pop sensibilities. String bowings and aspects of dynamic ensemble balances in the studio orchestra will be studied, as well as writing for the harp.

**MUAC 3832 Arranging for Computer-Based Media (2 Credits)**

This course will be an introduction to techniques of composition and arranging music for media, with an emphasis on practical assignments that the student will encounter in the professional world of media composition. Students will learn how to work in collaboration with filmmakers, master techniques of timing and synchronization, use traditional techniques of composition/arranging/orchestration to serve dramatic needs, and work efficiently in the recording studio under time and budget restraints.

**MUAC 3844 The Artist Entrepreneur (2 Credits)**

The Artist Entrepreneur is a course of study that examines the full spectrum of attributes and skills necessary for a student to "survive and thrive" in the every-changing landscape of the 21st Century. With a two-fold approach of examining effective strategies for a "modern artistry mindset" along with extensive case studies of successful 21st Century professionals, this course will offer the student a wide array of important recourses to guide their career. The case study aspect of The Artist Entrepreneur will be based on multiple evaluations of successful artists in the 21st Century in partnership with local presenters. Prerequisite: MUAC 3092.

**MUAC 3845 Writing for The Modern Large Jazz Ensemble I (2 Credits)**

A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Frank Foster, Sammy Nestico, Slide Hampton, Bob Brookmeyer and other modern practitioners. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.

**MUAC 3846 Writing for the Modern Large Jazz Ensemble II (2 Credits)**

A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Bob Brookmeyer, Maria Schneider, Gil Evans, Darcy James Argue, and others. A special emphasis will be placed on creating full works for the large jazz ensemble that uses textures and modern extended form approaches indicative of these artists. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.

**MUAC 3847 Hip-Hop: Theory and Practice (4 Credits)**

Students in this class will examine the socio-cultural, economic, and political significance of hip-hop as a medium of expression for youth around the world. Through analysis of popular writing and media, as well as academic texts, we critically explore issues of race, social justice, masculinity, misogyny, censorship, technology, and intellectual property, as they relate to mainstream and underground hip-hop in America. Having discussed hip-hop's roots in the U.S., the remainder of the quarter will be devoted to tracing hip-hop's global routes.

**MUAC 3860 Basic Jazz Improvisation (4 Credits)**

The study of jazz improvisation techniques and forms. Open to music majors or by instructor permission.

**MUAC 3870 Jazz Improvisation & Composition (4 Credits)**

Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student's improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

**MUAC 3910 Orchestration (4 Credits)**

Techniques of instrumental scoring.

**MUAC 3933 Graduate Music History Review (0 Credits)****MUAC 3935 Graduate Music Theory Review (0 Credits)**

This course provides an accelerated review of materials from the undergraduate theory core, including analysis and written exercises in diatonic and chromatic harmony, counterpoint, tonal forms, and an introduction to 20th-Century theory.

**MUAC 3959 Movement and Expression for Conductors (4 Credits)**

Conductors use their whole body to communicate and elicit successful performances from their ensemble. If you have unnecessary tension or lack of ease in your body, this is communicated unconsciously to your ensemble, hindering quality of performance. Additionally, physical tension can prevent your ability to communicate and think clearly under pressure. This course is an exploration of freedom of movement and the physicality of musical expression. Classes will include group activities in free-movement, dance, acting, keeping your cool, poise, balance, tension release, as well as hands-on instruction applying Alexander technique to your conducting.

**MUAC 3960 Advanced Orchestral Conducting (2 Credits)**

Discussions of and exercises in score study, interpretation, and techniques associated with orchestral conducting. Includes practical experience conducting orchestral repertoire. Required of MM Conducting students with Choral or wind concentrations. Open to other students with permission of instructor. Prerequisite: Permission of instructor (not needed for MM Conducting students with Choral or Wind concentration). Fall quarter only.

**MUAC 3961 Advanced Choral Conducting (2 Credits)**

Conducting complex choral works, including those with instrumental accompaniment; phrasing, interpretation and score reading. Prerequisite: MUAC 2940. Fall quarter only.

**MUAC 3962 Advanced Wind Conducting (2 Credits)**

Conducting complex wind compositions; phrasing interpretation and score reading. Prerequisite: MUAC 2970. Spring quarter only.

**MUAC 3973 Advanced Wind Literature I (2 Credits)**

This course is an overview of wind literature appropriate for junior high school, high school, college and professional programs including strategies in effective programming and creation of appropriate program notes.

**MUAC 3974 Advanced Wind Literature II (2 Credits)**

An in-depth study of successful compositional techniques by prominent composers of wind literature. Prerequisite: MUAC 3973.

**MUAC 3980 Advanced Jazz Improvisation and Composition (4 Credits)**

A three term sequence continuing the in-depth study of the theory, performance practices, style, and history of jazz improvisation and composition. Prerequisite: satisfactory completion of the three terms of Jazz Improvisation and Composition or consent of the instructor.

**MUAC 3990 Internship in Music (0-8 Credits)**

Internship in Music will offer opportunities for music majors to experience actual music related careers within a sponsoring music organization chosen by the student and accepted by the supervising faculty of the School of Music.

**MUAC 3991 Independent Study (1-10 Credits)****MUAC 4000 Introduction to Graduate Study (2 Credits)**

Problems of research in various chronological epochs of Western musical culture; research techniques and sources used in research; formal writing style.

**MUAC 4002 Form and Analysis (4 Credits)**

Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

**MUAC 4006 Post-Tonal Theory: Mode/Rhythm (4 Credits)**

Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

**MUAC 4007 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)**

This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

**MUAC 4008 Modal Counterpoint, Renaissance Vocal Style (4 Credits)**

This course teaches students to compose vocal music in the Renaissance style. After surveying species counterpoint, students learn imitative techniques en route to composing three- and four-voice texted pieces.

**MUAC 4009 Tonal Counterpoint (4 Credits)**

Eighteenth-century counterpoint using J.S. Bach as a model, with two- and three-part fugue writing.

**MUAC 4010 Pedagogy of Music Theory (4 Credits)**

Materials, devices, techniques of teaching theory. Students must have successfully completed undergraduate music theory or passed graduate review theory.

**MUAC 4014 Music-Theoretical Approaches to Popular Music (4 Credits)**

This course is an environment for engaging with generating music-theory scholarship on popular music. "Popular music" in this context refers to commercially successful music (e.g., hip-hop, rock, pop, country, etc.) as well as the predecessors of those genres (e.g., bluegrass, funk, soul, etc.). The course surveys a scholarly ecosystem that includes both analytical methods designed for older repertoires as well as newer methods that engage popular music's current particularities. These methods explore form, rhythm and meter, timbre, modality, harmony, race & ethnicity, gender & sexuality, interaction & improvisation, music instrument studies, text expression, multimedia, music & technology, philosophical concerns of ontology and groove, and more. The structure of the course is not set by the instructor in advance. Rather, the instructor and individual students will devise a grading contract in the first week that guides the topics in which the students will complete their work. The aim of the work is the further students' scholarly agendas and improve their capacity to read and present secondary scholarship, write and present their own scholarship, transcribe music, and provide feedback to their peers. Cross Listed with MUAC 3014.

**MUAC 4020 Introduction to Research in Piano Pedagogy (2 Credits)**

This course is designed to support the research requirements for the lecture-recital and/or the independent graduate-level pedagogical project which meet the standard competencies of the piano pedagogy program.

**MUAC 4050 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4051 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4052 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4090 Model Composition (4 Credits)**

Students in this course deepen their understanding of musical styles and techniques by composing works that imitate major composers before 1900. Music by each student is performed in a final recital. Prerequisite: Tonal Counterpoint, equivalent coursework from another institution, or permission of instructor.

**MUAC 4121 Seminar in Music Theory (4 Credits)**

Seminar in Music Theory focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

**MUAC 4160 Issues in Opera History and Adaptation (4 Credits)**

This course addresses cultural, historical, analytical, aesthetic, and scholarly issues relevant to the history of opera. Students will consider the various ways in which composers, librettists, singers, patrons, conductors, listeners, and scholars have adapted to changes in social and cultural practices surrounding and subsuming opera as a social phenomenon, as well as to changes in the art form itself. We will study representative works and productions from the earliest music dramas of the Baroque period through to contemporary operas and reflect on the challenges posed in staging these works for today's audiences. Assignments may include weekly reflection papers, oral or virtual presentations, and a research project developed in consultation with the instructor.

**MUAC 4161 Topics in Modern Opera (4 Credits)**

This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

**MUAC 4189 Jazz Performance Techniques (2 Credits)**

Individual study of jazz performance techniques in a directed study environment.

**MUAC 4196 Graduate Composition Tutorial (2 Credits)****MUAC 4200 Diction-Graduate Voice Majors (2 Credits)**

This course is designed to help refine the diction skills of graduate students in voice, with an emphasis on Italian, French and German. Native speakers will be presented, and the student will learn some basic vocabulary and syntactical aspects of the language.

**MUAC 4300 Topics in Jazz History (4 Credits)**

A seminar focusing on a major figure of jazz history. Detailed examination of a single artist, their life, music and influences.

**MUAC 4305 Advanced Bebop Concepts (2 Credits)**

An in-depth study of the language of bebop jazz improvisation. The course will combine listening, composing and performing skills with theoretical knowledge of the great improvisers of the 1940s and 50s.

**MUAC 4350 Talam: Rhythmic Form and Process in South Indian Music (4 Credits)**

This course explores the rhythmic system (talam) of Carnatic music, the classical music of Southern India. We begin the quarter with a general introduction to Carnatic music performance, examining its relationship to religious identity, histories of colonialism and nationalism, and social practices of class, caste, and gender. Having contextualized South Indian classical music socio-historically, the remainder of the quarter will focus on theoretical and practical issues in Carnatic talam. Readings and discussions will examine Indian conceptions of time (musical, cosmological, and cultural), the setting of song-texts, the art of improvisation and accompaniment, as well as the relationship between music, dance, and the body. We will also discuss and analyze cross-cultural applications of Carnatic rhythm in the compositions and pedagogies of several rock, jazz, and classical musicians. Weekly modules in solkattu, a system of spoken syllables and patterned hand gestures, will help students build and sharpen rhythmic skills and develop an analytical understanding for the intricacies of Carnatic meter and rhythmic design. Over the quarter, students will learn increasingly challenging exercises and rhythmic compositions in a variety of tala cycles (3, 5, 7, 8, and 9 beats in length). Some class time will be devoted to hands-on instruction in Carnatic percussion, including the mrdangam, the principle drum of South Indian classical music, as well as other hand drums including the khanjira frame drum.

**MUAC 4450 Suzuki Group Lesson Practicum (1 Credit)**

The Suzuki Group Lesson Teaching Practicum provides an opportunity for Suzuki Pedagogy master's students and Suzuki Teaching Certificate students to receive feedback on their own group lesson teaching skills from the professor. Prerequisites: MUAC 3477 or MUAC 3461.

**MUAC 4492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)**

This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4493 Approaches to American Popular Music (4 Credits)**

We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4494 Music and Belief in World Cultures (4 Credits)**

How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world's religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops.

**MUAC 4498 Music, Dance, and Everyday Life in South Asia (4 Credits)**

This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged.

**MUAC 4499 Topics in Musicology (4 Credits)**

This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project.

**MUAC 4511 Mahler and Musical Culture (4 Credits)**

We explore Gustav Mahler's life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4512 Stories of Music History (4 Credits)**

We explore a number of case studies in which "conventional wisdom" about a composer, repertory, or a period of time turns out to be not universally "true," but instead contingent on cultural context and changing ideologies about music. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4513 Wagner and the Ideology of the Artwork (4 Credits)**

We explore Richard Wagner's music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4518 Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon (4 Credits)**

This course asks, what happens when people engage with music that is not their own? How do we determine who owns music? A piece? A tradition? What is the difference between theft, appropriation, and appreciation? We will explore these questions through diverse case studies examining popular, classical, and traditional musics from around the world. We will examine Paul Simon's engagement with South African musicians during apartheid, rap's overwhelming popularity among young white men in the United States, and Central African musicians' embrace of Cuban music in the 1960s and '70s. We will parse out what kinds of cross-cultural musical engagements occur, their impacts, and the responsibilities of individuals, governments, and international organizations in different contexts.

**MUAC 4519 Social Justice and Community Music Making (4 Credits)**

What is community music? How do community arts programs function? How do they integrate social justice and music? This interdisciplinary community engaged learning course examines these questions both inside and outside of the classroom. Students will analyze how music programs are built and run by applying ideas from in-class readings and discussions to collaborative projects with local social justice arts-based organizations (e.g., a social justice songwriting project with local teens, a storytelling performance project with a community choir). By working with local community arts and social justice program professionals, students will critically analyze best practices as they learn how organizations are constructed, get funding, demonstrate impact, and pursue their social justice and educational missions. Drawing on scholarship from community arts, social work, ethnomusicology, cultural policy, and music education, this course provides an interdisciplinary foundation for students to engage with (and even create) impactful arts- and social justice-focused programs in their communities.

**MUAC 4520 Topics in Hindustani Music (4 Credits)**

This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course will be developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, one class each week is designed to incorporate hands-on music-making through singing, rhythmic exercises, and dance. By the end of the quarter, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We will analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting).

**MUAC 4521 Topics in Baroque Music (4 Credits)**

Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4535 Baroque Opera on Stage (4 Credits)**

This course will explore aspects of Baroque opera not immediately conveyed by a score - including staging, gesture, scenic design, machinery, theater space, performers response - as they inform our understanding of specific Baroque operas and the cultural context within which they were performed. We will focus on operas by Monteverdi, Cavalli, Purcell, Handel, Lully, Campra and Rameau, among others. Students should expect to participate in class discussions, to write short response papers, to give short oral presentations, and to write a 12 to 15 page paper that examines a Baroque opera or operas in the light of one or more performance considerations. With the prior consent of the instructor, students may submit an alternative final project, one which combines performance with some form of written work.

**MUAC 4536 Musics of the African Diaspora (4 Credits)**

How have African music-cultures changed in their transitions to new lands? What performative Africanisms have been retained, reconstructed and/or highlighted in the aftermath of legal slavery? And within newer Afro-diasporic communities? What role does musical transmission play in cultural retention and survival? This course will explore the connections and differences in musical practice and worldview throughout the African diaspora. We focus primarily on music-cultures of North, South, and Central America, and the Caribbean, examining traditional forms of music and dance associated with religion and ritual such as Afro-Cuban bata drumming, practices which fuse music and movement such as Afro-Brazilian capoeira, jazz, and popular music such as rap. Lectures and class discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops.

**MUAC 4537 Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship (4 Credits)**

This course is an experiential exploration of the spirituality of African-American sacred song. Participants will sing, consider the history of the music and explore their own connection to the songs, as well as the inspiration and challenge these songs may offer to present and future communities.

**MUAC 4538 Cultural and Psychological History of the African American Spiritual (4 Credits)**

In this graduate academic music course, we trace the cultural and psychological history of African American spirituals, which are the sacred folk songs that were created and first sung in the 18th and 19th centuries by African women and men enslaved in North America. We explore the cultural and psychological functions of the music during slavery and the different functions of choral and art song spirituals that evolved after slavery, peaking in their cultural impact during the Harlem Renaissance of the 1920s and 30s. We also examine the cultural relationship of the spirituals to gospel music, and the influence of the spirituals tradition on the emergence of the freedom songs of the Civil Rights Movement of the 1950s and 60s. Throughout the course, we reflect on the relationship of the spirituals to larger issues of racial identity and social justice. Finally, we examine the cultural and psychological meanings of the spirituals tradition in contemporary twenty-first century America.

**MUAC 4539 Music, Politics, and Policy (4 Credits)**

This course examines the ways in which policies and politics engage with popular, jazz, folk, and classical musics around the world. Students will explore contemporary and historical cases in which governments and NGOs foster, transform, reject, and otherwise use musics to promote their own ideas about local economies, national cultures, diplomacy, democracy, innovation, cultural diversity, and even criminal law. We ask, can music promote peace? Democracy? How? How do governments create local and national music scenes? Which local and national cultures do they promote and protect? To what end? We look at how the Cuban government has embraced rap music as emblematic of the nation's revolutionary ethos; how the United States government used jazz as a diplomatic tool during the Cold War; how NGOs in Israel and Palestine used popular and classical musics to promote peace and understanding; how American courts have used rap music as evidence in criminal cases; and how funding and intellectual property laws impact musical ownership, tradition, innovation, and creativity.

**MUAC 4540 Music and Activism (4 Credits)**

In many times and places, people around the world sing, chant, and drum in the streets. Their lived experiences don't line up with the equality and opportunity their governments claim to champion. Music is an integral part of their advocacy work. They play and sing as they draw attention to injustices, foster cohesion and community, communicate messages (both covertly and forcefully), express pain, joy and pride, energize and sustain themselves, as well as (de)humanize themselves and others. This course explores the special place music has in activism around the world. We examine protest movements such as the South African anti-apartheid movement, the American Abolitionist and Civil Rights movements, American/European White Nationalist movements, the Arab Spring, and the worldwide Black Lives Matter movements. We will explore community music projects with social justice agendas such as Youth on Record, The Spirituals Project, and the West-Eastern Divan Orchestra. We ask, why is music a particularly important part of activist work? What special place does it have? How is it used for both good and bad? For community mobilization, peace, and violence? Drawing on the fields of ethnomusicology, musicology, and cultural policy, we explore music, not just as a means to achieve certain ends, but as integral to the way humans position themselves in the world and advocate for themselves and others.

**MUAC 4545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)**

With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4547 Topics in Advanced Keyboard Repertoire (4 Credits)**

Topics in Advanced Keyboard Repertoire focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

**MUAC 4600 Extra-Musical Roles of the Music Director (0-2 Credits)**

Under the supervision and guidance of conducting faculty, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. Students will learn about and gain hands-on, actual experience with many of the non-musical tasks with which conductors are faced. These experiences will include managing ensemble personnel, librarian activities, running auditions, and recruiting.

**MUAC 4601 Soundpainting: The Study of the Live Composing Sign Language for the Performing and Visual Arts (2 Credits)**

In this course, students will study the soundpainting gestural language, a universal live composing sign language for the performing and visual arts.

**MUAC 4602 Free Improvisation Techniques (2 Credits)**

Free Improvisation Techniques will explore exercises in Tom Hall's book *Free Improvisation: A Practical Guide*. We will also explore how those exercises relate to the broader concepts of improvising as discussed in Stephen Nachmanovich's landmark book *Free Play*. This class is best suited for all musicians, especially those who are seeking to expand the way they relate to performing and how performing relates to other aspects of their life.

**MUAC 4801 Introduction to Schenkerian Analysis (4 Credits)****MUAC 4831 Current Trends in Piano Pedagogy (2 Credits)**

This course will explore current trends including some of the following topics: technology, professionalism, the history of piano pedagogy, employment opportunities and creative projects.

**MUAC 4837 Pedagogy and Repertoire Organ (2 Credits)**

Study of teaching techniques, survey of literature and teaching materials from the 20th and 21st centuries. Prerequisite: MUAC 3740.

**MUAC 4840 Piano Teaching Practicum (0-2 Credits)**

MUAC 4840 is a course designed to provide guided observations, lesson planning, and practice teaching students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

**MUAC 4850 Elementary Piano Pedagogy I (2 Credits)**

An in-depth study of methods and curriculum for teaching piano at the beginner and elementary level. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials.

**MUAC 4851 Elementary Piano Pedagogy II (2 Credits)**

This course is designed in a sequence with Elementary Piano Pedagogy I. An in-depth study of methods and curriculum for teaching piano at the late elementary to early intermediate levels. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials. Prerequisite: MUAC 4850.

**MUAC 4852 Group Piano Teaching Techniques (2 Credits)**

An in-depth study of methods and curriculum for group study and the teaching of adults and children. Focus on philosophical, psychological, and physiological bases for teaching the piano in groups of all ages. Study and evaluation of current resources.

**MUAC 4853 Intermediate Piano Pedagogy I (2 Credits)**

Course content will emphasize teaching methods, materials, and curriculum content at the intermediate level of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

**MUAC 4854 Intermediate Piano Pedagogy II (2 Credits)**

This course is designed in a sequence with Intermediate Piano Pedagogy I. Course content will emphasize teaching methods, materials, and curriculum content at the intermediate to early advanced levels of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

**MUAC 4991 Independent Study (1-10 Credits)****MUAC 4993 Independent Study (1-10 Credits)****MUAC 4995 Independent Research (1-10 Credits)****MUAC 5991 Graduate Thesis (1-10 Credits)**

## Music: Studio Lessons (MUPR)

**MUPR 3120 Alexander Technique (2 Credits)**

The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion.

**MUPR 3190 Jazz Piano (2 Credits)****MUPR 3210 Piano (2 Credits)**

For non-majors only. If you are interested in Piano for Non-Majors, please email [lamontpiano@du.edu](mailto:lamontpiano@du.edu).

**MUPR 3230 Voice (2 Credits)**

For non-majors only.

**MUPR 3250 Violin (2 Credits)**

For non-majors only.

**MUPR 3270 Violoncello (2 Credits)**

For non-majors only.

**MUPR 3290 Viola (2 Credits)**

For non-majors only.

**MUPR 3310 Bass Violin (2 Credits)****MUPR 3312 Jazz Bass (2 Credits)****MUPR 3330 Harp (2 Credits)****MUPR 3350 Organ Improvisation (2 Credits)**

This course is designed for organ students to introduce them to the art of organ improvisation, hymn and ensemble playing, as well as all possible forms of accompaniment. It is meant for undergraduate students (upper division), graduate students, and artist diploma graduates. Prerequisites: knowledge of music history, figured bass, and counterpoint. Permission of instructor required.

**MUPR 3351 Organ (2 Credits)****MUPR 3370 Clarinet (2 Credits)**

For non-majors only.

**MUPR 3390 Flute (2 Credits)**

For non-majors only.

**MUPR 3460 Bassoon (2 Credits)****MUPR 3480 Trombone (2 Credits)**

For non-majors only.

**MUPR 3481 Jazz Trombone (2 Credits)****MUPR 3500 Trumpet (2 Credits)**

For non-majors only.

**MUPR 3520 Horn (2 Credits)**

For non-majors only.

**MUPR 3540 Euphonium (2 Credits)****MUPR 3560 Tuba (2 Credits)**

For non-majors only.

**MUPR 3621 Jazz Guitar (2 Credits)****MUPR 3660 Percussion (2 Credits)**

For non-majors only.

**MUPR 3661 Percussion Set (2 Credits)****MUPR 3680 Oboe (2 Credits)****MUPR 3780 Saxophone (2 Credits)****MUPR 3900 Carillon (2 Credits)****MUPR 3920 Composition (2 Credits)****MUPR 3930 Conducting (2 Credits)****MUPR 4040 Music Production (2 Credits)**

This course is designed to meet you where you currently are in your production and theory experience and then progress from there. As such, the first 1 or 2 meetings may be to assess your current status and construct a plan for the academic quarter. Possible directions include, but are not limited to, audio theory, microphone technique, post-production (mixing/mastering), editing, songwriting and production, sound synthesis, and electronic music production, etc.



**MUPR 4191 Jazz Piano (2 Credits)**

**MUPR 4210 Piano (2 Credits)**

**MUPR 4230 Voice (2 Credits)**

**MUPR 4250 Violin (2 Credits)**

**MUPR 4270 Violoncello (2 Credits)**

**MUPR 4290 Viola (2 Credits)**

**MUPR 4310 Bass Violin (2 Credits)**

**MUPR 4312 Jazz Bass (2 Credits)**

**MUPR 4330 Harp (2 Credits)**

**MUPR 4350 Organ (2 Credits)**

**MUPR 4370 Clarinet (2 Credits)**

**MUPR 4390 Flute (2 Credits)**

**MUPR 4460 Bassoon (2 Credits)**

**MUPR 4480 Trombone (2 Credits)**

**MUPR 4481 Jazz Trombone (2 Credits)**

**MUPR 4500 Trumpet (2 Credits)**

**MUPR 4520 Horn (2 Credits)**

**MUPR 4540 Euphonium (2 Credits)**

**MUPR 4560 Tuba (2 Credits)**

**MUPR 4600 Classical Guitar (0-2 Credits)**

**MUPR 4610 Classical Guitar (4 Credits)**

**MUPR 4621 Jazz Guitar (2 Credits)**

**MUPR 4660 Percussion (2 Credits)**

**MUPR 4661 Percussion Set (2 Credits)**

**MUPR 4680 Oboe (2 Credits)**

**MUPR 4780 Saxophone (2 Credits)**

**MUPR 4900 Carillon (2 Credits)**

**MUPR 4920 Composition (2 Credits)**

One-on-one instruction for composition majors.

**MUPR 4930 Conducting (2 Credits)**

This course provides individualized instruction in conducting for graduate students majoring in conducting. Repertoire selection, analysis, rehearsal procedures, and gestures will all be studied. Students will prepare assigned repertoire for class each week. Significant time will be spent developing gestures that reflect the artistic and pedagogical intentions of each student. The individual lesson is also a mentoring time to develop strategies for career development and recital preparation. Analysis projects may be assigned to provide an opportunity for in-depth scholarly research and presentation of significant literature relating to the theme of the quarter.

**MUPR 4991 Independent Study (2-4 Credits)**

## Media, Film & Journalism Studies

Office: Media, Film and Journalism Studies Building, Room 127

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Phone: 303-871-2166

Email: mfjsadm@du.edu

Web Site: <http://www.du.edu/ahss/mfjs> (<http://www.du.edu/ahss/mfjs/>)

### Master of Arts in International and Intercultural Communication

The Master of Arts program in International and Intercultural Communication is a joint master's degree from the Josef Korbel School of International Studies (JKSIS) and the Department of Media, Film & Journalism Studies (MFJS). This highly flexible program allows students to choose from the breadth of coursework available in JKSIS and MFJS, while developing their own specific areas of concentration. Students complete internships to

gain professional experience, and may further hone expertise by completing a Graduate Certificate as part of the degree. Certificate Programs include: Global Business & Corporate Social Responsibility; Global Health Affairs; and Public Diplomacy.

International and Intercultural Communication graduates pursue globally-oriented careers in a variety of fields, including: Global health communication; Public diplomacy & Public affairs; International PR and marketing; Nonprofit management; Cross-cultural and diversity training; International education; Human rights and Conflict resolution; International administration, and more.

Effective global communication requires that people understand both international and intercultural dynamics and differences. Success is based on communicating goals and bridging differences. Students pursuing the MA in International and Intercultural Communication establish a strong theoretical and applied foundation, while learning the nuances of the global environment. They then have an opportunity to extend this interdisciplinary base through courses in business, anthropology, education and other areas.

## Master of Arts in Media and Public Communication

The Master of Arts in Media and Public Communication is a 48-credit, two-year degree program, which equips students with a combination of essential theoretical and practical skills that prepare them for a variety of professional and research careers in media and communication. The program emphasizes the role of media and communication in bridge building and social justice across diverse audiences. Students can choose one of two areas of concentration: Strategic Communication or Media and Globalization. Depending on students' goals and interests, they can opt to complete a master's thesis, a substantial research paper, or a professional internship as their capstone requirement.

**Concentration in Strategic Communication:** Strategic communication encompasses skills and activities associated with public relations, advertising, brand management, and marketing communication. This concentration focuses on the nonprofit and government sectors, as well as on international and intercultural issues within strategic communication. Classes emphasize ethical communication and incorporate experiential learning projects in which students work with nonprofit organizations to develop creative and strategically sound communication campaigns. Students benefit from faculty expertise in nonprofit, international, intercultural, health, corporate, and political communication. The coursework integrates theoretical concepts in media and communication with applied research, strategic planning, and messaging skills essential for professional success in the nonprofit, government, and for-profit sectors. Students also gain a solid foundation for pursuing advanced degrees and conducting academic research.

**Concentration in Media and Globalization:** This concentration is designed for students who are interested in pursuing careers as researchers and media educators. Courses focus on the role of media and communication in social and cultural change in both global and local settings. Students gain in-depth theoretical knowledge of media, culture, and communication and acquire methodological skills needed to conduct independent research projects based on their interests. This concentration emphasizes critical and conceptual thinking, cultural awareness, and social responsibility. Students benefit from faculty's research and community engaged projects in international locations, including Latin America, Africa, Europe, and Asia, as well as from faculty work with immigrant and multicultural communities in the US. Graduates develop a solid foundation for pursuing advanced degrees and careers in higher education and research.

## Public Diplomacy Certificate of Specialization

The Public Diplomacy Graduate Certificate is an interdisciplinary, 24-credit certificate, which examines the history, theory, methods and uses of strategic communication for the purposes of informing, influencing, and establishing dialogue with international publics and stakeholders. The certificate is designed to help students acquire a sophisticated understanding of global media and communication processes and the ways in which they are employed by individuals, groups, organizations, and governments to advance their strategic interests. The certificate combines expertise from the Department of Media, Film, and Journalism Studies and the Josef Korbel School of International Studies, providing students with an interdisciplinary learning experience. Graduates of the Public Diplomacy Certificate are equipped with conceptual and practical skills that prepare them for careers in the fields of cultural diplomacy, nation branding, public affairs and information, foreign aid, global health and development communication, international strategic communication, and international education. The certificate is open to students enrolled in one of the master's programs offered by the Department of Media, Film, and Journalism Studies or the Josef Korbel School of International Studies, and can be integrated into the degree program. This certificate program does not require additional credits.

## Master of Arts in International & Intercultural Communication

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload

your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Media and Public Communication with a Concentration in Strategic Communication

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- **Program GPA requirement:** The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Media and Public Communication with a Concentration in Media and Globalization

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Arts in International and Intercultural Communication

#### IIC/Peace Corps' Paul D. Coverdell Fellows Program

In cooperation with the Peace Corps, the Paul D. Coverdell Fellows Program permits students who have completed their service in the Peace Corps to complete the MA in International & Intercultural Communication degree following their service. They receive 3 credits for their Peace Corps service toward the 48 credits required for the degree, leaving 45 credits for the program. In addition, the foreign language proficiency requirement is waived. Students are required to complete an internship with a high needs community in the U.S.

#### Coursework requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year. Students are allowed to take one graduate 3000-level course to count towards the 56 hours required, but not if a separate 4000-level of the course exists for graduate students. Students must consult with the instructor and the IIC director before enrolling in any 3000-level course. Grinds courses may not be applied to this degree. Students are welcome to take Grinds courses as desired, but they will not count towards any of the requirements for this degree, including electives.

Code	Title	Credits
<b>Core coursework requirements</b>		
<b>I. Department of Media, Film and Journalism Studies requirements (6 courses)</b>		<b>24</b>
Required foundational courses:		
MFJS 4650	Global Media and Communication	
MFJS 4654	Intercultural Communication	
Complete an additional 4 courses in MFJS		
<b>II. Joseph Korbel School of International Studies requirements (4 courses)</b>		<b>16</b>
Students must complete 4 courses in JKIS. These courses may be International Studies (INTS), Conflict Resolution (CRES), or Public Policy (PPOL).		
<b>III. Research Methods</b>		<b>4</b>
Students must take one research methods course; if taken in MFJS or INTS, it counts as one of the 4 courses required in either unit and opens up the possibility to take one elective course. Students who take methods in another department will not have any courses left over for electives. Students who wish to take a methods course from another department must receive approval from the IIC director. Approved research methods courses include:		
MFJS 4560	Audience and Communication Research	
INTS 4010	Epistemology	
INTS 4050	Statistical Methods I	
INTS 4051	Statistical Methods II	
INTS 4052	Statistical Methods III	
INTS 4057	Statistics *	
INTS 4058	Applied Time-Series Analysis	
INTS 4303	Econometrics for Decision Making I	
INTS 4333	International Project Design and Monitoring	
INTS 4342	Project Management	
INTS 4522	Philosophy of Social Science	
INTS 4575	Systems Thinking for Social Scientists	
INTS 4579	International Futures	

INTS 4632	Qualitative Research Methods
INTS 4633	Int'l Project Evaluation
INTS 4644	Human Rights Research Methods
INTS 4711	Topics in International Studies
INTS 4735	Defense and Security Methods
INTS 4966	Applied Field Methods: Africa
INTS 4999	Research Design: Ph.D. Prospectus, Substantial Research Paper, and MA Thesis
RMS 4941	Introduction to Qualitative Research

**IV. Internship (must serve a high needs community in the U.S.)** **4**

MFJS 4980	Internship
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**V. Electives** **0-4**

Electives serve as additional coursework needed to reach the minimum number of credits required for the degree and to help development a specialization. These may be taken in MFJS, JKJIS, or another department.

**Total Credits** **48**

Note: The maximum number of credits that will be accepted in transfer toward the degree is 20 credits

\* Check prerequisites for these courses

Minimum number of credits required for degree: 48 credits

**Internship**

Internships require 40 hours of work per credit (40 x 4 = 160 hours). IIC Peace Corps Fellows are required to complete five credits of internship with a high-needs community in the United States. An internship is registered as a course (MFJS 4980: Internship), and may be taken for 1 to 5 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students in the Paul D. Coverdell Fellows Program must complete their internship in a high-need community within the U.S. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised by the Director of Internships for the IIC Program in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

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## Master of Arts in Media and Public Communication with a Concentration in Media and Globalization

### Degree Requirements

The MA in Media and Public Communication with a Concentration in Media and Globalization requires 48 hours of credit, including completing a thesis, a substantial research paper (SRP), or an internship.

### Course Requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

Code	Title	Credits
Required Courses		12
MFJS 4160	Media Theories	
MFJS 4300	Media Law <sup>1</sup>	
MFJS 4560	Audience and Communication Research <sup>1</sup>	
Choose One of the Following Courses:		4
MFJS 4650	Global Media and Communication	
MFJS 4654	Intercultural Communication	
Concentration Courses		
Choose 4 of the following courses:		16
MFJS 4001	Producing Video for Social Media and Advocacy <sup>2</sup>	
MFJS 4065	Public Diplomacy and Nation Branding	
MFJS 4080	Global/Multicultural Campaigns	
MFJS 4165	Global Health and Development Communication	
MFJS 4175	Justice Equity Diversity and Inclusion in Health Communication <sup>1</sup>	
MFJS 4242	Reel Women <sup>1,2</sup>	
MFJS 4506	Audio Documentaries <sup>1</sup>	
MFJS 4652	Feminist Media Studies <sup>1</sup>	

MFJS 4653	Language, Power, and Globalization <sup>2</sup>	
MFJS 4655	JEDII (Justice, Equity, Diversity, Inclusion, & Internationalization) Storytelling <sup>1,2</sup>	
MFJS 4660	Global Edutainment & Narrative Persuasion	
MFJS 4912	Seminar in Media Film & Journalism Studies <sup>3</sup>	
Elective Courses Inside or Outside the Department		8-12
Internship OR Substantial Research Paper (SRP) OR Thesis <sup>4</sup>		4
MFJS 4980	Internship	
or MFJS 4995	Thesis/Substantial Research Paper	
Total Credits		48

1. This course may be cross-listed with an undergraduate course.

2. This course is offered infrequently. Please talk to your advisor with questions.

3. Advisor approval is required when taking this course as a concentration course. Students may take 4912 more than once if the course topic is different.

4. Students may take up to 8 Thesis credits, but only 4 Internship or SRP credits.

Minimum number of credits required for the degree: 48

### Internship

Internships require 40 hours of work per credit (40 x 4 = 160 hours). An internship is registered as a course (MFJS 4980: Internship), and may be taken for a maximum of 4 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students may elect to do an internship with media/communications agencies, non-profit organizations, corporations, or government, located in the Denver area, or elsewhere in the U.S. or abroad. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised by the director of internships in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

### Thesis

Students may opt to do a thesis instead of an internship, for a maximum of 4 credits. To begin work on the thesis, the student must first choose an area of interest and develop a research question that will guide the thesis project. At that time, the student should also identify a faculty member with expertise in their area of interest who is available and willing to work with them as a thesis advisor. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the thesis project. Students should review the process and policies for the master's thesis in the Graduate Policy Manual. Students can find "Thesis and Dissertation Formatting Guidelines," "Thesis Oral Defense Information," and "Thesis/Dissertation Submission Instructions via ETD" under the "Graduation and Oral Defense Information on this website. The student should meet with the thesis advisor to finalize a research question and outline the entire project. The student should then begin work on a preliminary proposal which may need to be reviewed by the MFJS Graduate Committee (as determined by the thesis advisor and MA director), and should include the following:

- research problem or question
- theoretical framework
- preliminary literature review
- methods
- The committee will review the proposal and the student's course record (including grades), consult with the student's advisor and instructors of courses related to the thesis, and make a recommendation to the student on doing a thesis. If the committee recommends against the student doing a thesis, the student is required to do an internship. A student has the option to revise and resubmit the preliminary thesis proposal one time. Once the preliminary proposal has been approved by the graduate committee, the student and advisor will need to select a thesis committee, which includes the advisor and a minimum of two other committee members who will read the formal research proposal and the final report. These additional members should be contacted and asked if they would be willing to serve on the thesis committee. Once the thesis committee is formed, the student should begin work on a formal thesis proposal. The exact form of this proposal will be outlined by the thesis advisor and will vary according to the thesis topic, the specific problem being studied and the methodology proposed to explore that problem. All proposals should include the following (the order may vary):
- a general introduction to the thesis topic
- an explication of the problem(s) the research will address (i.e., the purpose of the study)
- a review of the literature related to the stated problem
- a clear and succinct statement of the research questions or hypotheses the thesis will address
- a discussion of the research methods that will be used to explore the questions or hypotheses
- a description of the material or data that will be examined in order to suggest answers to the research questions or to test the hypotheses
- if appropriate, a discussion of the contributions the study will make to the existing discourse on the thesis topic.

- The student will need to convene the thesis committee for a proposal meeting following completion of the proposal. The committee members should be presented with a draft of the research proposal two weeks prior to this meeting. At the meeting the committee members will question the student on the project's theory, design, and research methods to ensure that the project is rigorous and of appropriate scope. Revisions to the proposal may be required following this meeting. An approved proposal outlines the specific procedures the student must follow to complete the thesis requirement. Following approval of the research proposal, the student may then proceed to conduct the research described in the proposal, then report and discuss the results in the final written thesis report, which must be approved in an oral defense by the thesis committee. The format of the thesis should follow the guidelines developed by the Office of Graduate Studies exactly.

### Substantial Research Paper (SRP)

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage students in an independent research project that is longer and more in-depth than a class research paper, but less than a thesis project. Unlike a thesis, an SRP does not require a review committee or an oral defense; rather, it will be supervised and graded by a single appointed faculty member. Also, unlike a thesis, the SRP does not require the collection of primary data, but may use secondary data only.

To begin work on the SRP, the student must first choose an area of research interest and develop a research question that will guide the research. It may be based on a class research paper that will then be expanded for the SRP. The student should choose an SRP faculty advisor with expertise in the student's area of interest. The faculty advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the SRP. It is important that the student and faculty advisor establish a reasonable and mutually agreeable timeline for exchanging drafts and comments on the student's work. The final copy of the SRP should be formatted according to an academic style, such as APA or MLA, and follow any other guidelines agreed upon with the faculty advisor.

Students opting to complete an SRP should register for MFJS 4995 for a maximum of 4 credits, allocated in the quarters in which they are actually working on the SRP. It is not permissible to register for credit before work has commenced or after the work has been completed.

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## Master of Arts in Media and Public Communication with a Concentration in Strategic Communication

### Degree Requirements

The MA in Media and Public Communication with a Concentration in Strategic Communication requires 48 hours of credit, including completing a thesis, a substantial research paper (SRP), or an internship.

### Coursework Requirements

Students should plan ahead to ensure they are able to complete their required courses as some are offered every other year.

Code	Title	Credits
Required Courses		12
MFJS 4160	Media Theories	
MFJS 4300	Media Law <sup>1</sup>	
MFJS 4560	Audience and Communication Research <sup>1</sup>	
Choose one of the following courses		4
MFJS 4650	Global Media and Communication	
MFJS 4654	Intercultural Communication	
Concentration Courses		16
MFJS 4050	Foundations of Strategic Communication	
Choose 3 of the following courses		
MFJS 4001	Producing Video for Social Media and Advocacy <sup>2</sup>	
MFJS 4060	Strategic Messaging	
MFJS 4065	Public Diplomacy and Nation Branding	
MFJS 4080	Global/Multicultural Campaigns	
MFJS 4165	Global Health and Development Communication	
MFJS 4175	Justice Equity Diversity and Inclusion in Health Communication	
MFJS 4320	Brands and Identities	
MFJS 4504	Social Media Strategies <sup>1</sup>	
MFJS 4506	Audio Documentaries <sup>1</sup>	
MFJS 4660	Global Edutainment & Narrative Persuasion	
MFJS 4912	Seminar in Media Film & Journalism Studies <sup>3</sup>	
Elective Courses Inside or Outside the Department		8-12
Internship, Substantial Research Paper (SRP), or Thesis <sup>4</sup>		4

MFJS 4980 or MFJS 4995	Internship Thesis/Substantial Research Paper	48
Total Credits		48

1. *This course may be cross-listed with an undergraduate course.*
2. *This course is offered infrequently. Please talk to your advisor with questions.*
3. *Advisor approval is required when taking this course as a concentration course. Students may take 4912 more than once if the course topic is different.*
4. *Students may take up to 8 Thesis credits, but only 4 Internship or SRP credits.*

Minimum number of credits required for the degree: 48

### Internship

Internships require 40 hours of work per credit (40 x 4 = 160 hours). An internship is registered as a course (MFJS 4980: Internship), and may be taken for a maximum of 4 credits during any one term. (Note: For internships at the end of a student's program, they must be secured or in the process of being secured in the quarter before graduation.) Students may elect to do an internship with media/communications agencies, non-profit organizations, corporations, or government, located in the Denver area, or elsewhere in the U.S. or abroad. Students are encouraged to do the internship after they have completed at least half of the 48 credits required for the MA degree. All internships will be administered and supervised by the director of internships in the Dept. of Media, Film and Journalism Studies. Students must meet with the internship director in order to obtain approval for an internship.

### Thesis

Students may opt to do a thesis instead of an internship, for a maximum of 4 credits. To begin work on the thesis, the student must first choose an area of interest and develop a research question that will guide the thesis project. At that time, the student should also identify a faculty member with expertise in their area of interest who is available and willing to work with them as a thesis advisor. The advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the thesis project. Students should review the process and policies for the master's thesis in the Graduate Policy Manual. Students can find "Thesis and Dissertation Formatting Guidelines," "Thesis Oral Defense Information," and "Thesis/Dissertation Submission Instructions via ETD" under the "Graduation and Oral Defense Information on this website. The student should meet with the thesis advisor to finalize a research question and outline the entire project. The student should then begin work on a preliminary proposal which may need to be reviewed by the MFJS Graduate Committee (as determined by the thesis advisor and MA director), and should include the following:

- research problem or question
- theoretical framework
- preliminary literature review
- methods
- The committee will review the proposal and the student's course record (including grades), consult with the student's advisor and instructors of courses related to the thesis, and make a recommendation to the student on doing a thesis. If the committee recommends against the student doing a thesis, the student is required to do an internship. A student has the option to revise and resubmit the preliminary thesis proposal one time. Once the preliminary proposal has been approved by the graduate committee, the student and advisor will need to select a thesis committee, which includes the advisor, a committee chair who is a tenured or tenure-track faculty member outside of MFJS, and a minimum of one other committee member who will read the formal research proposal and the final report. These additional members should be contacted and asked if they would be willing to serve on the thesis committee. Once the thesis committee is formed, the student should begin work on a formal thesis proposal. The exact form of this proposal will be outlined by the thesis advisor and will vary according to the thesis topic, the specific problem being studied and the methodology proposed to explore that problem. All proposals should include the following (the order may vary):
- a general introduction to the thesis topic
- an explication of the problem(s) the research will address (i.e., the purpose of the study)
- a review of the literature related to the stated problem
- a clear and succinct statement of the research questions or hypotheses the thesis will address
- a discussion of the research methods that will be used to explore the questions or hypotheses
- a description of the material or data that will be examined in order to suggest answers to the research questions or to test the hypotheses
- if appropriate, a discussion of the contributions the study will make to the existing discourse on the thesis topic.
- The student will need to convene the thesis committee for a proposal meeting following completion of the proposal. The committee members should be presented with a draft of the research proposal two weeks prior to this meeting. At the meeting the committee members will question the student on the project's theory, design, and research methods to ensure that the project is rigorous and of appropriate scope. Revisions to the proposal may be required following this meeting. An approved proposal outlines the specific procedures the student must follow to complete the thesis requirement. Following approval of the research proposal, the student may then proceed to conduct the research described in the proposal, then report and discuss the results in the final written thesis report, which must be approved in an oral defense by the thesis committee. The format of the thesis should follow the guidelines developed by the Office of Graduate Studies exactly.



**Substantial Research Paper (SRP)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage students in an independent research project that is longer and more in-depth than a class research paper, but less than a thesis project. Unlike a thesis, an SRP does not require a review committee or an oral defense; rather, it will be supervised and graded by a single appointed faculty member. Also, unlike a thesis, the SRP does not require the collection of primary data, but may use secondary data only.

To begin work on the SRP, the student must first choose an area of research interest and develop a research question that will guide the research. It may be based on a class research paper that will then be expanded for the SRP. The student should choose an SRP faculty advisor with expertise in the student's area of interest. The faculty advisor will help the student to focus the research question and may suggest additional readings or coursework that will help the student develop the SRP. It is important that the student and faculty advisor establish a reasonable and mutually agreeable timeline for exchanging drafts and comments on the student's work. The final copy of the SRP should be formatted according to an academic style, such as APA or MLA, and follow any other guidelines agreed upon with the faculty advisor.

Students opting to complete an SRP should register for MFJS 4995 for a maximum of 4 credits, allocated in the quarters in which they are actually working on the SRP. It is not permissible to register for credit before work has commenced or after the work has been completed.

## Certificate of Specialization Program

### Certificate of Specialization in Media and Public Communication with Concentration in Public Diplomacy

**Program Requirements**

Minimum Credits Required for Certificate: 24

**Coursework Requirements**

Students will take classes in three categories as follows:

Code	Title	Credits
<b>Foundational Courses</b>		<b>8</b>
MFJS 4065	Public Diplomacy and Nation Branding	
MFJS 4160	Media Theories	
or MFJS 4650	Global Media and Communication	
or MFJS 4080	Global/Multicultural Campaigns	
<b>Applied Course</b>		<b>4</b>
MFJS 4050	Foundations of Strategic Communication	
MFJS 4060	Strategic Messaging	
MFJS 4165	Global Health and Development Communication	
MFJS 4504	Social Media Strategies	
<b>Context Specialization Courses</b>		<b>12</b>
Students should select courses that directly focus on the society, politics, economics, or culture of particular countries or regions or challenges related to a specific theme or issue. Context Specialization courses must be arranged into a logical three-course set (by region and/or theme) that matches student interests and is approved by the Certificate Director(s). Only full-credit, graduate level courses in JKSI and MFJS, which are approved by the Certificate Director(s) in advance and are not used to meet another Certificate requirement are eligible for this category. At least two of the specialization courses must be from the Josef Korbel School of International Studies (JKSI). The third course may be from either JKSI or MFJS.		
<b>Total Credits</b>		<b>24</b>

\* Course may be counted as either Foundation, Applied, or Context Specialization, but cannot be counted in more than one of those categories

**Non-Coursework Requirements**

Applicants must be enrolled master's students in good standing in either MFJS or JKSI. Applicants from either unit must apply for the Certificate no later than February 1 in the first year of their master's program in order to be able to complete all of the necessary coursework for the Certificate by the end of their second year.

**MFJS 4001 Producing Video for Social Media and Advocacy (4 Credits)**

This course covers the basics in video production and video storytelling for social media and is open to all graduate students at the University of Denver who are interested in YouTube and other social media video content creation for advocacy, education, and support of social movements. Students will maximize their video storytelling abilities, producing storytelling content that can be shared across multiple social media platforms using mobile phones or equivalent basic consumer equipment. Learning takes place within justice, equity, diversity, inclusion and internationalization frameworks consistent with department, College, and University expectations. The course fulfills elective requirements within MEPC and IIC graduate programs and serves as a university graduate level elective.

**MFJS 4050 Foundations of Strategic Communication (4 Credits)**

Focuses on understanding and implementing public communication campaigns. Central to the course is the exploration of the theoretical social science framework underlying communication campaigns and examination of the ways theories are used to define and explain communication problems and to plan and evaluate campaigns.

**MFJS 4055 Media and Cultural Studies (4 Credits)**

This class surveys key ideas and authors in the interdisciplinary field of cultural studies with a focus on their contributions to the study of media and communication. Some theoretical concepts to be discussed include: representation, identity, cultural production, ideology, hegemony, intersectionality, and power as these relate to the analysis of media institutions, technologies, cultures, audiences/users, texts, and artifacts. Students will develop an understanding of cultural studies as a theoretical, methodological, and political project, devoted to social critique and transformative praxis.

**MFJS 4060 Strategic Messaging (4 Credits)**

Continues the focus on learning and applying public relations techniques, emphasizing media relations and media writing. Students develop the ability to formulate and evaluate appropriate communication objectives, strategies, and tactics in response to real-world public relations problems, paying attention to ethical considerations. Students produce a portfolio of written public relations materials. Prerequisite MFJS 4050 or instructor permission.

**MFJS 4065 Public Diplomacy and Nation Branding (4 Credits)**

Drawing on research from strategic communication, cultural studies, international relations, and marketing, this interdisciplinary course examines how nation-states strive to manage their reputations and increase their influence in the context of globalization and mediatization. Students will learn about the evolution of public diplomacy and nation branding from the Cold War to present day and will discuss current developments and challenges. The course will introduce several theoretical approaches and will use a variety of case studies to help students gain insights into public diplomacy and nation branding as fields of research and of practice. Instructor approval required for all non-MEPC and IIC students.

**MFJS 4070 Seminar in Strategic Communication (4 Credits)**

Through a combination of course readings, case study analyses and guest speakers, students will observe and learn about the practice of public relations in the health and nonprofit sectors. Students will also learn about the goals, challenges and opportunities specific to these sectors. Prerequisite: MCOM/MFJS 4060 or permission of instructor.

**MFJS 4080 Global/Multicultural Campaigns (4 Credits)**

Explores aspects of international and intercultural public relations, including intercultural communications issues, international media issues, international corporate PR, cross-cultural and diversity training, international media relations, and international public relations of governments. The class focuses on relevant theories and issues, rather than on techniques.

**MFJS 4160 Media Theories (4 Credits)**

Surveys a number of theoretical approaches to the study of media and mass communication, paying attention to the historical context in which they arise. Students explore the relationships among media technologies, institutions, content, and audiences as well as their impacts on culture and society. The class prepares students to formulate theoretically grounded research questions within the field of media and mass communication.

**MFJS 4165 Global Health and Development Communication (4 Credits)**

This course will begin with an overview of health communication (which includes but is not limited to health promotion and behavior change). We will discuss individual, social, cultural & technological factors, and relevant theories and concepts in relation to international health communication and development. Students will then learn about the role of communication in international health and development and the way it is practiced in the field. We will also discuss and apply the social and cultural factors that influence the design, delivery, reception, and effectiveness of international health communication programs, the role of international health's important players big and small (e.g. WHO, UNAID, PEPFAR, Doctors without Borders, pharmaceutical companies, local village leaders, local ministries of health, husbands, mothers, etc.), and the ways in which the use of both upstream and downstream communication is imperative. We will examine case studies and the latest research for international health communication and its effectiveness while we also apply health communication theories from a variety of perspectives.

**MFJS 4175 Justice Equity Diversity and Inclusion in Health Communication (4 Credits)**

The course will begin with an overview of Health Communication in the United States and the ways in which health and illness are defined through communication, including media. We will discuss existing health disparities and social determinants of health as we examine health communication in multicultural settings in the U.S. We will further examine multicultural audiences and perspectives about health and illness, including diverse meaning systems and their influences on health attitudes and behaviors. Students will learn about cross-cultural concepts of health and disease and how those are represented in communication about health and illness. As students learn about what it means to develop culturally grounded health communication campaigns, they will examine culture centric messaging in health promotion. We will also discuss the ways in which health care systems are promoting patient-centered, culturally sensitive health care.

**MFJS 4200 Topics in Mass Communications (4 Credits)****MFJS 4222 Experimental Theory and Production (4 Credits)**

This course is an historical, critical overview of experimental film/video movements; training in experimental projection techniques; production of own experimental projects. Lab fee required. Cross listed with MFJS 3222. Prerequisite: MFJS 4470 or permission of instructor.

**MFJS 4227 Producing the Environmental Documentary (4 Credits)**

This course is designed to provide you with a basic understanding of cinematography: cameras, lenses, grip equipment, lighting, and composition. When you complete this course, the goal is for you to have an intermediate understanding of cinematography and that which motivates lighting and composition choices. Because people are the most important part of any production, emphasis will be placed on your ability to work effectively with class members. Learning to collaborate is crucial to your success in this class.

**MFJS 4229 Video Editing is for Everybody (4 Credits)**

Video has become ubiquitous. Whether on YouTube, Hulu, television or a friend's Facebook page, people are exposed to thousands of edited videos every year. From business to anthropology, chemistry to journalism, students in every discipline want to create videos to enhance class projects, aide business plans, promote good works, accompany science processes and create lasting memories. This course is designed to provide students with a basic understanding of television and film editing. When completing this course, the goal is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), editing software and applying a mixture of editing theories and techniques (continuity and montage style editing). There are no prerequisites for this course.

**MFJS 4242 Reel Women (4 Credits)**

Reel Women explores films from the U.S., England, Senegal, India, Canada, Colombia, and Saudi Arabia that are made for, about, and/or by women with the aim of better understanding and centralizing issues pertinent to women's daily lives across the world.

**MFJS 4300 Media Law (4 Credits)**

Introduction to freedom of expression and media law. Students learn how the American legal system works and gain an understanding and appreciation of the philosophical foundations of free expression. In addition, students confront many of the issues facing professional communicators today. Topics include incitement, hate speech, student speech, copyright, defamation, and other issues crucial to mass media professionals. The course examines also explores challenges to free expression brought by new(er) communication technologies. The purpose of this class is to give students the knowledge and critical thinking skills needed to be successful in today's rapidly changing communication environment. Cross-listed with MFJS 3040.

**MFJS 4310 New Media Law & Regulation (4 Credits)**

Examination of current conflicts in mass communications law. Particular emphasis is given the legal problems of communications technologies. Topics may include libel, privacy, obscenity, news gathering, copyright, media ownership and comparative approaches to media law. The course provides insight into how the legal process works and an understanding of the principles and philosophies that underlie the restraints on new communication technologies.

**MFJS 4320 Brands and Identities (4 Credits)**

Reviews theories and cases of the role and meaning of brands in a consumer society, with a particular emphasis on understanding how brands are implicated in the construction and presentation of personal and group identities. The course combines insights from marketing, social psychology, and cultural studies to explore the importance of brands for both consumers and practitioners. Students master core branding concepts and use them to critically analyze salient social and cultural issues.

**MFJS 4504 Social Media Strategies (4 Credits)**

In this class, students get familiar with the principles of social media strategy and learn how to design messaging strategies and tactics for social media. In addition, students work with a real client on a strategic communication campaign for social media.

**MFJS 4506 Audio Documentaries (4 Credits)**

In the past decade, an explosion in the production and accessibility of audio documentary work has created an unprecedented interest and expansion of the documentary form in nearly all sectors of public life. Building on this trend, this course teaches the skills of ethnographically informed audio documentary work that can record and interpret culture and lived experience. We focus on learning the techniques of non-fiction storytelling used in established public radio programs like This American Life, Radio Lab, or Snap Judgement, as well as newer podcasts like Reply All, Invisibilia, or Embedded. The course will prepare students to tell complex stories using strong character-driven narrative. Sound documentation and representation will not be done along journalistic principles, but instead through rigorous ethnography that relies on participant-observation and immersion. Through practical application and the exploration of ethnography and documentary approaches to communication, the course explores questions that surround the interpretation and representation of socio-cultural experience via a sonic medium. To understand the basic mechanics of sound and its narrative form, participants will learn to digitally record and edit audio. Storytelling will then become more complex as students learn to conduct ethnography, interviews, and develop a script for radio. Students will ultimately analyze and create audio documentaries in an effort to understand a significant form of digital storytelling. There are three central learning objectives that will guide us through the course: (1) we will practice ethnographic and documentary methodology, (2) learn to write for radio, and (3) learn the workflow of audio editing to produce an audio documentary.

**MFJS 4560 Audience and Communication Research (4 Credits)**

This class offers an introduction to social science methods applied to communication and audience research. By the end of the course, students will be familiar with: the role and functions of communication and audience research in contemporary society; the processes and practices involved in developing and executing a research project; the basic different forms of research, both qualitative, such as interviews and focus groups and quantitative, such as surveys and experiments; how to use research skills for different career paths. Cross-listed with MFJS 3110/4560.

**MFJS 4567 Activist Media (4 Credits)**

In the mediated digital era, communication is changing fast and shifting the dynamics of real-world power, expanding spaces for journalism and activist communication aimed at working for social change and social justice. This dynamic space has enabled citizens, protesters, journalists, PR professionals, tech developers and hacktivists to harness a diverse range of media tools and platforms for activism and social change. Media has played a key role in social and political movements of the past and more recent online movements. Social media platforms have provided new tools to resist the domination and limitations of mainstream corporate media and create new media strategies and messages to promote social change. But these platforms have also created new risks and challenges for activists. In this course, we will address these issues of communication power dynamics and also media strategies and tools of social and political movements working towards social change.

**MFJS 4650 Global Media and Communication (4 Credits)**

Major theories concerning international communication flows, the impact of globalization and global media, issues of new communication technologies, the rhetoric and media framing of global politics and culture; international marketing and public relations; and national and cultural sovereignty issues related to communication.

**MFJS 4652 Feminist Media Studies (4 Credits)**

MFJS 4652 (Feminist Media Studies) explores the gendered intersections between media and society through the analytical lens of Feminist Media Studies (FMS). While aligned with the discipline Media Studies, FMS centers questions related to power and patriarchy, and aims to create space for praxis. Paying close attention to issues of intersectionality, this course surveys the historical emergence, and contributions, of feminist methodology and inquiry related to issues such as sexism within gaming, the politics of visibility in television production, the celluloid ceiling, and networked bodies. During the quarter, you will engage in multiple points of active and reflective learning that provide the space to strengthen both your understanding and application of FMS. Assignments include discussion questions, self-reflective analysis, and a final project that highlights application, creativity, and subversion. Cross listed with MFJS 3652.

**MFJS 4653 Language, Power, and Globalization (4 Credits)**

This course focuses on scholarly and political debates surrounding the social nature of language, language and (inter)national and individual identity, language policy, multilingualism and linguistic diversity, language and globalization, language and media and communication technologies, and, finally, the future of the global language landscape.

**MFJS 4654 Intercultural Communication (4 Credits)**

This course focuses on the intersections between culture & communication, including intercultural communication in interpersonal and mediated contexts at the local, national and global levels as shaped by processes of globalization. It covers major theoretical perspectives and methods, the role of power and privilege in the construction and articulation of culture and cultural identity, and intersections with race, ethnicity, gender, sexuality and class, intercultural training and the role of communication and culture in conflict and conflict resolution.

**MFJS 4655 JEDII (Justice, Equity, Diversity, Inclusion, & Internationalization) Storytelling (4 Credits)**

This course focuses on multicultural approaches to journalism and media, including representations and news coverage related to gender, race/ethnicity, class, and sexuality, disabilities, religion, and nationality, etc.. The class explores culture and intercultural communication and ways to apply these to journalistic writing as a creative process and craft. Prerequisite: Prior journalistic coursework or its equivalent (including writing experience). Cross-listed with MFJS 3655.

**MFJS 4656 Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures (4 Credits)**

This is a one-week intensive travel course that takes place in Tucson, Arizona and south to the US-Mexican border region. The focus of this experiential learning class is to study immigration issues, border cultures, and the role of communication and media through testimonies of immigrants, and visits to key sites such as the migrant trail, immigration detention center and courts. Also included are talks by activists and officials involved in the immigration debate. Class meets for two pre-class sessions in spring quarter. Cross-listed with MFJS 3656.

**MFJS 4660 Global Edutainment & Narrative Persuasion (4 Credits)**

MFJS 4660 Global Edutainment & Narrative Persuasion serves as a gateway to explore the potential of entertainment as an educational tool that can spread awareness, change attitudes, and/or influence behaviors. In this course, students will trace the history of narrative persuasion strategy, pinpoint the modalities it has embraced (e.g., films, TV shows, music, books, and TikTok videos, etc.), highlight topical areas it has addressed, and assess its effectiveness cross-culturally. MFJS 4660 will culminate in the production of student Edutainment projects that tackle global issues of concern.

**MFJS 4912 Seminar in Media Film & Journalism Studies (1-5 Credits)****MFJS 4980 Internship (1-8 Credits)**

Arrange with internship director to complete internship with Denver-area media organization. Prerequisite: varies; consult internship director.

**MFJS 4991 Independent Study (1-10 Credits)****MFJS 4995 Thesis/Substantial Research Paper (1-8 Credits)****Courses****MFJS 4001 Producing Video for Social Media and Advocacy (4 Credits)**

This course covers the basics in video production and video storytelling for social media and is open to all graduate students at the University of Denver who are interested in YouTube and other social media video content creation for advocacy, education, and support of social movements. Students will maximize their video storytelling abilities, producing storytelling content that can be shared across multiple social media platforms using mobile phones or equivalent basic consumer equipment. Learning takes place within justice, equity, diversity, inclusion and internationalization frameworks consistent with department, College, and University expectations. The course fulfills elective requirements within MEPC and IIC graduate programs and serves as a university graduate level elective.

**MFJS 4050 Foundations of Strategic Communication (4 Credits)**

Focuses on understanding and implementing public communication campaigns. Central to the course is the exploration of the theoretical social science framework underlying communication campaigns and examination of the ways theories are used to define and explain communication problems and to plan and evaluate campaigns.

**MFJS 4055 Media and Cultural Studies (4 Credits)**

This class surveys key ideas and authors in the interdisciplinary field of cultural studies with a focus on their contributions to the study of media and communication. Some theoretical concepts to be discussed include: representation, identity, cultural production, ideology, hegemony, intersectionality, and power as these relate to the analysis of media institutions, technologies, cultures, audiences/users, texts, and artifacts. Students will develop an understanding of cultural studies as a theoretical, methodological, and political project, devoted to social critique and transformative praxis.

**MFJS 4060 Strategic Messaging (4 Credits)**

Continues the focus on learning and applying public relations techniques, emphasizing media relations and media writing. Students develop the ability to formulate and evaluate appropriate communication objectives, strategies, and tactics in response to real-world public relations problems, paying attention to ethical considerations. Students produce a portfolio of written public relations materials. Prerequisite MFJS 4050 or instructor permission.

**MFJS 4065 Public Diplomacy and Nation Branding (4 Credits)**

Drawing on research from strategic communication, cultural studies, international relations, and marketing, this interdisciplinary course examines how nation-states strive to manage their reputations and increase their influence in the context of globalization and mediatization. Students will learn about the evolution of public diplomacy and nation branding from the Cold War to present day and will discuss current developments and challenges. The course will introduce several theoretical approaches and will use a variety of case studies to help students gain insights into public diplomacy and nation branding as fields of research and of practice. Instructor approval required for all non-MEPC and IIC students.

**MFJS 4070 Seminar in Strategic Communication (4 Credits)**

Through a combination of course readings, case study analyses and guest speakers, students will observe and learn about the practice of public relations in the health and nonprofit sectors. Students will also learn about the goals, challenges and opportunities specific to these sectors. Prerequisite: MCOM/MFJS 4060 or permission of instructor.

**MFJS 4080 Global/Multicultural Campaigns (4 Credits)**

Explores aspects of international and intercultural public relations, including intercultural communications issues, international media issues, international corporate PR, cross-cultural and diversity training, international media relations, and international public relations of governments. The class focuses on relevant theories and issues, rather than on techniques.

**MFJS 4160 Media Theories (4 Credits)**

Surveys a number of theoretical approaches to the study of media and mass communication, paying attention to the historical context in which they arise. Students explore the relationships among media technologies, institutions, content, and audiences as well as their impacts on culture and society. The class prepares students to formulate theoretically grounded research questions within the field of media and mass communication.

**MFJS 4165 Global Health and Development Communication (4 Credits)**

This course will begin with an overview of health communication (which includes but is not limited to health promotion and behavior change). We will discuss individual, social, cultural & technological factors, and relevant theories and concepts in relation to international health communication and development. Students will then learn about the role of communication in international health and development and the way it is practiced in the field. We will also discuss and apply the social and cultural factors that influence the design, delivery, reception, and effectiveness of international health communication programs, the role of international health's important players big and small (e.g. WHO, UNAID, PEPFAR, Doctors without Borders, pharmaceutical companies, local village leaders, local ministries of health, husbands, mothers, etc.), and the ways in which the use of both upstream and downstream communication is imperative. We will examine case studies and the latest research for international health communication and its effectiveness while we also apply health communication theories from a variety of perspectives.

**MFJS 4175 Justice Equity Diversity and Inclusion in Health Communication (4 Credits)**

The course will begin with an overview of Health Communication in the United States and the ways in which health and illness are defined through communication, including media. We will discuss existing health disparities and social determinants of health as we examine health communication in multicultural settings in the U.S. We will further examine multicultural audiences and perspectives about health and illness, including diverse meaning systems and their influences on health attitudes and behaviors. Students will learn about cross-cultural concepts of health and disease and how those are represented in communication about health and illness. As students learn about what it means to develop culturally grounded health communication campaigns, they will examine culture centric messaging in health promotion. We will also discuss the ways in which health care systems are promoting patient-centered, culturally sensitive health care.

**MFJS 4200 Topics in Mass Communications (4 Credits)****MFJS 4222 Experimental Theory and Production (4 Credits)**

This course is an historical, critical overview of experimental film/video movements; training in experimental projection techniques; production of own experimental projects. Lab fee required. Cross listed with MFJS 3222. Prerequisite: MFJS 4470 or permission of instructor.

**MFJS 4227 Producing the Environmental Documentary (4 Credits)**

This course is designed to provide you with a basic understanding of cinematography: cameras, lenses, grip equipment, lighting, and composition. When you complete this course, the goal is for you to have an intermediate understanding of cinematography and that which motivates lighting and composition choices. Because people are the most important part of any production, emphasis will be placed on your ability to work effectively with class members. Learning to collaborate is crucial to your success in this class.

**MFJS 4229 Video Editing is for Everybody (4 Credits)**

Video has become ubiquitous. Whether on YouTube, Hulu, television or a friend's Facebook page, people are exposed to thousands of edited videos every year. From business to anthropology, chemistry to journalism, students in every discipline want to create videos to enhance class projects, aide business plans, promote good works, accompany science processes and create lasting memories. This course is designed to provide students with a basic understanding of television and film editing. When completing this course, the goal is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), editing software and applying a mixture of editing theories and techniques (continuity and montage style editing). There are no prerequisites for this course.

**MFJS 4242 Reel Women (4 Credits)**

Reel Women explores films from the U.S., England, Senegal, India, Canada, Colombia, and Saudi Arabia that are made for, about, and/or by women with the aim of better understanding and centralizing issues pertinent to women's daily lives across the world.

**MFJS 4300 Media Law (4 Credits)**

Introduction to freedom of expression and media law. Students learn how the American legal system works and gain an understanding and appreciation of the philosophical foundations of free expression. In addition, students confront many of the issues facing professional communicators today. Topics include incitement, hate speech, student speech, copyright, defamation, and other issues crucial to mass media professionals. The course examines also explores challenges to free expression brought by new(er) communication technologies. The purpose of this class is to give students the knowledge and critical thinking skills needed to be successful in today's rapidly changing communication environment. Cross-listed with MFJS 3040.

**MFJS 4310 New Media Law & Regulation (4 Credits)**

Examination of current conflicts in mass communications law. Particular emphasis is given the legal problems of communications technologies. Topics may include libel, privacy, obscenity, news gathering, copyright, media ownership and comparative approaches to media law. The course provides insight into how the legal process works and an understanding of the principles and philosophies that underlie the restraints on new communication technologies.

**MFJS 4320 Brands and Identities (4 Credits)**

Reviews theories and cases of the role and meaning of brands in a consumer society, with a particular emphasis on understanding how brands are implicated in the construction and presentation of personal and group identities. The course combines insights from marketing, social psychology, and cultural studies to explore the importance of brands for both consumers and practitioners. Students master core branding concepts and use them to critically analyze salient social and cultural issues.

**MFJS 4504 Social Media Strategies (4 Credits)**

In this class, students get familiar with the principles of social media strategy and learn how to design messaging strategies and tactics for social media. In addition, students work with a real client on a strategic communication campaign for social media.

**MFJS 4506 Audio Documentaries (4 Credits)**

In the past decade, an explosion in the production and accessibility of audio documentary work has created an unprecedented interest and expansion of the documentary form in nearly all sectors of public life. Building on this trend, this course teaches the skills of ethnographically informed audio documentary work that can record and interpret culture and lived experience. We focus on learning the techniques of non-fiction storytelling used in established public radio programs like *This American Life*, *Radio Lab*, or *Snap Judgement*, as well as newer podcasts like *Reply All*, *Invisibilia*, or *Embedded*. The course will prepare students to tell complex stories using strong character-driven narrative. Sound documentation and representation will not be done along journalistic principles, but instead through rigorous ethnography that relies on participant-observation and immersion. Through practical application and the exploration of ethnography and documentary approaches to communication, the course explores questions that surround the interpretation and representation of socio-cultural experience via a sonic medium. To understand the basic mechanics of sound and its narrative form, participants will learn to digitally record and edit audio. Storytelling will then become more complex as students learn to conduct ethnography, interviews, and develop a script for radio. Students will ultimately analyze and create audio documentaries in an effort to understand a significant form of digital storytelling. There are three central learning objectives that will guide us through the course: (1) we will practice ethnographic and documentary methodology, (2) learn to write for radio, and (3) learn the workflow of audio editing to produce an audio documentary.

**MFJS 4560 Audience and Communication Research (4 Credits)**

This class offers an introduction to social science methods applied to communication and audience research. By the end of the course, students will be familiar with: the role and functions of communication and audience research in contemporary society; the processes and practices involved in developing and executing a research project; the basic different forms of research, both qualitative, such as interviews and focus groups and quantitative, such as surveys and experiments; how to use research skills for different career paths. Cross-listed with MFJS 3110/4560.

**MFJS 4567 Activist Media (4 Credits)**

In the mediated digital era, communication is changing fast and shifting the dynamics of real-world power, expanding spaces for journalism and activist communication aimed at working for social change and social justice. This dynamic space has enabled citizens, protesters, journalists, PR professionals, tech developers and hacktivists to harness a diverse range of media tools and platforms for activism and social change. Media has played a key role in social and political movements of the past and more recent online movements. Social media platforms have provided new tools to resist the domination and limitations of mainstream corporate media and create new media strategies and messages to promote social change. But these platforms have also created new risks and challenges for activists. In this course, we will address these issues of communication power dynamics and also media strategies and tools of social and political movements working towards social change.

**MFJS 4650 Global Media and Communication (4 Credits)**

Major theories concerning international communication flows, the impact of globalization and global media, issues of new communication technologies, the rhetoric and media framing of global politics and culture; international marketing and public relations; and national and cultural sovereignty issues related to communication.

**MFJS 4652 Feminist Media Studies (4 Credits)**

MFJS 4652 (Feminist Media Studies) explores the gendered intersections between media and society through the analytical lens of Feminist Media Studies (FMS). While aligned with the discipline Media Studies, FMS centers questions related to power and patriarchy, and aims to create space for praxis. Paying close attention to issues of intersectionality, this course surveys the historical emergence, and contributions, of feminist methodology and inquiry related to issues such as sexism within gaming, the politics of visibility in television production, the celluloid ceiling, and networked bodies. During the quarter, you will engage in multiple points of active and reflective learning that provide the space to strengthen both your understanding and application of FMS. Assignments include discussion questions, self-reflective analysis, and a final project that highlights application, creativity, and subversion. Cross listed with MFJS 3652.

**MFJS 4653 Language, Power, and Globalization (4 Credits)**

This course focuses on scholarly and political debates surrounding the social nature of language, language and (inter)national and individual identity, language policy, multilingualism and linguistic diversity, language and globalization, language and media and communication technologies, and, finally, the future of the global language landscape.

**MFJS 4654 Intercultural Communication (4 Credits)**

This course focuses on the intersections between culture & communication, including intercultural communication in interpersonal and mediated contexts at the local, national and global levels as shaped by processes of globalization. It covers major theoretical perspectives and methods, the role of power and privilege in the construction and articulation of culture and cultural identity, and intersections with race, ethnicity, gender, sexuality and class, intercultural training and the role of communication and culture in conflict and conflict resolution.

**MFJS 4655 JEDII (Justice, Equity, Diversity, Inclusion, & Internationalization) Storytelling (4 Credits)**

This course focuses on multicultural approaches to journalism and media, including representations and news coverage related to gender, race/ethnicity, class, and sexuality, disabilities, religion, and nationality, etc.. The class explores culture and intercultural communication and ways to apply these to journalistic writing as a creative process and craft. Prerequisite: Prior journalistic coursework or its equivalent (including writing experience). Cross-listed with MFJS 3655.

**MFJS 4656 Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures (4 Credits)**

This is a one-week intensive travel course that takes place in Tucson, Arizona and south to the US-Mexican border region. The focus of this experiential learning class is to study immigration issues, border cultures, and the role of communication and media through testimonies of immigrants, and visits to key sites such as the migrant trail, immigration detention center and courts. Also included are talks by activists and officials involved in the immigration debate. Class meets for two pre-class sessions in spring quarter. Cross-listed with MFJS 3656.

**MFJS 4660 Global Edutainment & Narrative Persuasion (4 Credits)**

MFJS 4660 Global Edutainment & Narrative Persuasion serves as a gateway to explore the potential of entertainment as an educational tool that can spread awareness, change attitudes, and/or influence behaviors. In this course, students will trace the history of narrative persuasion strategy, pinpoint the modalities it has embraced (e.g., films, TV shows, music, books, and TikTok videos, etc.), highlight topical areas it has addressed, and assess its effectiveness cross-culturally. MFJS 4660 will culminate in the production of student Edutainment projects that tackle global issues of concern.

**MFJS 4912 Seminar in Media Film & Journalism Studies (1-5 Credits)****MFJS 4980 Internship (1-8 Credits)**

Arrange with internship director to complete internship with Denver-area media organization. Prerequisite: varies; consult internship director.

**MFJS 4991 Independent Study (1-10 Credits)****MFJS 4995 Thesis/Substantial Research Paper (1-8 Credits)**

## Philosophy

Office: Sturm Hall, Room 257

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Phone: 303-871-2063

Email: [philosophy@du.edu](mailto:philosophy@du.edu)

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### Master of Arts in Philosophy

The department of philosophy at the University of Denver offers an MA in philosophy, but only when done through the university's flexible dual-degree program in conjunction with an MA in another approved discipline. The philosophy faculty places a strong emphasis on research and personal interaction with students. Our program is designed to meet the needs of two kinds of students — those wishing to prepare for doctoral work in philosophy and those seeking an individualized course of study with a more interdisciplinary focus.

#### Flexible Dual-Degree Program in Philosophy

Students must already have been both admitted and deposited for the master's degree program in another approved DU master's program \*before\* applying to the MA in Philosophy.

#### Proposal Process for Flexible Dual-Degree Program

After formal admission into both programs, the dean, chair, or director of each degree program and both program advisors, must carefully compare the requirements for each program and approve the proposal. The student must then submit a copy of the original requirements for each degree (printout from the unit Web site or copy from the student handbook is acceptable), and the flexible dual-degree proposal to the Office of Graduate Education. The philosophy department will provide a coursework template for the student to include with his or her proposal. The student then submits the documents listed above to the Office of Graduate Education, which reviews and decides on the proposals.

### Master of Arts in Philosophy

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### Prerequisites

- Students must already have been admitted and deposited for the master's degree program in another approved DU master's program before applying to the MA in Philosophy. An undergraduate degree in philosophy is desirable, but talented students from other areas will be considered for admission.

#### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.



### Other Required Materials

- Students are not eligible to apply for the MA in Philosophy until they have been admitted and deposited for their first MA program at DU. To propose a flexible dual-degree, the student must seek the counsel of an adviser in the philosophy department.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Philosophy

### Degree Requirements

#### Coursework Requirements

45 credit hours in philosophy (students may propose to have this amount reduced by a maximum of 10 credit hours under appropriate circumstances as specified by the flexible dual-degree guidelines). Because philosophy is part of a flexible dual degree program, these hours are required in addition to the required hours in another approved discipline. Courses graded below a C– cannot be counted for a flexible dual degree.

Code	Title	Credits
PHIL 3XXX, 4XXX, or 5XXX courses		45
<b>Total Credits</b>		<b>45</b>

#### Non-Coursework Requirements

- A comprehensive exam
- A portfolio paper approved by a committee of department faculty
- An oral defense covering both the comprehensive exam and the portfolio paper

#### PHIL 3000 Plato's Metaphysics (4 Credits)

A systematic study of Plato's Middle and Late Period Dialogues that focuses on his arguments for the existence of abstract objects and the development of Plato's theory of Forms. Prerequisite: At least Junior standing or permission of instructor.

#### PHIL 3003 Plato's Theory of Knowledge (4 Credits)

A systematic investigation of Plato's treatments of knowledge throughout the dialogues with a focus on the theory of recollection, Forms as objects of knowledge, the relationship between the Forms and perceptual experience, and the challenges posed by notions of true and false belief. Prerequisites: At least Junior standing or permission of instructor.

#### PHIL 3005 Cosmopolitics (4 Credits)

This class will be a close reading of Plato's dialogue Timaeus, with a special focus on the cosmological, theological, and political dimensions of the text.

#### PHIL 3010 Great Thinkers: Aristotle (4 Credits)

A study of Aristotle's central theories and doctrines. Prerequisite: junior standing or instructor's permission.

#### PHIL 3011 Great Thinkers: Virginia Woolf (4 Credits)

In this course we will read Virginia Woolf as a philosopher. We will discuss her philosophy of nature, knowledge, art, politics, science, sensation, gender, and materialism throughout her fiction and non-fiction writings.

#### PHIL 3023 Great Thinkers: Maimonides: Politics, Prophecy and Providence (4 Credits)

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with RLGS 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**PHIL 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and RLGS 3024. Prerequisite: Junior standing or instructor's permission.

**PHIL 3026 Levinas and the Political (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting insight of "ethics as first philosophy," is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas' thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as "Reflections on the Philosophy of Hitlerism" (1934), *Totality and Infinity* (1961), *Otherwise Than Being or Beyond Essence* (1974), and "Peace and Proximity" (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other "Jewish theologies" of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitalities and strangers, friends and enemies; liberalism, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; "the 3rd"; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

**PHIL 3050 Great Thinkers: Hume (4 Credits)**

A detailed study of Hume's "radical" empiricism and its impact on contemporary analytic philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3061 Kant's Ethics/Aesthetics/Politics (4 Credits)**

A study of Kant's "value theory" and its historical significance. Prerequisite: junior standing or instructor's permission.

**PHIL 3062 Kant's Epistemology and Logic (4 Credits)**

A study of Kant's theory of knowledge, logic and related issues. Prerequisite: junior standing or instructor's permission.

**PHIL 3063 Kant on Religion (4 Credits)**

A study of Immanuel Kant's major writings on religion and their subsequent influence on theology and the philosophy of religion. Prerequisite: junior standing or instructor's permission. Cross-listed with RLGS 3456.

**PHIL 3070 Great Thinkers: Hegel (4 Credits)**

Hegel's "Phenomenology," later system and place in the history of modern philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Cross listed with ECON 3075.

**PHIL 3090 Great Thinkers: Heidegger (4 Credits)**

Study of "Being and Time" and related essays by a major 20th-century philosopher. Prerequisite: junior standing or instructor's permission.

**PHIL 3092 Great Thinkers: The Later Heidegger (4 Credits)**

Study of the works of Heidegger after 1930. Prerequisite: junior standing or instructor's permission.

**PHIL 3100 Great Thinkers: Wittgenstein (4 Credits)**

The course introduces students to Ludwig Wittgenstein's two masterworks, the *Tractatus* (1922) and *Philosophical Investigations* (1953), both of which provide fresh, often counterintuitive and conflicting, insights into topics ranging from logic and language to ethics, religion, art and culture. The course explores how the end of the Austro-Hungarian Empire and the pressures of an incipient modernity impacted the style, direction and substance of Wittgenstein's thought, developments that had profound existential and spiritual import for him as he wrestled with the many contradictions of his life and thought. The course concludes with a consideration of the relationship between Wittgenstein's later philosophy and the existential-phenomenology of Martin Heidegger, both of whom insist upon humanity's radical finitude and the pre-ontological understanding (forms of life) that always already conditions and guides our questions about reason, truth, beauty and meaning.

**PHIL 3101 Great Thinkers: Kierkegaard (4 Credits)**

Each year, the philosophy department offers at least two courses in great thinkers. Specific figures may vary from year to year. Cross-listed with RLGS 3102. Prerequisite: 10 hours of Philosophy at the 2000 level or permission of instructor.

**PHIL 3120 Metaphysics (4 Credits)**

In the course of this study, we will cover a broad range of philosophical topics falling within metaphysics, philosophy of language, philosophy of science, and epistemology. Prerequisite: junior standing or instructor's permission.

**PHIL 3130 Knowledge Problems (4 Credits)**

Problems in the foundations and justifications of claims to knowledge. Prerequisite: junior standing or instructor's permission.

**PHIL 3146 Great Thinkers: Levinas (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting and original idea of "ethics as first philosophy," is an important figure in the histories of phenomenology, metaphysics, and theology. In this course, we set out to explore Levinas' insights on ethics, alterity, and infinity, including the connection of his ideas to Plato, Descartes, Kant, and Husserl, as well as his critical responses to Heidegger and his positive contributions to Derrida. In this course, we work through Levinas' two major works, *Ethics and Infinity* and *Otherwise Than Being or Beyond Essence*, as well as a number of shorter writings—including material from his Talmudic commentaries. Themes to be covered include: Being, Goodness, Risk, Ethics, Alterity, Transcendence, Law, Judaism, Gift, Forgiveness, Politics, Theology, and Justice. This course is cross-listed with JUST 3146.

**PHIL 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)**

Neoplatonism is a unique genre—somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we will investigate a host of philosophical writings, including the *Theology of Aristotle* and the *Liber de Causis*, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Acemenna, Isaac Israeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection and the call to virtue. Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3152.

**PHIL 3175 Morality and the Law (4 Credits)**

A systematic study of various elements of the relation between law and morality. Are we obligated to obey every law the government enacts? Why? If we do have an obligation to obey the law, are civil disobedients like Martin Luther King, Jr. justified in disobeying the law? Are immoral laws, laws at all, or must a law connect with some higher moral truth to have any authority? To what extent is it morally permissible for the law to restrict our personal freedoms? To what extent is it morally permissible for the law to enforce morality in general? If it is not permissible for the law to enforce morality, do we incur any obligation to obey the law? Prerequisite: junior standing or instructor's permission.

**PHIL 3178 Metaethics (4 Credits)**

This course systematically and critically examines the metaphysical, semantic, and epistemic issues central to the study of metaethics. Do moral properties exist? If so, how are they related to natural properties? Do moral properties exist independent of human agency, or do we construct morality? If moral properties exist, how can we come to have justified belief about them? Is it possible to know that a moral belief is true? Doesn't the phenomenon of widespread, intractable disagreement about moral matters establish that there are no objective moral truths? Is the process of gaining scientific knowledge really that different from the process of gaining moral knowledge? Prerequisite: junior standing or instructor's permission.

**PHIL 3179 Virtue Ethics (4 Credits)**

Virtue ethics purportedly provides a distinct approach to moral deliberation, moral reasoning, moral decision-making, and moral justification. This course is a systematic study of the nature of virtue ethics, the nature of a virtue, and the alleged superiority of virtue ethics over its more familiar consequentialist and deontological alternatives. We also study various responses to the following questions: Have moral psychologists generated any valuable studies on the nature of virtue? What virtues ought we to endorse? At least Junior standing required or permission of the instructor.

**PHIL 3185 Philosophy of Action and Agency (4 Credits)**

Wittgenstein once asked, "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" Understanding the difference between mere happening and an intentional action became central to the philosophical investigation of action and agency in the 20th century. In this course we examine this distinction and why it should matter to us. Our topics include intentional action, the causal theory of action, the metaphysics of action, agent causation, basic action, acting and trying to act, intentions, weakness of will, strength of will, and mental action. Requires junior standing or permission of instructor.

**PHIL 3201 Wittgenstein, Quine, & Kripke on Necessity and a Priori Knowledge (4 Credits)**

A study of Wittgenstein, Quine, and Kripke on the nature of necessity, a priori knowledge and their relation to understanding philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3210 Philosophy of Movement (4 Credits)**

Everything is in motion. Yet, philosophers have consistently considered motion to be a derivative or secondary form of being. Why? What are the political and metaphysical consequences of marginalizing motion in the history of philosophy? The aim of this class is to read the history of philosophy with a unique focus on the status of movement and motion from the ancient to contemporary period.

**PHIL 3211 Contemporary Pol Philosophy (4 Credits)**

This class focuses primarily on the philosophical problems generated by thinking about political authority and justice. We discuss the nature of political authority, justice, rights, equality and the role of property in a modern state.

**PHIL 3215 Modern Jewish Philosophy (4 Credits)**

Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3215.

**PHIL 3333 Logic, Language, and Metaphysics (4 Credits)**

This course provides a systematic exploration of the foundations of contemporary philosophy—namely, logic and language—and their metaphysical implications. The class can be divided in three broad modules. Our starting point is the collapse of Kant's system due to staggering discoveries in physics and geometry. Next, we shall discuss the subsequent development of mathematical logic and the philosophy of language in the work of Frege, Russell, Tarski, and Gödel. The last portion is devoted to philosophical applications of these logical results in the field of metaphysics. Specifically, we shall explore the work of Carnap, Quine, and Kripke. Junior or senior standing required (or instructor permission).

**PHIL 3445 Cultural Theory and Critique (4 Credits)**

This course will provide an overview of the major theories of culture and cultural critique, as well as a consideration of some of the major controversies and recent developments in this field. It will proceed roughly chronologically, beginning with liberal humanist critique and continuing with hermeneutics, materialist and Marxist critique, psychoanalysis, the Frankfurt School, structuralism, post-structuralism, and contemporary British cultural studies. It will also consider more recent developments, such as feminist critique, GLBT critique, and postcolonialism. While the approach will be mainly philosophical, implications for other areas such as literature, art, emergent media, religion, and politics will also figure in the discussions, so it is appropriate for students in many fields, not just philosophy. Prerequisite: Junior standing or permission of the instructor. Note that this course will serve as a foundational offering for students interested in participating in the Critical Theory specialization.

**PHIL 3446 Philosophy in the American Tradition (4 Credits)**

The course introduces students to the thought of the three premier American Transcendentalist writers: Ralph Waldo Emerson, Margaret Fuller, and Henry David Thoreau. These three writers—by turns friends, rivals, neighbors, and even housemates in nearby Concord, Massachusetts—created what Emerson called “a poetry and philosophy of insight and not of tradition” and laid the foundations for American philosophy and literature as we know it today. They also led the first countercultural movement in American history, advocating causes as varied as environmentalism, abolitionism, women’s rights, and the “higher law” of the individual conscience in an age of unbridled capitalism and populism. We will consider the Transcendentalists as both writers and reformers, examining their calls for a uniquely American literature and their romantic sacralization of nature as well as their deep commitment to reform and their engagement with the turbulent politics of their time. In the final weeks of the course, we will explore the Transcendentalists’ profound influence on American cultural history, ranging from their contemporaries (Frederick Douglass, Walt Whitman, Emily Dickinson, and Nathaniel Hawthorne) to ours (Marilynne Robinson, Terrence Malick, and W. S. Merwin).

**PHIL 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault’s thesis with reference to different theoretical models of subjectivity and “subjectification” (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault’s 1981-82 lectures entitled *The Hermeneutics of the Subject*. This course is cross-listed with RLGS 3448.

**PHIL 3450 Phenomenology and Theology (4 Credits)**

Cross listed with RLGS 3455. Prerequisite: junior standing or instructor’s permission.

**PHIL 3460 Nietzsche & the Death of God (4 Credits)**

This course involves an intensive reading and discussion of Friedrich Nietzsche’s ‘Thus Spake Zarathustra,’ together with relevant associated materials, especially ‘The Gay Science.’ Prerequisite: junior standing or instructor’s permission. Cross listed with RLGS 3460.

**PHIL 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with RLGS 3465. Prerequisite: junior standing or instructor’s permission.

**PHIL 3466 Contemporary Continental Philosophy (4 Credits)**

A critical study of current trends in European philosophy, focusing on such thinkers as Deleuze, Badiou, Žižek, Meillassoux, or Laruelle. Prerequisite: junior standing or instructor’s permission.

**PHIL 3610 Advanced Topics in Philosophy, Psychology, and Cognitive Science (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, psychology, and cognitive science. More specifically, our main goal is to engage in a critical discussion of how the study of the mind requires an interdisciplinary approach that integrates empirical findings with conceptual and philosophical theorizing. Cross listed with PSYC 3610. Prerequisites: PSYC 1001 and junior standing (or instructor approval).

**PHIL 3611 The Boundaries of Scientific Knowledge: A Philosophical Exploration (4 Credits)**

Despite its staggering successes, public trust in science is disquietingly low. What has gone wrong? Why is a substantive portion of the population unwilling to trust the advice of specialists? A central problem lies in the tendency of scientists, philosophers, and various pundits to hype, bloat, and overemphasize the promises and results of scientific research. This leads to scientism, broadly conceived as the imperialist tendency to reduce all knowledge to scientific knowledge. But what exactly is scientism? Despite the pejorative connotation of the term, is it an intellectual sin or a virtue? The aim of this course is to map the terrain, exploring various dimensions of scientism, and how it affects the public dimensions of scientific research and its relation to the humanities, religion, and other domains of knowledge, culture, and society.

**PHIL 3612 AI and Robotics (4 Credits)**

In this interdisciplinary seminar we will discuss foundational issues regarding artificially intelligent systems. We will seek to understand how recent advances in AI research bear on our understanding of the nature of the mind, intelligence, agency, rationality, and consciousness. We will also discuss how philosophical advances can advance empirical progress. Additionally, we will discuss some barriers to progress that these technologies might pose. In particular, we will be focused on three groups of questions: 1. What special opportunities and challenges are presented by deep neural net and deep learning technology regarding building and understanding artificially minded intelligent agents? 2. What is the role of the body and environment in producing intelligence? 3. Deep neural net algorithms are already commonly used to predict recidivism rates, diagnose illnesses, and make advertising more effective. In what ways might such algorithms be approaching human or animal intelligence, or shed light on such intelligence? In what ways might human and animal intelligence be importantly different? In what ways might contemporary intelligence research perpetuate injustice and oppression? This seminar is designed to be interdisciplinary, and I welcome students working in philosophy, robotics/AI, and cognitive science who want to work hard and dig deeper. There are no strict prerequisites, but some background knowledge in relevant disciplines will be highly useful.

**PHIL 3618 Philosophy of Biology (4 Credits)**

A survey of conceptual issues that lie at the intersection of biology and philosophy: the central concepts of evolutionary theory (such as natural selection, fitness, adaptation and function), the relation of biology to other "lower" sciences (can it be reduced to physics and chemistry?), whether there are genuine scientific laws in biology, and the relation between biology and other fields like cognitive science and ethics. At least Junior standing required.

**PHIL 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**PHIL 3699 Proseminar in Philosophy (4 Credits)**

Philosophy is a diverse discipline with various subfields, most of which are becoming increasingly specialized and methodologically autonomous. Specialization is often (rightly) perceived as an indicator of disciplinary progress and intellectual development. However, it is important that students of philosophy pursue breadth as well as depth. The goal of this course is to provide an overview of a series of seminal texts in philosophy, from a variety of subfields, epochs, and traditions. Each weekly meeting is devoted to the presentation, analysis, and discussion of a text that any student of philosophy should read at some point in her or his career. Requires junior standing or instructor's permission.

**PHIL 3700 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3701 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3702 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3703 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3704 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3991 Independent Study (1-8 Credits)****PHIL 4991 Independent Study (1-10 Credits)****PHIL 4995 Independent Research (1-10 Credits)****PHIL 5300 Philosophy Colloquium (4 Credits)****PHIL 5400 Cultural Theory Colloquium (1-5 Credits)****Courses****PHIL 3000 Plato's Metaphysics (4 Credits)**

A systematic study of Plato's Middle and Late Period Dialogues that focuses on his arguments for the existence of abstract objects and the development of Plato's theory of Forms. Prerequisite: At least Junior standing or permission of instructor.

**PHIL 3003 Plato's Theory of Knowledge (4 Credits)**

A systematic investigation of Plato's treatments of knowledge throughout the dialogues with a focus on the theory of recollection, Forms as objects of knowledge, the relationship between the Forms and perceptual experience, and the challenges posed by notions of true and false belief. Prerequisites: At least Junior standing or permission of instructor.

**PHIL 3005 Cosmopolitics (4 Credits)**

This class will be a close reading of Plato's dialogue Timaeus, with a special focus on the cosmological, theological, and political dimensions of the text.

**PHIL 3010 Great Thinkers: Aristotle (4 Credits)**

A study of Aristotle's central theories and doctrines. Prerequisite: junior standing or instructor's permission.

**PHIL 3011 Great Thinkers: Virginia Woolf (4 Credits)**

In this course we will read Virginia Woolf as a philosopher. We will discuss her philosophy of nature, knowledge, art, politics, science, sensation, gender, and materialism throughout her fiction and non-fiction writings.

**PHIL 3023 Great Thinkers: Maimonides: Politics, Prophecy and Providence (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with RLGS 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**PHIL 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and RLGS 3024. Prerequisite: Junior standing or instructor's permission.

**PHIL 3026 Levinas and the Political (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting insight of "ethics as first philosophy," is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas' thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as "Reflections on the Philosophy of Hitlerism" (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and "Peace and Proximity" (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other "Jewish theologies" of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitalities and strangers, friends and enemies; liberalism, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; "the 3rd"; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

**PHIL 3050 Great Thinkers: Hume (4 Credits)**

A detailed study of Hume's "radical" empiricism and its impact on contemporary analytic philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3061 Kant's Ethics/Aesthetics/Politics (4 Credits)**

A study of Kant's "value theory" and its historical significance. Prerequisite: junior standing or instructor's permission.

**PHIL 3062 Kant's Epistemology and Logic (4 Credits)**

A study of Kant's theory of knowledge, logic and related issues. Prerequisite: junior standing or instructor's permission.

**PHIL 3063 Kant on Religion (4 Credits)**

A study of Immanuel Kant's major writings on religion and their subsequent influence on theology and the philosophy of religion. Prerequisite: junior standing or instructor's permission. Cross-listed with RLGS 3456.

**PHIL 3070 Great Thinkers: Hegel (4 Credits)**

Hegel's "Phenomenology," later system and place in the history of modern philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Cross listed with ECON 3075.

**PHIL 3090 Great Thinkers: Heidegger (4 Credits)**

Study of "Being and Time" and related essays by a major 20th-century philosopher. Prerequisite: junior standing or instructor's permission.

**PHIL 3092 Great Thinkers: The Later Heidegger (4 Credits)**

Study of the works of Heidegger after 1930. Prerequisite: junior standing or instructor's permission.

**PHIL 3100 Great Thinkers: Wittgenstein (4 Credits)**

The course introduces students to Ludwig Wittgenstein's two masterworks, the Tractatus (1922) and Philosophical Investigations (1953), both of which provide fresh, often counterintuitive and conflicting, insights into topics ranging from logic and language to ethics, religion, art and culture. The course explores how the end of the Austro-Hungarian Empire and the pressures of an incipient modernity impacted the style, direction and substance of Wittgenstein's thought, developments that had profound existential and spiritual import for him as he wrestled with the many contradictions of his life and thought. The course concludes with a consideration of the relationship between Wittgenstein's later philosophy and the existential-phenomenology of Martin Heidegger, both of whom insist upon humanity's radical finitude and the pre-ontological understanding (forms of life) that always already conditions and guides our questions about reason, truth, beauty and meaning.

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Each year, the philosophy department offers at least two courses in great thinkers. Specific figures may vary from year to year. Cross-listed with RLGS 3102. Prerequisite: 10 hours of Philosophy at the 2000 level or permission of instructor.

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In the course of this study, we will cover a broad range of philosophical topics falling within metaphysics, philosophy of language, philosophy of science, and epistemology. Prerequisite: junior standing or instructor's permission.

**PHIL 3130 Knowledge Problems (4 Credits)**

Problems in the foundations and justifications of claims to knowledge. Prerequisite: junior standing or instructor's permission.

**PHIL 3146 Great Thinkers: Levinas (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting and original idea of "ethics as first philosophy," is an important figure in the histories of phenomenology, metaphysics, and theology. In this course, we set out to explore Levinas' insights on ethics, alterity, and infinity, including the connection of his ideas to Plato, Descartes, Kant, and Husserl, as well as his critical responses to Heidegger and his positive contributions to Derrida. In this course, we work through Levinas' two major works, *Ethics and Infinity* and *Otherwise Than Being or Beyond Essence*, as well as a number of shorter writings—including material from his Talmudic commentaries. Themes to be covered include: Being, Goodness, Risk, Ethics, Alterity, Transcendence, Law, Judaism, Gift, Forgiveness, Politics, Theology, and Justice. This course is cross-listed with JUST 3146.

**PHIL 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)**

Neoplatonism is a unique genre—somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we will investigate a host of philosophical writings, including the *Theology of Aristotle* and the *Liber de Causis*, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Acemenna, Isaac Israeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection and the call to virtue. Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3152.

**PHIL 3175 Morality and the Law (4 Credits)**

A systematic study of various elements of the relation between law and morality. Are we obligated to obey every law the government enacts? Why? If we do have an obligation to obey the law, are civil disobedients like Martin Luther King, Jr. justified in disobeying the law? Are immoral laws, laws at all, or must a law connect with some higher moral truth to have any authority? To what extent is it morally permissible for the law to restrict our personal freedoms? To what extent is it morally permissible for the law to enforce morality in general? If it is not permissible for the law to enforce morality, do we incur any obligation to obey the law? Prerequisite: junior standing or instructor's permission.

**PHIL 3178 Metaethics (4 Credits)**

This course systematically and critically examines the metaphysical, semantic, and epistemic issues central to the study of metaethics. Do moral properties exist? If so, how are they related to natural properties? Do moral properties exist independent of human agency, or do we construct morality? If moral properties exist, how can we come to have justified belief about them? Is it possible to know that a moral belief is true? Doesn't the phenomenon of widespread, intractable disagreement about moral matters establish that there are no objective moral truths? Is the process of gaining scientific knowledge really that different from the process of gaining moral knowledge? Prerequisite: junior standing or instructor's permission.

**PHIL 3179 Virtue Ethics (4 Credits)**

Virtue ethics purportedly provides a distinct approach to moral deliberation, moral reasoning, moral decision-making, and moral justification. This course is a systematic study of the nature of virtue ethics, the nature of a virtue, and the alleged superiority of virtue ethics over its more familiar consequentialist and deontological alternatives. We also study various responses to the following questions: Have moral psychologists generated any valuable studies on the nature of virtue? What virtues ought we to endorse? At least Junior standing required or permission of the instructor.

**PHIL 3185 Philosophy of Action and Agency (4 Credits)**

Wittgenstein once asked, "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" Understanding the difference between mere happening and an intentional action became central to the philosophical investigation of action and agency in the 20th century. In this course we examine this distinction and why it should matter to us. Our topics include intentional action, the causal theory of action, the metaphysics of action, agent causation, basic action, acting and trying to act, intentions, weakness of will, strength of will, and mental action. Requires junior standing or permission of instructor.

**PHIL 3201 Wittgenstein, Quine, & Kripke on Necessity and a Priori Knowledge (4 Credits)**

A study of Wittgenstein, Quine, and Kripke on the nature of necessity, a priori knowledge and their relation to understanding philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3210 Philosophy of Movement (4 Credits)**

Everything is in motion. Yet, philosophers have consistently considered motion to be a derivative or secondary form of being. Why? What are the political and metaphysical consequences of marginalizing motion in the history of philosophy? The aim of this class is to read the history of philosophy with a unique focus on the status of movement and motion from the ancient to contemporary period.

**PHIL 3211 Contemporary Pol Philosophy (4 Credits)**

This class focuses primarily on the philosophical problems generated by thinking about political authority and justice. We discuss the nature of political authority, justice, rights, equality and the role of property in a modern state.

**PHIL 3215 Modern Jewish Philosophy (4 Credits)**

Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3215.

**PHIL 3333 Logic, Language, and Metaphysics (4 Credits)**

This course provides a systematic exploration of the foundations of contemporary philosophy—namely, logic and language—and their metaphysical implications. The class can be divided in three broad modules. Our starting point is the collapse of Kant's system due to staggering discoveries in physics and geometry. Next, we shall discuss the subsequent development of mathematical logic and the philosophy of language in the work of Frege, Russell, Tarski, and Gödel. The last portion is devoted to philosophical applications of these logical results in the field of metaphysics. Specifically, we shall explore the work of Carnap, Quine, and Kripke. Junior or senior standing required (or instructor permission).

**PHIL 3445 Cultural Theory and Critique (4 Credits)**

This course will provide an overview of the major theories of culture and cultural critique, as well as a consideration of some of the major controversies and recent developments in this field. It will proceed roughly chronologically, beginning with liberal humanist critique and continuing with hermeneutics, materialist and Marxist critique, psychoanalysis, the Frankfurt School, structuralism, post-structuralism, and contemporary British cultural studies. It will also consider more recent developments, such as feminist critique, GLBT critique, and postcolonialism. While the approach will be mainly philosophical, implications for other areas such as literature, art, emergent media, religion, and politics will also figure in the discussions, so it is appropriate for students in many fields, not just philosophy. Prerequisite: Junior standing or permission of the instructor. Note that this course will serve as a foundational offering for students interested in participating in the Critical Theory specialization.

**PHIL 3446 Philosophy in the American Tradition (4 Credits)**

The course introduces students to the thought of the three premier American Transcendentalist writers: Ralph Waldo Emerson, Margaret Fuller, and Henry David Thoreau. These three writers—by turns friends, rivals, neighbors, and even housemates in nearby Concord, Massachusetts—created what Emerson called “a poetry and philosophy of insight and not of tradition” and laid the foundations for American philosophy and literature as we know it today. They also led the first countercultural movement in American history, advocating causes as varied as environmentalism, abolitionism, women's rights, and the “higher law” of the individual conscience in an age of unbridled capitalism and populism. We will consider the Transcendentalists as both writers and reformers, examining their calls for a uniquely American literature and their romantic sacralization of nature as well as their deep commitment to reform and their engagement with the turbulent politics of their time. In the final weeks of the course, we will explore the Transcendentalists' profound influence on American cultural history, ranging from their contemporaries (Frederick Douglass, Walt Whitman, Emily Dickinson, and Nathaniel Hawthorne) to ours (Marilynne Robinson, Terrence Malick, and W. S. Merwin).

**PHIL 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault's thesis with reference to different theoretical models of subjectivity and “subjectification” (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault's 1981-82 lectures entitled *The Hermeneutics of the Subject*. This course is cross-listed with RLGS 3448.

**PHIL 3450 Phenomenology and Theology (4 Credits)**

Cross listed with RLGS 3455. Prerequisite: junior standing or instructor's permission.

**PHIL 3460 Nietzsche & the Death of God (4 Credits)**

This course involves an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Prerequisite: junior standing or instructor's permission. Cross listed with RLGS 3460.

**PHIL 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with RLGS 3465. Prerequisite: junior standing or instructor's permission.

**PHIL 3466 Contemporary Continental Philosophy (4 Credits)**

A critical study of current trends in European philosophy, focusing on such thinkers as Deleuze, Badiou, Žižek, Meillassoux, or Laruelle. Prerequisite: junior standing or instructor's permission.

**PHIL 3610 Advanced Topics in Philosophy, Psychology, and Cognitive Science (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, psychology, and cognitive science. More specifically, our main goal is to engage in a critical discussion of how the study of the mind requires an interdisciplinary approach that integrates empirical findings with conceptual and philosophical theorizing. Cross listed with PSYC 3610. Prerequisites: PSYC 1001 and junior standing (or instructor approval).

**PHIL 3611 The Boundaries of Scientific Knowledge: A Philosophical Exploration (4 Credits)**

Despite its staggering successes, public trust in science is disquietingly low. What has gone wrong? Why is a substantive portion of the population unwilling to trust the advice of specialists? A central problem lies in the tendency of scientists, philosophers, and various pundits to hype, bloat, and overemphasize the promises and results of scientific research. This leads to scientism, broadly conceived as the imperialist tendency to reduce all knowledge to scientific knowledge. But what exactly is scientism? Despite the pejorative connotation of the term, is it an intellectual sin or a virtue? The aim of this course is to map the terrain, exploring various dimensions of scientism, and how it affects the public dimensions of scientific research and its relation to the humanities, religion, and other domains of knowledge, culture, and society.



**PHIL 3612 AI and Robotics (4 Credits)**

In this interdisciplinary seminar we will discuss foundational issues regarding artificially intelligent systems. We will seek to understand how recent advances in AI research bear on our understanding of the nature of the mind, intelligence, agency, rationality, and consciousness. We will also discuss how philosophical advances can advance empirical progress. Additionally, we will discuss some barriers to progress that these technologies might pose. In particular, we will be focused on three groups of questions: 1. What special opportunities and challenges are presented by deep neural net and deep learning technology regarding building and understanding artificially minded intelligent agents? 2. What is the role of the body and environment in producing intelligence? 3. Deep neural net algorithms are already commonly used to predict recidivism rates, diagnose illnesses, and make advertising more effective. In what ways might such algorithms be approaching human or animal intelligence, or shed light on such intelligence? In what ways might human and animal intelligence be importantly different? In what ways might contemporary intelligence research perpetuate injustice and oppression? This seminar is designed to be interdisciplinary, and I welcome students working in philosophy, robotics/AI, and cognitive science who want to work hard and dig deeper. There are no strict prerequisites, but some background knowledge in relevant disciplines will be highly useful.

**PHIL 3618 Philosophy of Biology (4 Credits)**

A survey of conceptual issues that lie at the intersection of biology and philosophy: the central concepts of evolutionary theory (such as natural selection, fitness, adaptation and function), the relation of biology to other "lower" sciences (can it be reduced to physics and chemistry?), whether there are genuine scientific laws in biology, and the relation between biology and other fields like cognitive science and ethics. At least Junior standing required.

**PHIL 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**PHIL 3699 Proseminar in Philosophy (4 Credits)**

Philosophy is a diverse discipline with various subfields, most of which are becoming increasingly specialized and methodologically autonomous. Specialization is often (rightly) perceived as an indicator of disciplinary progress and intellectual development. However, it is important that students of philosophy pursue breadth as well as depth. The goal of this course is to provide an overview of a series of seminal texts in philosophy, from a variety of subfields, epochs, and traditions. Each weekly meeting is devoted to the presentation, analysis, and discussion of a text that any student of philosophy should read at some point in her or his career. Requires junior standing or instructor's permission.

**PHIL 3700 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3701 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3702 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3703 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3704 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3991 Independent Study (1-8 Credits)****PHIL 4991 Independent Study (1-10 Credits)****PHIL 4995 Independent Research (1-10 Credits)****PHIL 5300 Philosophy Colloquium (4 Credits)****PHIL 5400 Cultural Theory Colloquium (1-5 Credits)**

# Psychology

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The Psychology PhD programs in the department of psychology are oriented toward training qualified students to pursue careers in research, teaching, and professional practice. PhD programs include: Experimental Psychology with a concentration in Affect, Social and Cognitive Psychology, Clinical Psychology with a child emphasis, and Developmental and Child Psychology. We also offer a specialization in Developmental Cognitive Neuroscience (DCN).

### **Doctor of Philosophy in Experimental Psychology with a Concentration in Affect, Social and Cognitive Psychology**

The ASC PhD program will prepare you for research and teaching careers in affective science, social or cognitive psychology. You will work closely with faculty and fellow students in labs using psychophysiological measurement, social cognition paradigms, behavioral measures and neuroscience tools such as fMRI. As a student in the ASC program, you will choose an emphasis: Affect, Social, or Cognitive Psychology. Depending on your emphasis area, there are slight variations in how requirements are completed.

### **Doctor of Philosophy in Clinical (Child emphasis) Psychology**

The graduate program in Clinical Psychology focuses on the etiology, treatment and prevention psychopathology with an emphasis on the childhood and adolescent developmental periods.

### **Doctor of Philosophy in Developmental and Child Psychology**

The graduate program in Developmental Psychology focuses on human developmental processes—including biological, cultural, social and psychophysiological factors.

#### **Developmental Cognitive Neuroscience**

The specialization in Developmental Cognitive Neuroscience is open to students in any of the graduate programs in Psychology. It is designed to equip students with advanced knowledge and training in an interdisciplinary approach to neuroscience and psychology. The coursework covers diverse fields and research methods including neuroimaging, computational modeling, eye-tracking, psychophysiology, neuropsychology, neuroendocrinology, and behavioral genetics. The program prepares students to be leaders in collaborative science approaches.

### **Doctor of Philosophy in Psychology with a Concentration in Affective, Social & Cognitive Psychology**

#### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### **Standardized Test Scores**

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

#### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
- Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
- Minimum C1 Advanced Score: 176 (including a minimum of 200 on the speaking section)
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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### **Doctor of Philosophy in Psychology with a Concentration in Clinical Psychology (Child Emphasis)**

#### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
- Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
- Minimum C1 Advanced Score: 176 (including a minimum of 200 on the speaking section)
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Philosophy in Psychology with a Concentration in Developmental Psychology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 (including a minimum of 26 on the speaking section)
- Minimum IELTS Score: 6.5 (including a minimum of 8 on the speaking section)
- Minimum C1 Advanced Score: 176 (including a minimum of 200 on the speaking section)
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs Starting 2024

### Doctor of Philosophy in Clinical Psychology (Child Emphasis)

#### Coursework Requirements

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

## Degree requirements

Minimum number of credits required for the degree: 120

### Course requirements

Code	Title	Credits
<b>I. Master's degree requirements</b>		
The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.		
Total credits for master's degree - 45		
<b>II. PhD requirements</b>		
<b>Statistics requirement</b>		<b>8</b>
PSYC 4295	Research Design & Inference	
PSYC 4300	Correlation and Regression	
<b>Advanced statistics (1 course from below):</b>		<b>4</b>
PSYC 4330	Analysis of Variance	
PSYC 4350	Structural Equation Modeling for the Social Sciences	
PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	
Or both Programming courses listed below:		
PSYC 4360	Programming Psychology: Experiment Building with Python	
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	
<b>Core coursework requirements</b>		<b>16</b>
A. Cognitive Psychology		
Select one		
PSYC 4002	Prosem in Memory and Cognition	
PSYC 4525	Prosem in Develop Neuropsych	
B. Neuroscience		
Select one		
PSYC 4526	Prosem in Cog Neuroscience	
PSYC 4262	Affective Neuroscience	
PSYC 4045	Proseminar in Human Brain Development	
C. Social/Personality/Emotions		
PSYC 4021	Prosem in Social Psychology	
D. Developmental Psychology		
Select one		
PSYC 4032	Developmental Proseminar: Social-Emotional	
PSYC 4033	Devel Proseminar: Biological	
Other Required Courses		
Clinical Science		<b>8</b>
PSYC 4512	Prosem in Psychopathology	
PSYC 4565	Systems of Psychotherapy	
Ethics		<b>4</b>
PSYC 4920	Ethics-Psych & Rsrch Practice	
PSYC 4925	Clinical Ethics and Professional Issues in Psychology	
Multicultural Competency		<b>4</b>
PSYC 4571	Multicult Issues & Ment Health	
Clinical Assessment		<b>8</b>
PSYC 4411	Assessment-Cognition	
PSYC 4413	Assessment-Psychopathology (Social, Emotional, and Behavioral)	
Advanced Clinical		<b>8</b>
Advanced clinical requirement: Two advanced clinical courses from the options below (one course must be an intervention course). Choose from the following options:		
PSYC 4085	Stress & Health	
PSYC 4688	Clinical Psychopharmacology	

PSYC 4566	Systems of Psychotherapy II	
PSYC 4620	Advan in Couples Intervention	
PSYC 4625	Marital/Couples Thrpy-Div Popl	
PSYC 4518	Readings in Family Therapy	
Tool Requirement		8
Electives		44
Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours		
<b>Total Credits</b>		<b>120</b>

#### Non-coursework Requirements

- Master's research paper or thesis and oral defense
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense
- Profession Wide Competencies
- Technical Standards
- Clinical Training
  - Clinical Practicum
  - Successful Completion of an Externship
  - Successful Completion of an APA approved internship

### Specialization: Developmental Cognitive Neuroscience Requirements

The following requirements for the DCN specialization are in addition to the student's area requirements. The DCN specializations affects how students meet core and tool requirements. DCN students in each of the three majors/areas of the department have additional core requirements. DCN also affects advanced clinical requirements for clinical DCN students and elective requirements for non-clinical DCN students (see below). The neuroscience methods courses listed below which fulfill the DCN tool requirement are also sufficient to fulfill their area's tool requirement.

Any entering student who wishes to specialize in DCN must demonstrate competency in basic neurobiology (e.g., have taken an undergraduate class in biological psychology, neuroanatomy, psychophysiology, etc.). If not, they must take Introduction to Neurobiology offered by the department of Biological Sciences.

Students must take four of the following required core courses (any four):

PSYC 4002	Prosem in Memory and Cognition	
PSYC 4033	Devel Proseminar: Biological	
PSYC 4045	Proseminar in Human Brain Development	
PSYC 4262	Affective Neuroscience	
PSYC 4526	Prosem in Cog Neuroscience	
PSYC 4660	Perception: A Cognitive Neuroscience Approach	

DCN students must also take two of the following tool/methods courses, or have an equivalent approved by the DCN area head:

PSYC 4085	Stress & Health	4
PSYC 4255	Imaging the Mind	4
PSYC 4360	Programming Psychology: Experiment Building with Python	4
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4
PSYC 4525	Prosem in Develop Neuropsych	4
PSYC 4665	Executive Functioning	4
PSYC 4688	Clinical Psychopharmacology	4

## Doctor of Philosophy in Developmental and Child Psychology

### Coursework Requirements

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

#### I. Master's degree requirements

The Department requires completion of the Master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.

Total credits for master's degree 45

Code	Title	Credits
<b>I. Master's degree requirements</b>		
The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.		
Hours required for masters degree - 45		
<b>II. PhD requirements</b>		
Statistics		
PSYC 4295	Research Design & Inference	4
PSYC 4300	Correlation and Regression	4
Advanced Stat Course		4
PSYC 4330	Analysis of Variance	
PSYC 4350	Structural Equation Modeling for the Social Sciences	
PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	
or both Programming courses listed below:		8
PSYC 4360	Programming Psychology: Experiment Building with Python	
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	
<b>Core coursework requirements</b>		
Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)		16
A. Cognitive Psychology		
One required		
PSYC 4002	Prosem in Memory and Cognition	
PSYC 4525	Prosem in Develop Neuropsych	
B. Neuroscience		
PSYC 4526	Prosem in Cog Neuroscience	
PSYC 4262	Affective Neuroscience	
PSYC 4045	Proseminar in Human Brain Development	
C. Social/Personality/Emotions		
PSYC 4011	Proseminar in Emotion	
PSYC 4020	Proseminar in Personality	
PSYC 4021	Prosem in Social Psychology	
D. Developmental Psychology		
Both required		
PSYC 4032	Developmental Proseminar: Social-Emotional	
PSYC 4033	Devel Proseminar: Biological	
E. Clinical Science		
PSYC 4512	Prosem in Psychopathology	
PSYC 4565	Systems of Psychotherapy	
Ethics		
Complete the following course		
PSYC 4920	Ethics-Psych & Rsrch Practice	2

Tool Requirement	8
Electives	74
Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours	
<b>Total Credits</b>	<b>120</b>

**Non-coursework Requirements**

- First-Year Project or Paper
- Master's research paper or thesis and oral defense
- Developmental Comprehensive Exams
- Presentation Requirement
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense
- [THIS SECTION SHOULD BE ON THE DCN SPECIALIZATION AND INCLUDE AN ADDITIONAL COURSE LIST, SAME AS THE PHD in CLINICAL PSYCHOLOGY)

**Specialization: Developmental Cognitive Neuroscience Requirements**

The following requirements for the DCN specialization are in addition to the student's area requirements. The DCN specializations affects how students meet core and tool requirements. DCN students in each of the three majors/areas of the department have additional core requirements. DCN also affects advanced clinical requirements for clinical DCN students and elective requirements for non-clinical DCN students (see below). The neuroscience methods courses listed below which fulfill the DCN tool requirement are also sufficient to fulfill their area's tool requirement.

Any entering student who wishes to specialize in DCN must demonstrate competency in basic neurobiology (e.g., have taken an undergraduate class in biological psychology, neuroanatomy, psychophysiology, etc.). If not, they must take Introduction to Neurobiology offered by the department of Biological Sciences.

Students must take four of the following required core courses (any four):

Code	Title	Credits
PSYC 4002	Prosem in Memory and Cognition	
PSYC 4033	Devel Proseminar: Biological	
PSYC 4045	Proseminar in Human Brain Development	
PSYC 4262	Affective Neuroscience	
PSYC 4526	Prosem in Cog Neuroscience	
PSYC 4660	Perception: A Cognitive Neuroscience Approach	

DCN students must also take two of the following tool/methods courses, or have an equivalent approved by the DCN area head:

Code	Title	Credits
PSYC 4085	Stress & Health	4
PSYC 4255	Imaging the Mind	4
PSYC 4360	Programming Psychology: Experiment Building with Python	4
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4
PSYC 4525	Prosem in Develop Neuropsych	4
PSYC 4665	Executive Functioning	4
PSYC 4688	Clinical Psychopharmacology	4

**Doctor of Philosophy in Experimental PSYCHOLOGY (Required Concentration in Affective, Cognitive, and Social psychology)**

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

**Degree requirements**

Minimum number of credits required for the degree: 120

**Course requirements**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>I. Master's degree requirements</b>		
The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.		
Total credits for master's degree		45
<b>II. PhD requirements</b>		
<b>Statistics Requirements</b>		
PSYC 4295	Research Design & Inference	4
PSYC 4300	Correlation and Regression	4
<b>Advanced Stat Course (one from below):</b>		<b>4</b>
PSYC 4350	Structural Equation Modeling for the Social Sciences	
PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	
or both Programming courses listed below:		<b>8</b>
PSYC 4360	Programming Psychology: Experiment Building with Python	
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	
<b>Core coursework requirements</b>		
Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)		
<b>A. Cognitive Psychology</b>		<b>4</b>
PSYC 4002	Prosem in Memory and Cognition	
<b>B. Neuroscience (1 from below):</b>		<b>4</b>
PSYC 4525	Prosem in Develop Neuropsych	
PSYC 4526	Prosem in Cog Neuroscience	
PSYC 4262	Affective Neuroscience	
<b>C. Social/Personality/Emotions</b>		<b>4</b>
PSYC 4011	Proseminar in Emotion	
PSYC 4020	Proseminar in Personality	
PSYC 4021	Prosem in Social Psychology	
Note: ASC students must take one core course in affect (Proseminar in Emotion or Proseminar in Affective Neuroscience), one in social (Proseminar in Social Psychology), and one in cognitive psychology (Proseminar in Memory and Cognition or Proseminar in Cognitive Neuroscience), and one additional core course		
<b>D. Developmental Psychology</b>		<b>4</b>
PSYC 4032	Developmental Proseminar: Social-Emotional	
PSYC 4033	Devel Proseminar: Biological	
<b>E. Clinical Science</b>		<b>4</b>
PSYC 4512	Prosem in Psychopathology	
PSYC 4565	Systems of Psychotherapy	
<b>Ethics</b>		<b>2</b>
Complete the following course:		
PSYC 4920	Ethics-Psych & Rsrch Practice	
<b>Specialty Seminars</b>		
Students are expected to take at least 2 specialty seminars in their program (or another, pending approval of their advisor) whenever they are offered. Proseminars not used to meet the core requirements may be used.		
PSYC 4028	Social Cognition	
PSYC 4025	Intergroup Relations	
PSYC 4015	Nonverbal Behavior	
PSYC 4045	Proseminar in Human Brain Development	
PSYC 4660	Perception: A Cognitive Neuroscience Approach	
PSYC 4665	Executive Functioning	
<b>Electives</b>		



Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours

**Non-coursework requirements:**

- Master's research paper or thesis and oral defense
- Teaching
- Conceptual Analysis of Dissertation Area (CADA) paper or Comprehensive Exam
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense

## Doctoral Programs Prior to 2024

### Doctor of Philosophy in Psychology with a Concentration in Affect, Social and Cognitive

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

**Degree requirements**

**Course requirements**

Code	Title	Credits
<b>I. Master's degree requirements</b>		
The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.		
<b>Total credits for master's degree</b>		<b>45</b>

Code	Title	Credits
<b>II. PhD requirements</b>		
<b>Statistics Requirements</b>		
PSYC 4295	Research Design & Inference	4
PSYC 4300	Correlation and Regression	4
Advanced Stat Course (1 from below):		
PSYC 4350	Structural Equation Modeling for the Social Sciences	4
PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	4
or both Programming courses listed below:		
PSYC 4360	Programming Psychology: Experiment Building with Python	4
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4

**Core coursework requirements**

Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)

**A. Cognitive Psychology**

PSYC 4002	Prosem in Memory and Cognition	4
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**B. Neuroscience**

PSYC 4526	Prosem in Cog Neuroscience	4
PSYC 4525	Prosem in Develop Neuropsych	4
PSYC 4262	Affective Neuroscience	4

**C. Social/Personality/Emotions**

PSYC 4011	Proseminar in Emotion	4
PSYC 4021	Prosem in Social Psychology	4
PSYC 4020	Proseminar in Personality	4

Note: ASC students must take one core course in affect (Proseminar in Emotion or Proseminar in Affective Neuroscience), one in social (Proseminar in Social Psychology), and one in cognitive psychology (Proseminar in Memory and Cognition or Proseminar in Cognitive Neuroscience), and one additional core course

**D. Developmental Psychology**

PSYC 4032	Developmental Proseminar: Social-Emotional	4
PSYC 4033	Devel Proseminar: Biological	4
E. Clinical Science		
PSYC 4512	Prosem in Psychopathology	4
PSYC 4565	Systems of Psychotherapy	4

**Ethics**

Complete the following course:

PSYC 4920	Ethics-Psych & Rsrch Practice	2
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**Tool requirement** **8**

**Specialty Seminars**

Students are expected to take at least 2 specialty seminars in their program (or another, pending approval of their advisor) whenever they are offered

**Electives**

Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours

**Total Credits** **120**

Minimum number of credits required for the degree: 120

**Non-coursework requirements:**

- Master's research paper or thesis and oral defense
- Teaching
- Conceptual Analysis of Dissertation Area (CADA) paper or Comprehensive Exam
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense

**Doctor of Philosophy in Psychology with a Concentration in Clinical Psychology****Degree Requirements****Coursework Requirements**

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

Code	Title	Credits
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**I. Master's degree requirements**

The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.

**Total credits for master's degree** **45**

Code	Title	Credits
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**II. PhD requirements****Statistics Requirement**

PSYC 4295	Research Design & Inference	4
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PSYC 4300	Correlation and Regression	4
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Advanced Stat Course (1 from below):

PSYC 4350	Structural Equation Modeling for the Social Sciences	4
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PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	4
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or both Programming courses listed below (Check with your Area Head to make sure the Programming classes will count)

PSYC 4360	Programming Psychology: Experiment Building with Python	4
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PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4
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**Core coursework requirements**

A. Cognitive Psychology

PSYC 4002	Prosem in Memory and Cognition	4
<b>B. Neuroscience (1 from below)</b>		
PSYC 4526	Prosem in Cog Neuroscience	4
PSYC 4525	Prosem in Develop Neuropsych	4
PSYC 4262	Affective Neuroscience	4
<b>C. Social/Personality/Emotions</b>		
PSYC 4021	Prosem in Social Psychology	4
<b>D. Developmental Psychology</b>		
PSYC 4032	Developmental Proseminar: Social-Emotional	4
PSYC 4033	Devel Proseminar: Biological	4
<b>E. Clinical Science</b>		
PSYC 4512	Prosem in Psychopathology	4
PSYC 4565	Systems of Psychotherapy	4
<b>Ethics</b>		
Complete the following courses:		
PSYC 4920	Ethics-Psych & Rsrch Practice	2
PSYC 4925	Clinical Ethics and Professional Issues in Psychology	3
<b>Multicultural Competency</b>		
PSYC 4571	Multicult Issues & Ment Health	4
<b>Clinical Assessment</b>		
PSYC 4411	Assessment-Cognition	4
PSYC 4413	Assessment-Psychopathology (Social, Emotional, and Behavioral)	4
<b>Advanced Clinical</b>		
Advanced clinical requirement (one course must be an intervention course)		8
<b>Tool Requirement</b>		8
Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours		
<b>Total Credits</b>		<b>120</b>

Minimum number of credits required for the degree: 120

#### Non-coursework Requirements

- Master's research paper or thesis and oral defense
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense
- Profession Wide Competencies
- Technical Standards
- Clinical Training
  - Clinical Practicum
  - Successful Completion of an Externship
  - Successful Completion of an APA approved internship

## Doctor of Philosophy in Psychology with a Concentration in Developmental Psychology

### Degree Requirements

#### Coursework Requirements

Students earn a master's degree on their way toward obtaining the PhD; however, students are not required to obtain an official master's degree. All students are required to fulfill the requirements for the master's degree, regardless of whether or not they apply for graduation for an official master's degree. Completion of master's degree requirements is required in order to be advanced to preliminary doctoral candidacy.

Code	Title	Credits
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**I. Master's degree requirements**

The Department requires completion of the master's degree requirements as part of the Ph.D. program. To earn an official master's degree, complete at least 28 credits of the 45 minimum number of credits in content coursework which excludes Independent Study and Independent Research credits.

<b>Total credits for master's degree</b>	<b>45</b>
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Code	Title	Credits
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**II. PhD requirements****Statistics Requirement**

PSYC 4295	Research Design & Inference	4
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PSYC 4300	Correlation and Regression	4
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Advanced Stat Course (1 from below):

PSYC 4350	Structural Equation Modeling for the Social Sciences	4
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PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	4
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or both Programming courses listed below:

PSYC 4360	Programming Psychology: Experiment Building with Python	4
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PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4
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**Core coursework requirements**

Complete one course from four of the five categories (Cognitive Psychology, Neuroscience, Social/Personality/Emotions, Developmental Psychology, and Clinical Science)

**A. Cognitive Psychology**

PSYC 4002	Prosem in Memory and Cognition	4
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**B. Neuroscience**

PSYC 4526	Prosem in Cog Neuroscience	4
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PSYC 4525	Prosem in Develop Neuropsych	4
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PSYC 4262	Affective Neuroscience	4
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**C. Social/Personality/Emotions**

PSYC 4011	Proseminar in Emotion	4
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PSYC 4021	Prosem in Social Psychology	4
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PSYC 4020	Proseminar in Personality	4
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**D. Developmental Psychology**

PSYC 4032	Developmental Proseminar: Social-Emotional	4
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PSYC 4033	Devel Proseminar: Biological	4
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Note: Developmental Students are required to complete both courses.

**E. Clinical Science**

PSYC 4512	Prosem in Psychopathology	4
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PSYC 4565	Systems of Psychotherapy	4
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**Ethics**

Complete the following course:

PSYC 4920	Ethics-Psych & Rsrch Practice	2
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Additional courses at DU, no more than 8 credits outside PSYC department, minimum 56 credit hours total must be content courses, to minimum of 120 credit hours

<b>Tool Requirement</b>	<b>8</b>
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<b>Total Credits</b>	<b>120</b>
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Minimum number of credits required for degree: 120

**Non-coursework Requirements**

- First-Year Project or Paper
- Master's research paper or thesis and oral defense
- Developmental Comprehensive Exams

- Presentation Requirement
- Dissertation Prospectus and Prospectus Meeting
- Dissertation and Oral Defense

## Specialization: Developmental Cognitive Neuroscience Requirements

The following requirements for the DCN program are in addition to the student's area requirements. The DCN specialization affects how students meet Core and Tool requirements. DCN students in each of the three Areas of the Department have additional Core requirements listed below. It also affects Advanced Clinical requirements for Clinical DCN students and elective requirements for non-clinical DCN Students (see below). The Neuroscience methods courses listed fulfill the student's Tool Requirement; students are not required to fulfill their area's Tool requirements.

Any entering student in DCN must demonstrate competency in basic neurobiology (i.e. have taken an undergraduate class in physiological psychology, basic neurobiology, etc.). Otherwise, they need to take Introduction to Neurobiology in the Biology Department.

### Coursework requirements

Code	Title	Credits
Four required Core Courses (any 4)		
PSYC 4002	Prosem in Memory and Cognition	4
PSYC 4033	Devel Proseminar: Biological	4
PSYC 4045	Proseminar in Human Brain Development	4
PSYC 4262	Affective Neuroscience	4
PSYC 4526	Prosem in Cog Neuroscience	4
PSYC 4660	Perception: A Cognitive Neuroscience Approach	4
Two of the following tool/method courses:		
PSYC 4085	Stress & Health	4
PSYC 4255	Imaging the Mind	4
PSYC 4254	Intro to Neural Network Models	4
PSYC 4360	Programming Psychology: Experiment Building with Python	4
PSYC 4365	Programming Psychology: Model-Fitting and Analysis	4
PSYC 4525	Prosem in Develop Neuropsych	4
PSYC 3665	Executive Functioning	4
PSYC 4688	Clinical Psychopharmacology	4
Genetics (available at IBG at CU Boulder; check with Developmental Cognitive Neuroscience Area Head about how to enroll.)		
Build your own tool (Please see DCN Area Head for details)		

## Dual Undergraduate/Graduate Master's Program

### Master of Arts in Psychology Dual Degree with BA or BS in Psychology

Minimum of 45 credits required for the MA. 28 credits must be content courses.

Code	Title	Credits
<b>Foundations In Research Methods and Statistics</b>		
PSYC 4295	Research Design & Inference	4
PSYC 4300	Correlation and Regression	4
In addition to PSYC 4295 and PSYC 4300 you must choose one of the following Advanced Statistics Course:		
PSYC 4330	Analysis of Variance	4
PSYC 4350	Structural Equation Modeling for the Social Sciences	4
PSYC 4355	Multilevel Modeling for the Psychological Sciences: Theory and Applications	4
<b>Ethics</b>		
PSYC 4920	Ethics-Psych & Rsrch Practice	2
<b>Proseminar Courses</b>		
Choose two of the following:		
PSYC 4002	Prosem in Memory and Cognition	4
PSYC 4011	Proseminar in Emotion	4

PSYC 4021	Prosem in Social Psychology	
PSYC 4032	Developmental Proseminar: Social-Emotional	
PSYC 4033	Devel Proseminar: Biological	

**Electives**

A minimum of two elective courses in PSYC must be taken 8

**Master's Thesis**

PSYC 5995	Independent Research	1-10
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**Additional Credit Hours**

Additional elective courses or independent research to reach 45 credit minimum

All courses for the MA must be taken at the 4000#level or above. No course can count for undergraduate and graduate level credit hours. Cross# listed courses taken at one level may not be retroactively applied to another, as requirements and grading criteria may differ.

**Programs non#course requirements.**

Successful completion of master's research paper or thesis and oral defense.

**Grade Requirement:**

A grade lower than "C-" renders the credit unacceptable for meeting University degree requirements. Grades of "C-" or better qualify for graduate credit but may not count towards the degree. Students should consult with their program to understand unit-specific minimum grade requirements.

**Admission requirements:**

- Current undergraduate student at DU
- Minimum of 120 credit hours completed when applications are due
- Signed certification from psychology major advisor that undergraduate degree requirements can be fit in alongside MA program
- Completion of Intro Stats (PSYC 2300) or equivalent and Research Methods (PSYC 3050) with a B or higher before Autumn Quarter of the year they begin the program (4<sup>th</sup> year or equivalent)
- Letter of support from faculty member willing to oversee research thesis, stating research potential as well as capability to contribute to graduate classes
- Completion of personal statement outlining research interests, career goals, and briefly outlining how a research-based MA program will help them achieve those goals

**PSYC 3020 Adolescence (4 Credits)**

This course examines development during the adolescent years exploring biological, cognitive, and social transitions central to this developmental stage. It considers key contexts in which adolescents develop: families, peer groups, schools, work, leisure, and the mass media. Special attention is given to the importance of diverse social and cultural experiences and its impact on adolescent behavior and cognition. Prerequisites: PSYC2070 and PSYC3050, must be major or minor in psychology, must have junior or senior standing.

**PSYC 3029 Imaging the Mind (4 Credits)**

Imaging the Mind is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 4255. Prerequisites: PSYC 2031 and PSYC 3050, must be major or minor in psychology, must have junior standing. Permission of the instructor required.

**PSYC 3032 Introduction to Neural Networks (4 Credits)**

Introduction to basic principles and computational methods in artificial neural network modeling; neural models of cognitive and psychological processes examined and evaluated. Cross listed with PSYC 4254. Prerequisite: PSYC 1001 and PSYC 3050. Must be major or minor in psychology. Must have junior standing. Permission of instructor required.

**PSYC 3035 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is for students in the cognitive neuroscience specialization, a joint program with Biological Sciences. The goal of the seminar is to provide an opportunity for senior-level cognitive neuroscience majors to apply the knowledge and skills they have acquired in other courses to current cutting-edge topics in the field. Prerequisites: PSYC 2031 and PSYC 3050, must have cognitive neuroscience concentration, must have senior standing.

**PSYC 3151 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3152 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2751 and PSYC 2752.

**PSYC 3350 Cultural Psychology (4 Credits)**

This seminar examines how people's sociocultural context shapes their thoughts, feelings, and behaviors. To approach this question, we read and discuss classic as well as recent theoretical and empirical articles from the field of cultural psychology. Topics include defining culture; dimensions of cultural variation; culture-biology interactions; methodological considerations; cultural influences on cognition, emotion, the self, moral judgment, and health; cultural neuroscience; cultural approaches to race and ethnicity; and mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research. Prerequisite: PSYC 2740 and PSYC 3050; must be a major or minor in psychology, must have junior standing.

**PSYC 3666 Brain Development & Cognition (4 Credits)**

Examines what the brain tells us about development and what development tells us about the brain. Topics include subcortical and cortical developments to the acquisition of language and drawing. Prerequisites: PSYC 2070 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3701 Topics in Psychology (1-4 Credits)**

Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3991 Independent Study (1-10 Credits)**

Maximum of 5 hours per quarter not to exceed a total of 10 quarter hours.

**PSYC 3999 Psychology Senior Assessment (0 Credits)**

This course involves a required assessment of graduating psychology majors' knowledge of the discipline based on coursework taken one quarter prior to graduation. Prerequisites: at least any four of the following courses required for the major: PSYC 1001 or equivalent, PSYC 2300, 3050, PSYC 2500, PSYC 2070, PSYC 2031, PSYC 2740, and at least 163 total credit hours or at least 30 credits of psychology hours.

**PSYC 4002 Prosem in Memory and Cognition (4 Credits)**

Theory/research on thinking, problem solving, language, creative thought, other aspects of knowing process.

**PSYC 4011 Proseminar in Emotion (4 Credits)**

Social/physiological aspects of emotions, including motivation, physiological processes, basic emotions, cognitive appraisal, cross-cultural issues, empathy, effects of emotions.

**PSYC 4015 Nonverbal Behavior (4 Credits)**

This course will be cross-listed with Psyc 3015 (undergraduate students in 3015 and graduate students in 4015 will be seated in the same classroom but will have different requirements). Most humans speak for a very small portion of their day (by most estimates, an hour or less) but during every waking moment of your life, you display nonverbal behaviors. These behaviors include facial expressions, eye gaze, posture, head movements, movement toward and away from things, gestures, distance from other people, vocal intonation, and many other subtle bodily actions. In this class, we will survey an enormous scientific literature regarding the causes and consequences of nonverbal behaviors. Our focus will be on nonverbal behavior in humans, but we will also review the role of nonverbal behavior in the social life of human and non-human animals alike. Topics include, but are not limited to questions such as: What methods should scientists use to examine the causes and consequences of nonverbal behavior? Do nonverbal behaviors reveal emotions and other psychological states or do nonverbal behaviors instead function for the purpose of social influence? What is the role of nonverbal behavior in deception and the detection of deception? Do people non-consciously process the social meaning of others' nonverbal behaviors?.

**PSYC 4020 Proseminar in Personality (4 Credits)**

Personality structure/dynamics, theory and findings, interrelationships between personality and socio-cultural determinants of behavior.

**PSYC 4021 Prosem in Social Psychology (4 Credits)**

Major theoretical issues and empirical research in social psychology; topics include cultural, social structure, cognitive consistency, social neuroscience, social cognition, person perception, the self, social influence, attitudes, relationships, emotion, coping.

**PSYC 4025 Intergroup Relations (4 Credits)**

This course is intended to provide a foundation in understanding how individuals and groups relate to each other within a social structure. Social groups can take many forms, ranging from classic social groups (e.g., race, gender, ethnicity, religion, sexual orientation) to minimal groups where membership is arbitrary. This course will explore foundational principles in classic and contemporary research on intergroup relations.

**PSYC 4028 Social Cognition (4 Credits)**

Social cognition describes how people make sense of themselves and others. The emphasis on "how" is important—social cognition research focuses on perceptual, cognitive, and affective processes that help people think about themselves and others. You will learn about the theories, findings, and methods in a specific area of study.

**PSYC 4032 Developmental Proseminar: Social-Emotional (4 Credits)**

Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

**PSYC 4033 Devel Proseminar: Biological (4 Credits)**

This course provides an overview of major biological processes during development and their effects on physical, cognitive, and social development. Specific topics will include: history, concepts, and central themes of developmental psychology; theoretical and biological models of human development (e.g., developmental psychobiological systems view); brain development and plasticity; behavioral genetics; sleep and circadian rhythms; sexual differentiation and hormonal influences on behavior; stress and the HPA axis; effects of nutrition and toxic substances.

**PSYC 4045 Proseminar in Human Brain Development (4 Credits)**

This course offers an overview of current research and methodologies in the field of developmental cognitive, affective, and social neuroscience. It explores the insights that the brain provides about development and, conversely, what development reveals about the brain. Topics covered include sensitive periods for neuroplasticity, pediatric neuroimaging techniques, and the development of cognitive, affective, and social processes, as well as the impact of environmental factors. Emphasis is placed on discussing current research, evaluating findings, and proposing new research ideas in the field. Prerequisite: Instructor permission.

**PSYC 4055 The Neuroscience and Psychology of Parenthood and Parent-Child Relationships (4 Credits)**

This course explores the theory, research and issues relevant to parenthood and parent-child relationships. The course overviews the evolutionary, neurobiological, and psychological perspective of parent-child relationships with a focus on the understanding of recent advances in neuroscience research. Topics include neuroplasticity of parental brain, maternal vs. paternal biology for parenting, and social and biological determinants of parent-child relationships. Emphasis is placed on discussion of current research, evaluation of the findings, and proposals and ideas of new research in the field. The goal is not to memorize facts but rather to learn to think like a developmental cognitive/social neuroscientist. Cross-listed with course PSYC 3055. Prerequisite: Instructor permission.

**PSYC 4085 Stress & Health (4 Credits)**

This course will serve as an introduction to the field of psychoneuroimmunology, with a focus on stress and development. The first section of the course will review basic immunology including immune system components and functions, and relations between the immune system and other systems. The later portion of the course will focus on effects of stress for different disease mechanisms (infection, allergy, cancer etc). Instructor approval required.

**PSYC 4235 Teaching Psychology (1-5 Credits)**

Experiential approach to learning techniques for teaching psychology.

**PSYC 4241 Seminar-Discourse Processes (4 Credits)****PSYC 4254 Intro to Neural Network Models (4 Credits)**

Cross listed with PSYC 3032.

**PSYC 4255 Imaging the Mind (4 Credits)**

Imaging Cognition is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 3029.

**PSYC 4256 Seminar:Cognitive Neuroscience (4 Credits)**

Neural systems underlying human perception, memory, language, pathological syndromes that result from damage to these systems.

**PSYC 4257 Psychophys & Neuroscience Lab (4 Credits)****PSYC 4258 Social Neuroscience (4 Credits)****PSYC 4262 Affective Neuroscience (4 Credits)**

Affective neuroscience is the study of emotions in the brain. In this course, we explore how new frontiers in emotion research, from brain scans to psychoactive drugs to monkey colonies, have changed the way we think about emotions and moods. We aim to learn how scientists ask these new questions: how and what can we learn about emotion from animal models, patient studies, genetic studies, brain scans, and drugs? We learn and debate different theories about what emotions are: when are emotions helpful and harmful? Why do we have them? How many are there? Can we control how we feel? Finally, we learn how to think about emotions scientifically: What kind of evidence matters? How do emotion scholars talk about their work? What kind of questions can we ask, and what kind can we hope to answer?.

**PSYC 4295 Research Design & Inference (4 Credits)****PSYC 4300 Correlation and Regression (4 Credits)**

The course reviews the logic of statistical inference before introducing the procedures of correlation and regression. We begin with simple bivariate relationships before moving on to multivariate relationships for both categorical and continuous independent variables. Topics in regression include multicollinearity, variable selection, and curvilinear relationships. The course emphasizes the (stringent) requirements needed to be able to interpret correlational data in terms of cause and effect. The course also emphasizes the assessment of interactions in regression analysis for both categorical and continuous independent variables. Also included is basic coverage of logistic regression and regression assumptions. Prerequisite: PSYC 4295.

**PSYC 4330 Analysis of Variance (4 Credits)**

Complex analysis of variance, other quantitative methodologies. Prerequisite: PSYC 4300 or instructor's permission.



**PSYC 4350 Structural Equation Modeling for the Social Sciences (4 Credits)**

This advanced course covers the basics of structural equation modeling and how this flexible approach to statistical analysis can be applied in the social sciences. Specific techniques that will be covered will include testing for mediation, path analysis, confirmatory factor analysis, and the analysis of longitudinal data, as well as other related topics. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments and an emphasis on interpreting and critiquing structural equation models in published research. A course on correlational methods and regression is a pre/co-requisite.

**PSYC 4355 Multilevel Modeling for the Psychological Sciences: Theory and Applications (4 Credits)**

This advanced course covers the basics of multilevel (hierarchical) linear modeling and how this flexible approach to statistical analysis can be applied to theory and data in the psychological sciences. Specific techniques that will be covered include the analysis of nested data, family and dyadic data, and longitudinal data as well as mediation and moderation. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments. There will also be an emphasis on interpreting and critiquing multilevel modeling analyses in published research. Courses on analysis of variance as well as correlational methods and regression are pre/corequisites.

**PSYC 4360 Programming Psychology: Experiment Building with Python (4 Credits)**

This graduate-level course provides an introduction to computer programming. The goal of the course is to help psychology students develop practical coding skills in Python that will allow them to design and create complex, computer-based experiments. Students will also learn to analyze and plot data. No previous experience with programming is required (or expected). The course begins with an introduction to basic principles of programming with Python. From there, students learn to code by solving challenges specific to the design/construction of a psychological/vision-based experiment. The class is highly interactive— each class includes a mixture of lecture, group-based problem solving, and coding in teams or individually. This class is highly recommended for students who wish to improve their programming proficiency before enrolling in PSYC 4365, although it is not a prerequisite.

**PSYC 4365 Programming Psychology: Model-Fitting and Analysis (4 Credits)**

An introduction to creating, fitting, and performing statistical inference using computational models with an emphasis on binary choice data. The aims of this course include familiarizing students with the mathematical basis of model-fitting, learning the value of taking a variety of approaches to fitting trial-by-trial data, and giving students practical hands-on experience with maximum likelihood fitting methods. This course will use both MATLAB and R. Though not a prerequisite, this course is intended to follow Programming Psychology: Experiment Building in MATLAB (PSYC 4360), and so will assume students already have a basic knowledge of coding in MATLAB (including debugging, scripts, functions, loops, and plotting). This course is open to graduate students outside of the Department of Psychology.

**PSYC 4411 Assessment-Cognition (4 Credits)**

This course will provide students with a graduate level overview of theory, research, and practice in the measurement of cognitive functioning. Students will gain practical skills in administering standardized measures of cognitive and academic functioning. They will also develop skills in interpreting cognitive test results and recognizing patterns in cognitive profiles related to specific learning and developmental disorders.

**PSYC 4413 Assessment-Psychopathology (Social, Emotional, and Behavioral) (4 Credits)**

Overview of evidence-based psychological assessment (emotional, behavioral, and social) with a focus on integrating theory, research, and clinical practice.

**PSYC 4512 Prosem in Psychopathology (4 Credits)****PSYC 4518 Readings in Family Therapy (4 Credits)**

This course will survey major historical and contemporary theories from the field of family therapy. Basic family therapy techniques will be covered, and integrated with other modes of therapy (e.g. individual, marital). In the second half of the course, students will work with families and receive group supervision.

**PSYC 4525 Prosem in Develop Neuropsych (4 Credits)**

We will cover the theory and measurement of brain-behavior relations across the lifespan in several major neuropsychological domains, including executive functions, language, memory, and visual-spatial function. As is characteristic of the developmental neuropsychological field, students will learn to integrate information across multiple levels of analysis (genetic, brain, cognitive, behavioral) and draw on principles of neural and cognitive development in their application of neuropsychological theory to research and clinical issues. We will discuss current controversies in the field and continued areas for growth.

**PSYC 4526 Prosem in Cog Neuroscience (4 Credits)**

This is a graduate-level introduction to cognitive neuroscience. It covers basic theories of cognition and their neurological support.

**PSYC 4565 Systems of Psychotherapy (4 Credits)**

The course provides an introduction to evidence-based treatment for children and adolescents. Conceptual and empirical underpinnings of youth therapies are examined. Treatments for three prominent child and adolescent disorders - disruptive behavior problems, depression, and anxiety disorders - are highlighted. Demonstration and practice of specific treatment components is included.

**PSYC 4566 Systems of Psychotherapy II (4 Credits)**

Conceptual/empirical foundations of interventions for clinical problems, including (but not limited to) parasuicidal behavior, Borderline Personality Disorder, and substance abuse.

**PSYC 4571 Multicult Issues & Ment Health (4 Credits)**

Theory, research, and practice issues related to the mental health of racial/ethnic minority and other diverse groups.

**PSYC 4587 Workshop in Marital Therapy (4 Credits)****PSYC 4612 Marital Conflict (1-10 Credits)****PSYC 4620 Advan in Couples Intervention (4 Credits)****PSYC 4625 Marital/Couples Thrpy-Div Popl (4 Credits)**

This course will cover the complexities in couples research and intervention that are the focus of current investigations in labs around the world. The major issues revolve around the role that marital problems play in the development, maintenance and treatment of a variety of child and adult problems and vice versa. These will include, adult sexual problems, alcohol and drug use and abuse, anxiety disorders, depression, medical problems, and that marital discord and destructive conflict are generic risk factors for a wide range of child and adult mental health problems and that marital health is a protective factor.

**PSYC 4660 Perception: A Cognitive Neuroscience Approach (4 Credits)**

An introduction to human perception with a strong emphasis on visual perception. This course evaluates the current understanding of how neural activity in the brain allows people to perceive basic sensory features (e.g., brightness, color, size, position, depth, movement, loudness and pitch) as well as recognize and discriminate complex perceptual patterns (e.g., 2D-shapes, 3D-objects, faces, and scenes). The underlying mechanisms are discussed on the basis of behavioral, neurophysiological, and computational evidence.

**PSYC 4665 Executive Functioning (4 Credits)**

This course provides an overview of current research, theories, and methods in the study of executive function and cognitive control. We will explore executive function from an interdisciplinary perspective, drawing on work from cognitive psychology and neuroscience, clinical neuropsychology, and developmental and educational psychology. Topics include the brain basis of executive function and cognitive control, the unity and diversity of executive functions, the development of executive functions, emotion and motivation as modulating influences on executive control, executive function in psychopathology, the role of individual differences, and links between executive function performance and higher-order behavioral outcomes. Enrollment restricted to Ph.D. program or with instructor approval.

**PSYC 4688 Clinical Psychopharmacology (4 Credits)**

This course offers an in-depth examination of medications used to treat mental disorders, including the neurobiology of these medications. Different options available for each disorder will be discussed, along with issues related to the effective use of psychiatric medications. Prerequisites: Instructor approval required.

**PSYC 4920 Ethics-Psych & Rsrch Practice (2 Credits)**

Ethical issues on psychological research. Teaching, practice.

**PSYC 4925 Clinical Ethics and Professional Issues in Psychology (3 Credits)**

Ethical topics related to clinical psychology; professional topics in clinical psychology such as supervision and consultation. Instructor permission required.

**PSYC 4928 Initial Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's first year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4929 Advanced Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's second year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4930 Psychology Practicum-Clinical (1-5 Credits)**

On-the-job training in clinical psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4931 Psychology Practicum-Teaching (0-5 Credits)**

On-the-job training in teaching psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4932 Psychology Practicum-Research (1-5 Credits)**

On-the-job training in research psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4933 Psychology Practicum - Advanced Clinical (0 Credits)**

Advanced on-the-job training in clinical psychology. May be repeated up to 6 times. Prerequisite: Admission to doctoral program.

**PSYC 4934 Practicum: DCN Neuropsychology (1-10 Credits)****PSYC 5991 Masters Independent Study (1-10 Credits)****PSYC 5995 Independent Research (1-10 Credits)****PSYC 6981 APA Internship (8 Credits)**

1 Year APA approved Internship in clinical psychology - the course is not graded.

**PSYC 6991 Ph.D Independent Study (1-10 Credits)****PSYC 6995 Independent Research (1-10 Credits)****Courses****PSYC 3020 Adolescence (4 Credits)**

This course examines development during the adolescent years exploring biological, cognitive, and social transitions central to this developmental stage. It considers key contexts in which adolescents develop: families, peer groups, schools, work, leisure, and the mass media. Special attention is given to the importance of diverse social and cultural experiences and its impact on adolescent behavior and cognition. Prerequisites: PSYC2070 and PSYC3050, must be major or minor in psychology, must have junior or senior standing.

**PSYC 3029 Imaging the Mind (4 Credits)**

Imaging the Mind is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 4255. Prerequisites: PSYC 2031 and PSYC 3050, must be major or minor in psychology, must have junior standing. Permission of the instructor required.

**PSYC 3032 Introduction to Neural Networks (4 Credits)**

Introduction to basic principles and computational methods in artificial neural network modeling; neural models of cognitive and psychological processes examined and evaluated. Cross listed with PSYC 4254. Prerequisite: PSYC 1001 and PSYC 3050. Must be major or minor in psychology. Must have junior standing. Permission of instructor required.

**PSYC 3035 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is for students in the cognitive neuroscience specialization, a joint program with Biological Sciences. The goal of the seminar is to provide an opportunity for senior-level cognitive neuroscience majors to apply the knowledge and skills they have acquired in other courses to current cutting-edge topics in the field. Prerequisites: PSYC 2031 and PSYC 3050, must have cognitive neuroscience concentration, must have senior standing.

**PSYC 3151 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3152 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2751 and PSYC 2752.

**PSYC 3350 Cultural Psychology (4 Credits)**

This seminar examines how people's sociocultural context shapes their thoughts, feelings, and behaviors. To approach this question, we read and discuss classic as well as recent theoretical and empirical articles from the field of cultural psychology. Topics include defining culture; dimensions of cultural variation; culture-biology interactions; methodological considerations; cultural influences on cognition, emotion, the self, moral judgment, and health; cultural neuroscience; cultural approaches to race and ethnicity; and mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research. Prerequisite: PSYC 2740 and PSYC 3050; must be a major or minor in psychology, must have junior standing.

**PSYC 3666 Brain Development & Cognition (4 Credits)**

Examines what the brain tells us about development and what development tells us about the brain. Topics include subcortical and cortical developments to the acquisition of language and drawing. Prerequisites: PSYC 2070 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3701 Topics in Psychology (1-4 Credits)**

Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3991 Independent Study (1-10 Credits)**

Maximum of 5 hours per quarter not to exceed a total of 10 quarter hours.

**PSYC 3999 Psychology Senior Assessment (0 Credits)**

This course involves a required assessment of graduating psychology majors' knowledge of the discipline based on coursework taken one quarter prior to graduation. Prerequisites: at least any four of the following courses required for the major: PSYC 1001 or equivalent, PSYC 2300, 3050, PSYC 2500, PSYC 2070, PSYC 2031, PSYC 2740, and at least 163 total credit hours or at least 30 credits of psychology hours.

**PSYC 4002 Prosem in Memory and Cognition (4 Credits)**

Theory/research on thinking, problem solving, language, creative thought, other aspects of knowing process.

**PSYC 4011 Proseminar in Emotion (4 Credits)**

Social/physiological aspects of emotions, including motivation, physiological processes, basic emotions, cognitive appraisal, cross-cultural issues, empathy, effects of emotions.

**PSYC 4015 Nonverbal Behavior (4 Credits)**

This course will be cross-listed with Psyc 3015 (undergraduate students in 3015 and graduate students in 4015 will be seated in the same classroom but will have different requirements). Most humans speak for a very small portion of their day (by most estimates, an hour or less) but during every waking moment of your life, you display nonverbal behaviors. These behaviors include facial expressions, eye gaze, posture, head movements, movement toward and away from things, gestures, distance from other people, vocal intonation, and many other subtle bodily actions. In this class, we will survey an enormous scientific literature regarding the causes and consequences of nonverbal behaviors. Our focus will be on nonverbal behavior in humans, but we will also review the role of nonverbal behavior in the social life of human and non-human animals alike. Topics include, but are not limited to questions such as: What methods should scientists use to examine the causes and consequences of nonverbal behavior? Do nonverbal behaviors reveal emotions and other psychological states or do nonverbal behaviors instead function for the purpose of social influence? What is the role of nonverbal behavior in deception and the detection of deception? Do people non-consciously process the social meaning of others' nonverbal behaviors?.

**PSYC 4020 Proseminar in Personality (4 Credits)**

Personality structure/dynamics, theory and findings, interrelationships between personality and socio-cultural determinants of behavior.

**PSYC 4021 Prosem in Social Psychology (4 Credits)**

Major theoretical issues and empirical research in social psychology; topics include cultural, social structure, cognitive consistency, social neuroscience, social cognition, person perception, the self, social influence, attitudes, relationships, emotion, coping.

**PSYC 4025 Intergroup Relations (4 Credits)**

This course is intended to provide a foundation in understanding how individuals and groups relate to each other within a social structure. Social groups can take many forms, ranging from classic social groups (e.g., race, gender, ethnicity, religion, sexual orientation) to minimal groups where membership is arbitrary. This course will explore foundational principles in classic and contemporary research on intergroup relations.

**PSYC 4028 Social Cognition (4 Credits)**

Social cognition describes how people make sense of themselves and others. The emphasis on "how" is important—social cognition research focuses on perceptual, cognitive, and affective processes that help people think about themselves and others. You will learn about the theories, findings, and methods in a specific area of study.

**PSYC 4032 Developmental Proseminar: Social-Emotional (4 Credits)**

Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

**PSYC 4033 Devel Proseminar: Biological (4 Credits)**

This course provides an overview of major biological processes during development and their effects on physical, cognitive, and social development. Specific topics will include: history, concepts, and central themes of developmental psychology; theoretical and biological models of human development (e.g., developmental psychobiological systems view); brain development and plasticity; behavioral genetics; sleep and circadian rhythms; sexual differentiation and hormonal influences on behavior; stress and the HPA axis; effects of nutrition and toxic substances.

**PSYC 4045 Proseminar in Human Brain Development (4 Credits)**

This course offers an overview of current research and methodologies in the field of developmental cognitive, affective, and social neuroscience. It explores the insights that the brain provides about development and, conversely, what development reveals about the brain. Topics covered include sensitive periods for neuroplasticity, pediatric neuroimaging techniques, and the development of cognitive, affective, and social processes, as well as the impact of environmental factors. Emphasis is placed on discussing current research, evaluating findings, and proposing new research ideas in the field. Prerequisite: Instructor permission.

**PSYC 4055 The Neuroscience and Psychology of Parenthood and Parent-Child Relationships (4 Credits)**

This course explores the theory, research and issues relevant to parenthood and parent-child relationships. The course overviews the evolutionary, neurobiological, and psychological perspective of parent-child relationships with a focus on the understanding of recent advances in neuroscience research. Topics include neuroplasticity of parental brain, maternal vs. paternal biology for parenting, and social and biological determinants of parent-child relationships. Emphasis is placed on discussion of current research, evaluation of the findings, and proposals and ideas of new research in the field. The goal is not to memorize facts but rather to learn to think like a developmental cognitive/social neuroscientist. Cross-listed with course PSYC 3055. Prerequisite: Instructor permission.

**PSYC 4085 Stress & Health (4 Credits)**

This course will serve as an introduction to the field of psychoneuroimmunology, with a focus on stress and development. The first section of the course will review basic immunology including immune system components and functions, and relations between the immune system and other systems. The later portion of the course will focus on effects of stress for different disease mechanisms (infection, allergy, cancer etc). Instructor approval required.

**PSYC 4235 Teaching Psychology (1-5 Credits)**

Experiential approach to learning techniques for teaching psychology.

**PSYC 4241 Seminar-Discourse Processes (4 Credits)****PSYC 4254 Intro to Neural Network Models (4 Credits)**

Cross listed with PSYC 3032.

**PSYC 4255 Imaging the Mind (4 Credits)**

Imaging Cognition is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 3029.

**PSYC 4256 Seminar: Cognitive Neuroscience (4 Credits)**

Neural systems underlying human perception, memory, language, pathological syndromes that result from damage to these systems.

**PSYC 4257 Psychophys & Neuroscience Lab (4 Credits)****PSYC 4258 Social Neuroscience (4 Credits)****PSYC 4262 Affective Neuroscience (4 Credits)**

Affective neuroscience is the study of emotions in the brain. In this course, we explore how new frontiers in emotion research, from brain scans to psychoactive drugs to monkey colonies, have changed the way we think about emotions and moods. We aim to learn how scientists ask these new questions: how and what can we learn about emotion from animal models, patient studies, genetic studies, brain scans, and drugs? We learn and debate different theories about what emotions are: when are emotions helpful and harmful? Why do we have them? How many are there? Can we control how we feel? Finally, we learn how to think about emotions scientifically: What kind of evidence matters? How do emotion scholars talk about their work? What kind of questions can we ask, and what kind can we hope to answer?.

**PSYC 4295 Research Design & Inference (4 Credits)****PSYC 4300 Correlation and Regression (4 Credits)**

The course reviews the logic of statistical inference before introducing the procedures of correlation and regression. We begin with simple bivariate relationships before moving on to multivariate relationships for both categorical and continuous independent variables. Topics in regression include multicollinearity, variable selection, and curvilinear relationships. The course emphasizes the (stringent) requirements needed to be able to interpret correlational data in terms of cause and effect. The course also emphasizes the assessment of interactions in regression analysis for both categorical and continuous independent variables. Also included is basic coverage of logistic regression and regression assumptions. Prerequisite: PSYC 4295.

**PSYC 4330 Analysis of Variance (4 Credits)**

Complex analysis of variance, other quantitative methodologies. Prerequisite: PSYC 4300 or instructor's permission.

**PSYC 4350 Structural Equation Modeling for the Social Sciences (4 Credits)**

This advanced course covers the basics of structural equation modeling and how this flexible approach to statistical analysis can be applied in the social sciences. Specific techniques that will be covered will include testing for mediation, path analysis, confirmatory factor analysis, and the analysis of longitudinal data, as well as other related topics. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments and an emphasis on interpreting and critiquing structural equation models in published research. A course on correlational methods and regression is a pre/co-requisite.

**PSYC 4355 Multilevel Modeling for the Psychological Sciences: Theory and Applications (4 Credits)**

This advanced course covers the basics of multilevel (hierarchical) linear modeling and how this flexible approach to statistical analysis can be applied to theory and data in the psychological sciences. Specific techniques that will be covered include the analysis of nested data, family and dyadic data, and longitudinal data as well as mediation and moderation. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments. There will also be an emphasis on interpreting and critiquing multilevel modeling analyses in published research. Courses on analysis of variance as well as correlational methods and regression are pre/corequisites.

**PSYC 4360 Programming Psychology: Experiment Building with Python (4 Credits)**

This graduate-level course provides an introduction to computer programming. The goal of the course is to help psychology students develop practical coding skills in Python that will allow them to design and create complex, computer-based experiments. Students will also learn to analyze and plot data. No previous experience with programming is required (or expected). The course begins with an introduction to basic principles of programming with Python. From there, students learn to code by solving challenges specific to the design/construction of a psychological/vision-based experiment. The class is highly interactive—each class includes a mixture of lecture, group-based problem solving, and coding in teams or individually. This class is highly recommended for students who wish to improve their programming proficiency before enrolling in PSYC 4365, although it is not a prerequisite.

**PSYC 4365 Programming Psychology: Model-Fitting and Analysis (4 Credits)**

An introduction to creating, fitting, and performing statistical inference using computational models with an emphasis on binary choice data. The aims of this course include familiarizing students with the mathematical basis of model-fitting, learning the value of taking a variety of approaches to fitting trial-by-trial data, and giving students practical hands-on experience with maximum likelihood fitting methods. This course will use both MATLAB and R. Though not a prerequisite, this course is intended to follow Programming Psychology: Experiment Building in MATLAB (PSYC 4360), and so will assume students already have a basic knowledge of coding in MATLAB (including debugging, scripts, functions, loops, and plotting). This course is open to graduate students outside of the Department of Psychology.

**PSYC 4411 Assessment-Cognition (4 Credits)**

This course will provide students with a graduate level overview of theory, research, and practice in the measurement of cognitive functioning. Students will gain practical skills in administering standardized measures of cognitive and academic functioning. They will also develop skills in interpreting cognitive test results and recognizing patterns in cognitive profiles related to specific learning and developmental disorders.

**PSYC 4413 Assessment-Psychopathology (Social, Emotional, and Behavioral) (4 Credits)**

Overview of evidence-based psychological assessment (emotional, behavioral, and social) with a focus on integrating theory, research, and clinical practice.

**PSYC 4512 Prosem in Psychopathology (4 Credits)****PSYC 4518 Readings in Family Therapy (4 Credits)**

This course will survey major historical and contemporary theories from the field of family therapy. Basic family therapy techniques will be covered, and integrated with other modes of therapy (e.g. individual, marital). In the second half of the course, students will work with families and receive group supervision.

**PSYC 4525 Prosem in Develop Neuropsych (4 Credits)**

We will cover the theory and measurement of brain-behavior relations across the lifespan in several major neuropsychological domains, including executive functions, language, memory, and visual-spatial function. As is characteristic of the developmental neuropsychological field, students will learn to integrate information across multiple levels of analysis (genetic, brain, cognitive, behavioral) and draw on principles of neural and cognitive development in their application of neuropsychological theory to research and clinical issues. We will discuss current controversies in the field and continued areas for growth.

**PSYC 4526 Prosem in Cog Neuroscience (4 Credits)**

This is a graduate-level introduction to cognitive neuroscience. It covers basic theories of cognition and their neurological support.

**PSYC 4565 Systems of Psychotherapy (4 Credits)**

The course provides an introduction to evidence-based treatment for children and adolescents. Conceptual and empirical underpinnings of youth therapies are examined. Treatments for three prominent child and adolescent disorders - disruptive behavior problems, depression, and anxiety disorders - are highlighted. Demonstration and practice of specific treatment components is included.

**PSYC 4566 Systems of Psychotherapy II (4 Credits)**

Conceptual/empirical foundations of interventions for clinical problems, including (but not limited to) parasuicidal, Borderline Personality Disorder, and substance abuse.

**PSYC 4571 Multicult Issues & Ment Health (4 Credits)**

Theory, research, and practice issues related to the mental health of racial/ethnic minority and other diverse groups.

**PSYC 4587 Workshop in Marital Therapy (4 Credits)****PSYC 4612 Marital Conflict (1-10 Credits)****PSYC 4620 Advan in Couples Intervention (4 Credits)****PSYC 4625 Marital/Couples Thrpy-Div Popl (4 Credits)**

This course will cover the complexities in couples research and intervention that are the focus of current investigations in labs around the world. The major issues revolve around the role that marital problems play in the development, maintenance and treatment of a variety of child and adult problems and vice versa. These will include, adult sexual problems, alcohol and drug use and abuse, anxiety disorders, depression, medical problems, and that marital discord and destructive conflict are generic risk factors for a wide range of child and adult mental health problems and that marital health is a protective factor.

**PSYC 4660 Perception: A Cognitive Neuroscience Approach (4 Credits)**

An introduction to human perception with a strong emphasis on visual perception. This course evaluates the current understanding of how neural activity in the brain allows people to perceive basic sensory features (e.g., brightness, color, size, position, depth, movement, loudness and pitch) as well as recognize and discriminate complex perceptual patterns (e.g., 2D-shapes, 3D-objects, faces, and scenes). The underlying mechanisms are discussed on the basis of behavioral, neurophysiological, and computational evidence.

**PSYC 4665 Executive Functioning (4 Credits)**

This course provides an overview of current research, theories, and methods in the study of executive function and cognitive control. We will explore executive function from an interdisciplinary perspective, drawing on work from cognitive psychology and neuroscience, clinical neuropsychology, and developmental and educational psychology. Topics include the brain basis of executive function and cognitive control, the unity and diversity of executive functions, the development of executive functions, emotion and motivation as modulating influences on executive control, executive function in psychopathology, the role of individual differences, and links between executive function performance and higher-order behavioral outcomes. Enrollment restricted to Ph.D. program or with instructor approval.

**PSYC 4688 Clinical Psychopharmacology (4 Credits)**

This course offers an in-depth examination of medications used to treat mental disorders, including the neurobiology of these medications. Different options available for each disorder will be discussed, along with issues related to the effective use of psychiatric medications. Prerequisites: Instructor approval required.

**PSYC 4920 Ethics-Psych & Rsrch Practice (2 Credits)**

Ethical issues on psychological research. Teaching, practice.

**PSYC 4925 Clinical Ethics and Professional Issues in Psychology (3 Credits)**

Ethical topics related to clinical psychology; professional topics in clinical psychology such as supervision and consultation. Instructor permission required.

**PSYC 4928 Initial Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's first year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4929 Advanced Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's second year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4930 Psychology Practicum-Clinical (1-5 Credits)**

On-the-job training in clinical psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4931 Psychology Practicum-Teaching (0-5 Credits)**

On-the-job training in teaching psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4932 Psychology Practicum-Research (1-5 Credits)**

On-the-job training in research psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4933 Psychology Practicum - Advanced Clinical (0 Credits)**

Advanced on-the-job training in clinical psychology. May be repeated up to 6 times. Prerequisite: Admission to doctoral program.

**PSYC 4934 Practicum: DCN Neuropsychology (1-10 Credits)****PSYC 5991 Masters Independent Study (1-10 Credits)****PSYC 5995 Independent Research (1-10 Credits)****PSYC 6981 APA Internship (8 Credits)**

1 Year APA approved Internship in clinical psychology - the course is not graded.

**PSYC 6991 Ph.D Independent Study (1-10 Credits)****PSYC 6995 Independent Research (1-10 Credits)**

## Religious Studies

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The Department of Religious Studies offers a master of arts (MA) degree in Religious Studies, as well as a graduate certificate in Religious Studies, a graduate certificate in Religion and International Affairs, and a specialized graduate certificate in World Religions. We are major contributors, together with the Iliff School of Theology and other schools and departments at DU, to a doctor of philosophy (PhD) degree in the Study of Religion.

### Why pursue an MA in Religious Studies at the University of Denver?

The Department of Religious Studies offers graduate students the opportunity to study with its distinguished faculty in a program that emphasizes breadth and depth. Religious Studies faculty members are well published and have won several distinguished teaching awards. They have served in leadership roles in national learned societies and have received grants from the National Endowment for the Humanities, the American Council of Learned Societies, and the Guggenheim Foundation.

The program provides students with a substantive grounding in the major religious traditions of the world, as well as training in the field of religious studies. Through the areas of specialization, it provides students with the opportunity to develop a specific and scholarly expertise in one of the following particular fields of interest: Sacred Texts, Critical Theory and Religion, Religion and International Studies, Philosophy of Religion, and Lived Religions. Students can use these areas of specializations to deepen their own expertise in a particular area while preparing for thesis work, completing a journal article, undertaking comprehensive exams, or developing a project in applied religious studies.

A remote synchronous online option for students is available nested in the MA in Religious Studies for students following the program's Critical Theory track. In addition to studying religion through the lens of the modern European approach to critical theory, this area of specialization focuses on critical topics including race, class, gender, ethnicity, and globalization. Students in the nested online option will take two live lecture courses offered on Zoom each quarter. These courses, also taken by on-campus students, are planned to meet both the core requirements for the MA in Religious Studies and the requirements for the critical theory specialization. Each of the two courses offered on Zoom are set to meet once per week in the late afternoon to early evening, in order to provide flexibility to students with full-time day jobs or other daytime responsibilities. Students pursuing the online option may switch to attend courses on campus at any point during their program. These students are also eligible for the same funding opportunities as their on-campus colleagues.

As part of broader University aims to support interdisciplinary work and internationalization (study and research abroad), the Department of Religious Studies expects students to embrace multiple disciplinary perspectives. It encourages students to enrich their graduate studies by taking courses in other departments and to work with faculty outside Religious Studies. For example, students in the MA program routinely take graduate-level courses in Anthropology, International Studies, Philosophy and Art History. Similarly, students in the MA program are encouraged to pursue advanced language training in the language(s) of their sub-field as well as modern research languages. Finally, the Department encourages students to study or conduct research abroad, as appropriate, and to seek external support in ways that will enhance their curriculum vitae as well as their scholarly and professional training.

Program advantages include the following:

- The opportunity to develop broad competencies in major religious traditions and the discipline of Religious Studies, while cultivating scholarly expertise in a particular area of specialization.
- Small classes that facilitate professor-student interaction, encouraging faculty mentoring while fostering community and collegiality with other graduate students.
- The opportunity to pursue interdisciplinary training and related interests by taking courses or working one-on-one with faculty in other University of Denver departments.
- Preparation either for doctoral work or for a professional career, with strong support from faculty and the University of Denver's career counselors.
- Opportunities to engage with and conduct research within metropolitan Denver, a culturally and religiously diverse city with a high quality of life.
- Substantial scholarship packages, including tuition credits and opportunities to serve as a research assistant.

### **What do applicants need in order to qualify for the Religious Studies MA program?**

Applicants must have an undergraduate degree from an accredited college, with a minimum grade point average (GPA) of 3.0. Applicants, as necessary, must meet the minimum performance standard set by the Office of Graduate Education for the Test of English as a Foreign Language (TOEFL). Applicants must have an appropriate background in the study of the humanities. Undergraduate courses in Religious Studies are highly desirable, but all work in related areas will be taken into consideration.

In addition, successful applicants will have the following qualifications:

- Academic qualification for graduate-level study;
- Preparation to do coursework and conduct research that emphasizes engagement with local and global communities;
- Motivation to work collegially with faculty and other students in a community of learning.

### **What can graduates do with a MA in Religious Studies?**

The MA degree in religious studies prepares students for PhD work or for teaching and careers in journalism, government, education, and nonprofit organizations in which cross-cultural analytical skills are important. The program provides broad competencies in several religious traditions, while offering students the opportunity to specialize in an area of particular interest.

### **Why pursue a Graduate Certificate in Religious Studies at the University of Denver?**

The graduate certificate in Religious Studies provides students with an opportunity to acquire graduate-level exposure to the academic study of religion and to several of the world's major religious traditions. This certificate program provides students with the opportunity to do the following:

- Develop an introductory, graduate-level understanding of two major world religious traditions;
- Gain a grasp of pertinent theoretical approaches to the study of religion; and
- Engage major issues in a particular religious tradition or aspect of religion.

For students currently enrolled in graduate programs in fields other than religious studies or the study of religion - such as business, international studies, law or other CAHSS disciplines - this certificate will augment the competencies gained in their primary program. For students currently pursuing a career, particularly those in consulting, journalism, the law, the non-profit sector, public policy, education, human resources, faith-based institutions/organizations or other professions where a knowledge of religious beliefs, practices and values can be important, this certificate will enhance their professional credentials or expand their expertise into a new arena.

### **What do applicants need in order to qualify for the Religious Studies graduate certificate program?**

Successful applicants will have the following qualifications:

- Academic qualification for graduate level study;
- Preparation to do coursework and conduct research that emphasizes engagement with local and global communities;
- Motivation to work with faculty and other students in a community of learning.



## Why Pursue a Graduate Certificate in Religion and International Affairs at the University of Denver?

The Graduate Certificate in Religion and International Affairs provides students pursuing a master's degree in the Department of Religious Studies (CAHSS) or the Josef Korbel School of International Studies the opportunity to enhance their home program of study with specific expertise in the scholarly and professional field of religion and international affairs. This certificate program emphasizes scholarly and practitioner approaches to understanding the intersections between religion and international affairs in the modern world, providing students with an interdisciplinary approach to contemporary case studies as well as theoretical issues.

## Why pursue a Specialized Graduate Certificate in World Religions at the University of Denver?

The World Religions Specialized Graduate Certificate offers students the opportunity to acquire graduate-level understanding of three of the world's major religious traditions, grounded in conceptual frameworks of how religion works in today's globalizing world. It aims to augment students' professional and scholarly knowledge with an understanding of the many ways that religion, politics, economics, culture, and society intersect - in the United States and around the world.

## What do applicants need in order to qualify for a Specialized Graduate Certificate in World Religions?

Applicants must have an undergraduate degree from an accredited college, with a minimum grade point average (GPA) of 3.0. Applicants, as necessary, must meet the minimum performance standard set by the Office of Graduate Education for the Test of English as a Foreign Language (TOEFL). Undergraduate courses taken in Religious Studies are highly desirable, but all work in related areas will be taken into consideration. Background in the study of the humanities will be especially useful in Religious Studies courses.

In addition, successful applicants will have the following qualifications:

- Academic qualification for graduate level study;
- Preparation to do coursework and conduct research that emphasizes engagement with local and global communities;
- Motivation to work collegially with faculty and other students in a community of learning.

## Joint PhD Program in the Study of Religion

A number of graduates of the Department of Religious Studies' MA program choose to continue their doctoral studies in the Joint PhD program.

The Joint PhD Program, which the University offers in partnership with the Iliff School of Theology, is taught by distinguished faculty from the University of Denver and Iliff. The faculty of the Department of Religious Studies anchor the Joint PhD program on the DU side. The program enrolls students from across the nation and around the world. The facilities and libraries of both institutions are open to all Joint PhD students, offering considerable research and academic resources. Please note that admission to the Joint Doctoral Program is a separate process, distinct from admission to the Department's MA program. For more details, please visit the joint PhD website at [www.du.edu/duiliffjoint/](http://www.du.edu/duiliffjoint/) (<http://www.du.edu/duiliffjoint/>).

## Master of Arts in Religious Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Appropriate undergraduate background in relevant arts, humanities or social science disciplines. Generally, some prior coursework in the academic study of religion is expected.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials. If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admissions to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Religious Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites:

- Generally, some prior coursework in the academic study of religion is expected.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate of Specialization in Religion and International Affairs

Interested applicants enrolled and in good standing in the Religious Studies MA program or the Korbel School of International Studies MA programs must submit an application form in order to officially add the certificate to their student record.

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## Certificate in World Religions

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176

- Minimum Duolingo English Test Score: 115

### English Conditional Admission:

No, this program does not offer English Conditional Admission.

## Master's Degree Program Master of Arts in Religious Studies

### Degree Requirements Coursework Requirements

Code	Title	Credits
<b>Course requirements:</b>		
RLGS 3760	Globalization and Religion: Theory and Methods	4
Select three of the following (Two from the Abrahamic Traditions and one from the Asian Traditions)		12
RLGS 3814	Modern Hinduism	
RLGS 3820	Buddhism	
RLGS 3001 or RLGS 3102	Judaism Early Judaism	
RLGS 3203 or RLGS 3192	Christianity Christian Literature	
RLGS 3500 or RLGS 3503	Islam Quran and Hadith	

### Areas of specialization

Select at least 16 hours in one of the following five areas of specialization: 16

Critical Theory

Critical Theory and Religion brings together a range of disciplines in social sciences and humanities, based on both the original discourses of "critical theory" as developed after WWII by the Frankfurt School, and the "new critical theory" in its interdisciplinary scope. This approach to religion will address topics such as class, race, gender, ethnicity, politics, globalization, and decolonialization. Students pursuing this specialization will choose their courses from a prescribed list of courses both inside and outside of the Religious Studies department. At least 8 of the 16 required credit hours for the specialization must have a RLGS prefix, though a cross-listed course may count. The following is a non-exhaustive sample of courses that meet the Critical Theory specialization criteria. Students will consult with the department's graduate advising team prior to each registration period to confirm whether their courses meet the Critical Theory criteria.

ANTH 3020	Native Religions	
ANTH 3060	Cultural Narratives	
ECON 3040	Marxian Political Economy	
PHIL 3005	Cosmopolitics	
PHIL 3075	Marxism	
PHIL 3210	Philosophy of Movement	
PHIL 3466	Contemporary Continental Philosophy	
RLGS 3302	Islamic Fundamentalism	
RLGS 3370	Freud, Psychology, & Religion	
RLGS 3452	Political Theology	
RLGS 3453	Is God a Racist Sexist?: Black Liberation and Womanist Theology	
RLGS 3454	Capitalism, Religion, Democracy	
RLGS 3460	Nietzsche & the Death of God	
RLGS 3465	Derrida and Postmodernism	
RLGS 3475	Deleuze and Semiotics	
RLGS 3570	Religion and Morality in the American Public Square	
RLGS 3645	Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism	
RLGS 3694	Religion in the Virtual Space: A Critical Theory Approach	
RLGS 3707	Religion and Film	
RLGS 3740	Bodies and Souls	

Sacred Texts

The Sacred Texts specialization focuses on biblical texts/religious traditions such as the Hebrew Bible, Christian Testament, the Qur'an, etc. Within this specialization, students will choose either to direct their study to one religious text, requiring appropriate competency in the relevant language (s), or take a comparative approach. The language requirement for this specialization must be completed either prior to matriculation, or during the student's first year of study, and is equivalent to one full-year of language instruction. The University of Denver does not offer introductory, graduate-level instruction in biblical Hebrew, koine Greek, Qur'anic Arabic, Sanskrit, classical Chinese, or Tibetan. The student may not use language instruction credit to satisfy degree requirements. Any student looking to pursue this specialization must consult the department's graduate advising team to discuss options such as outside language programs. The following is a sample of coursework used to fulfill the required 16 credit hours for the Sacred Texts specialization.

RLGS 3150	The Bible & Dead Sea Scrolls
RLGS 3151	Dead Sea Scrolls
RLGS 3192	Christian Literature
RLGS 3503	Quran and Hadith
RLGS 3740	Bodies and Souls

#### Religion and International Studies

The specialization in religion and international studies focuses on the role of religion in the interplay of different religions and cultures within a global context. Particular attention may be given to certain regions such as the Americas, Asia, or the Middle East, depending on the interest or availability of faculty. Students must take at least one course in a specific religious tradition beyond the core requirements as well as one course in the theory of religion that pertains to international and multicultural studies. The remaining courses can be chosen from the department's approved list of courses for the area of specialization. Finally, students must take at least 4 hours of course work (including independent study, service learning, or field work) at a location outside the United States and Canada that meet the student's curricular and long-term professional goals. Depending on the student's program of study, the department may in certain instances require the passing of a competency exam in a language relevant to that program of study (e.g., if the focus is on the Middle East, the language would be Arabic; if on Latin America, Spanish).

RLGS 3302	Islamic Fundamentalism
RLGS 3350	Culture, Psyche, and Religion
RLGS 3452	Political Theology
RLGS 3454	Capitalism, Religion, Democracy
RLGS 3500	Islam
RLGS 3502	Contemporary Islam
RLGS 3503	Quran and Hadith
RLGS 3504	Islam and Gender
RLGS 3645	Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism
RLGS 3707	Religion and Film
RLGS 3760	Globalization and Religion: Theory and Methods
RLGS 3814	Modern Hinduism
RLGS 3832	Religious Lives: The Dalai Lamas
RLGS 3890	Religion and Diaspora
RLGS 3893	Buddhism and Social Justice
ANTH 3020	Native Religions
INTS 4011	Comparative Genocide
INTS 4525	Religion-State Relations in Comparative Perspectives
INTS 4517	Politics of Deeply Divided Societies
INTS 4526	Modern Islamic Political Thought
INTS 4649	Human Rights and the Middle East

#### Lived Religions

The Lived Religions area of specialization allows students to attend closely to the practice of religions, as well as to activities and ways of life that may have had their origins in religions but may now be detached from specific traditions (e.g., meditation, dietary practices). In addition to the core requirements, students must take at least four courses (within or outside the department) in the historical, social, and cultural forms and practices of the world's various religions, which can include new, indigenous, Latino/a, or African and African diasporic religions. Students pursuing a specialization in Lived Religions will meet with the department's advising team prior to registration to verify that their courses meet the Lived Religions criteria.

RLGS 3001	Judaism
RLGS 3102	Early Judaism
RLGS 3203	Christianity
RLGS 3205	Native Americans and Christianity in USA

RLGS 3300	Psychology of Religion
RLGS 3302	Islamic Fundamentalism
RLGS 3350	Culture, Psyche, and Religion
RLGS 3500	Islam
RLGS 3502	Contemporary Islam
RLGS 3570	Religion and Morality in the American Public Square
RLGS 3832	Religious Lives: The Dalai Lamas
RLGS 3814	Modern Hinduism
RLGS 3820	Buddhism
RLGS 3890	Religion and Diaspora

#### Philosophy of Religion

Students pursuing a specialization in Philosophy of Religion may take courses in both the Religious Studies and Philosophy departments. Students are required to select at least 8 credit hours of coursework in the theory of religion, and 4 credit hours from each of two major philosophical periods (8 credit hours total), which can focus on one specific philosopher or philosophers. The philosophical periods are Ancient to Modern (Plato to Kant) and Late Modern to Postmodern (Hegel to present). Students pursuing this specialization will meet with the department's graduate advising team to discuss course selection prior to the start of their first term. The following is a non-exhaustive sample of coursework taken to satisfy the requirements of the Philosophy of Religion specialization.

RLGS 3023	Great Thinkers: Maimonides
RLGS 3192	Christian Literature
RLGS 3370	Freud, Psychology, & Religion
RLGS 3452	Political Theology
RLGS 3460	Nietzsche & the Death of God
RLGS 3465	Derrida and Postmodernism
RLGS 3475	Deleuze and Semiotics

<b>Elective Credits</b>	<b>13</b>
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<b>Total Credits</b>	<b>45</b>
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Minimum number of credits required for the degree: 45

Students must declare an Area of Specialization by the time they reach 32 hours of coursework.

#### Non-Coursework Requirements

In order to complete the MA degree, students must choose one of the following completion options:

- Journal Article Track:** The journal article option requires students to take a research paper they submitted as part of a Religious Studies course and expand it into a publishable journal article. Only a course with the prefix RLGS is eligible, unless the student has a compelling case for why a paper without that prefix should be used. Students selecting this option will research Religious Studies academic journals and will select an appropriate target journal with the approval of their advisor. They will shape their article in accordance with the aims and mission of the selected journal, and will format it in accordance with the journal's submission guidelines. The student will submit the final paper to their committee, and present the research as part of an oral presentation. Please note that the department does not require the student to publish the article, or to have it accepted for publication, in that journal. However, it must be the decision of the examining committee that the article meets the standards of the chosen journal.
- Thesis Track:** The thesis option requires students to take a religious studies course paper including original research, on which the student received a minimum grade of A-, and revise and expand it into a graduate thesis of approximately 50-60 pages. The thesis may be expanded based on the number of bibliographic materials used as well as the scope of the topic itself. Students should not try to alter the general topic of the original paper in any major way. The thesis involves a substantive undertaking that allows the student to make an original contribution to the field of scholarly religious studies, as well as to demonstrate a mastery of the relevant theories and background literature. It should involve serious engagement with primary sources, as well as sources in the student's research language, if appropriate. In order to be eligible to write a thesis, a student must agree on a topic as well as a tentative thesis title with the project's first reader *no later than* the end of the quarter in which the student will have completed 24 hours of credit toward the degree. Normally, that means the end of the spring quarter during the academic year when the student entered the program. In addition, students must have completed all their core requirements for the degree by that time.
- Comprehensive Exam Track:** The comprehensive exam option is recommended for students for whom the MA is a terminal degree. It is also recommended for those who plan to teach at the secondary school or community college level, or who might otherwise benefit from the certification of competency in the general field of Religious Studies. Students choosing this option will take ONE exam in the Theory of Religion; ONE in Judaism, Christianity, OR Islam; and ONE in Buddhism OR Hinduism. The department will provide the set reading lists for each exam – approximately 10-12 texts each. The department expects the students

to read, analyze, and reflect upon each text and its contribution to each field, as part of their preparation to demonstrate competency in the three fields.

Students planning to take comprehensive exams should meet for a final check-in with their advisor and examiners during the fourth week of the quarter before the one in which they intend to graduate. Students will normally take their exams during the fourth or fifth week of the quarter in which they intend to graduate. The student must opt no later than the last week of the quarter before taking exams whether they want to take three, 3-hour examinations in a proctored setting or three 72-hour take home-exams over a period of two weeks. In both exam formats, students may consult texts and/or notes. Take-home exams will require substantially more writing than proctored exams.

- **Project Track:** Students pursuing the project option will develop a project that will allow them to make an original contribution to the field of applied religious studies. It may take several forms but should include a substantive written component and a formal presentation.

Please note that all completion option defenses and presentations may only be scheduled during the regular academic year: Fall, winter or spring quarters.

The Department of Religious Studies allows graduate students to transfer up to 10 hours of previous graduate course work from another institution or another department at the University during the first quarter of the student's admission to the program. The transfer must be approved by the department as well as by the Office of Graduate Education. Similarly, the Department allows students to earn waivers for the traditions requirements by submitting syllabi from similar courses taken at the undergraduate level.

Students may also take up to 15 hours in independent study, including independent studies with course numbers outside of the department.

## Graduate Certificate Program

### Certificate in Religious Studies

The Graduate Certificate program allows students structured flexibility, providing exposure to religious traditions through the traditions requirement, training in the discipline of religious studies with the theory requirement, and the opportunity to pursue particular interests through elective courses. The certificate requires a minimum of 24 credit hours.

#### Program Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Traditions</b>		
Select two of the following:		8
RLGS 3814	Modern Hinduism	
RLGS 3820	Buddhism	
RLGS 3001	Judaism	
or RLGS 3102	Early Judaism	
RLGS 3203	Christianity	
or RLGS 3192	Christian Literature	
RLGS 3500	Islam	
or RLGS 3503	Quran and Hadith	
<b>Theory</b>		
Select one of the following:		4
RLGS 3300	Psychology of Religion	
RLGS 3452	Political Theology	
RLGS 3760	Globalization and Religion: Theory and Methods	
<b>Electives</b>		
Students choose three courses from RLGS 3000-level courses		12
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required for the degree: 24

## Certificate of Specialization Program

### Certificate of Specialization in Religion and International Affairs

This certificate program provides students pursuing an MA degree in the Department of Religious Studies (CAHSS) or the Joseph Korbel School of International Studies the opportunity to enhance their "home program" with coursework that emphasizes scholarly and practitioner approaches to understanding the intersections between religion and international affairs in the modern world.

This certificate requires a minimum of 24 credit hours.

Code	Title	Credits
<b>Core courses</b>		<b>8</b>
INTS 4525	Religion-State Relations in Comparative Perspectives	
RLGS 3760	Globalization and Religion: Theory and Methods	
<b>Elective courses <sup>1</sup></b>		<b>16</b>
Choose from the following:		
INTS 4517	Politics of Deeply Divided Societies	4
INTS 4526	Modern Islamic Political Thought	4
INTS 4534	Topics in Middle East Politics	4
INTS 4649	Human Rights and the Middle East	4
RLGS 3302	Islamic Fundamentalism	4
RLGS 3452	Political Theology	4
RLGS 3454	Capitalism, Religion, Democracy	4
RLGS 3503	Quran and Hadith	4
RLGS 3504	Islam and Gender	4
RLGS 3645	Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism	4
RLGS 3693	Religion and the Media	4
RLGS 3814	Modern Hinduism	4
RLGS 3890	Religion and Diaspora	4
RLGS 3893	Buddhism and Social Justice	4
<b>Total Credits</b>		<b>24</b>

<sup>1</sup> Other elective courses may be approved with permission from the director.

## Specialized Certificate Program

### Specialized Certificate in Religious Studies with a Concentration in World Religions

Minimum Credits Required for Certificate: 16

Code	Title	Credits
<b>Required Course</b>		<b>4</b>
RLGS 3760	Globalization and Religion: Theory and Methods	
Select 1-2 courses from the Western/Abrahamic traditions:		<b>4-8</b>
RLGS 3001 or RLGS 3102	Judaism Early Judaism	
RLGS 3203 or RLGS 3192	Christianity Christian Literature	<b>4</b>
RLGS 3500 or RLGS 3503	Islam Quran and Hadith	
Select 1-2 courses from the Eastern traditions:		<b>4-8</b>
RLGS 3820 RLGS 3814	Buddhism Modern Hinduism	
<b>Total Credits</b>		<b>16</b>

#### RLGS 3001 Judaism (4 Credits)

A literary and historical journey through Judaism. This course examines the "Jewish story" from its roots to its modern-day manifestations, focusing on select, classic Jewish texts in their historical contexts. From them, students explore Jewish tradition and practice and actively engage with and in the vivid interpretive imagination of the authors of Judaism throughout the ages. Cross listed with JUST 3001.

#### RLGS 3002 Creation & Humanity (4 Credits)

Why am I here and what is my place in the world? In this class, students engage a wide-variety of answers to this timeless question. We focus on primary texts regarding the creation of the world and humanity's role within the world from multiple religious traditions, from ancient Near Eastern mythologies to modern spiritualities and film. Themes of the course include humanity's relation to the divine, nature, and one another; we also discuss issues of inequality and sustainability. Students also learn to perform fruitful cross-cultural comparison.

**RLGS 3003 The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)**

The "Abrahamic Traditions" (Judaism, Christianity & Islam) are described as such because each tradition situates its origin in the figure of Abraham, yet there is another foundational figure who looms even larger in all three traditions – Moses. The Moses Traditions traces Jewish, Christian, and Islamic traditions about Moses from the Hebrew Bible through modern America, and in so doing brings into the foreground the religious and inter-religious importance of this beloved figure. Drawing from over 2,500 years of texts and traditions, students come away with a deeper understanding of: 1) how the figure of Moses is shaped and reshaped throughout history and across the globe, 2) how religious traditions portray and redescribe foundational figures to suit the ever-changing needs of their communities, and 3) how to engage a multi-faceted, culturally-embedded, and millennia-long collection of traditions in a way that yields fruitful insight into the inner workings of the religious imagination. This course is cross-listed with JUST 3003.

**RLGS 3023 Great Thinkers: Maimonides (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**RLGS 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and PHIL 3024. Prerequisite: Junior standing or instructor's permission.

**RLGS 3086 The Emergence of Monotheism (4 Credits)**

This course is cross-listed with JUST 3086. Monotheism, the belief in a singular deity, did not arise out of nothing. Rather, the emergence of monotheism was a multi-stage process spanning several millennia and involving numerous religious traditions, primarily Judaism, Christianity, and Islam. This process was marked by internal and external conflict, as individuals and communities struggled to distinguish themselves from their non-monotheistic predecessors and neighbors, while often attempting to convince others to do the same. In this class, we begin with the ancient Near Eastern religious environment in which the idea of monotheism first appeared, then turn our attention to how the movement toward monotheism shapes the texts of the Hebrew Bible, New Testament, and Quran. We also look to archaeological sites and case studies in material culture to fill out our understanding of the lived experiences at play in the emergence of monotheism.

**RLGS 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and ANTH 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**RLGS 3102 Early Judaism (4 Credits)**

This course traces the development of Judaism in history and literature from the Babylonian Exile and the end of the biblical period through the origins of Rabbinic Judaism and the completion of the Babylonian Talmud (c. 650 CE). However, special emphasis is placed on Jewish culture in the late Second Temple period (c. 200 BCE to 100 CE) and its impact on the early Christian movement, including Jewish literature from the time of Jesus, lost texts of the Bible, new evidence from the Dead Sea Scrolls, and the few surviving historical sources of the Second Temple Period. In addition, students analyze how the Bible came to be and understand how sacred texts and their interpretations eventually became the new center of both Judaism and Christianity. Cross listed with JUST 3102.

**RLGS 3150 The Bible & Dead Sea Scrolls (4 Credits)**

This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of "Bible" itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with JUST 3150. Prerequisites: None. The Scrolls will be read in English translation, but those with Hebrew reading skills will have an opportunity to read/translate portions of the Scrolls in community.



**RLGS 3151 Dead Sea Scrolls (4 Credits)**

The Dead Sea Scrolls represent one of the greatest manuscript finds of the twentieth century and have been said to be the most important discovery in biblical archaeology. These scrolls offer a rare window into early Judaism and Christianity and offer us the earliest and most important witnesses to the (Hebrew) Bible. This course covers the Dead Sea Scrolls in their historical, literary and religious context in English translation, together with relevant scholarly research. Cross listed with JUST 3151.

**RLGS 3192 Christian Literature (4 Credits)**

Reading and discussion of influential historic books pertaining to Christianity. This course will focus on a selection of primary texts either from a specific period of Christianity (such as early Christianity or medieval Christianity) or on a specific topic within the study of Christianity (such as monasticism or mysticism).

**RLGS 3203 Christianity (4 Credits)**

This is an introductory course about the Christian religion, with a substantial component devoted to experiential learning. The primary goal of the course is to acquaint students with the richness, dynamism and diversity of one of the world's largest and most influential religious traditions. Even those students who have some general knowledge of Christianity benefit from the disciplined approach of the academic study of religion.

**RLGS 3205 Native Americans and Christianity in USA (4 Credits)**

This class will help students explore the forms of Christianity that have emerged among the indigenous peoples of North America. In their struggles against and adaptation to Euro-American cultural forms, indigenous peoples have developed "contextualized" forms of Christian religiosity. Students will develop a careful understanding of the multiplicity and historical contingency of Christianity as it has spread throughout the world.

**RLGS 3300 Psychology of Religion (4 Credits)**

Beliefs, feelings and actions representing human religious response of experience; function of religion in individual life.

**RLGS 3302 Islamic Fundamentalism (4 Credits)**

This writing-intensive course introduces students to the history and scope of fundamentalist movements in the Muslim world, focusing on the Middle East. Beginning with a look at the internal traditions of renewal and reform built around the idea of a return to the fundament or origins of Islam, the course examines the rise of major movements from the 1700s to the present. Students will engage with key questions, including the following: What distinguishes fundamentalism from radicalism? How do Sunni and Shii fundamentalisms differ? What roles have these movements played in politics and society, and how might these evolve in the future? How might policy makers and others best approach fundamentalist groups? A basic knowledge of Islam is assumed; students wishing to enroll without this background knowledge will be provided supplementary readings.

**RLGS 3315 Religion & Moral Psychology (4 Credits)**

Philosophical foundations and research strategies of psychological studies of moral thought; Aristotelian, Kantian and utilitarian thought included, as well as religious dimensions of morality.

**RLGS 3350 Culture, Psyche, and Religion (4 Credits)****RLGS 3370 Freud, Psychology, & Religion (4 Credits)**

Readings, discussion, and papers help students learn about the life, intellectual and social environment, and clinical and theoretical work of Sigmund Freud. Attention is given to the influence of Freud's work on the understanding of religion at the beginning of the 21st century.

**RLGS 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault's thesis with reference to different theoretical models of subjectivity and "subjectification" (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault's 1981-82 lectures entitled The Hermeneutics of the Subject. This course is cross-listed with PHIL 3448.

**RLGS 3452 Political Theology (4 Credits)**

A general inquiry, focusing on the modern and postmodern eras, into various forms of philosophical reflection on the relationship between religion and political theory. Survey of the seminal ideas of such major thinkers as Kant, Hegel, Schmidt, Strauss, Derrida, Agamben, Asad, and Žižek.

**RLGS 3453 Is God a Racist Sexist?: Black Liberation and Womanist Theology (4 Credits)**

What is God's race? Does God have a gender? Is God on the side of the oppressed? Black liberation and Womanist theologies have asked these questions based on experience of black oppression in the context of the United States. African Americans have compelled to make sense of God in light of chattel slavery, Jim Crow laws, the Civil Rights Movement, and the Black Power Movement. This questioning continues in light of today's social environment. This seminar course will discuss the many strands of liberation theology in the United States, including Womanist theology. In addition to black liberation theology's methodologies and its challenges to the theological discipline, we will explore the origins and development of theological discourse in the late 1960s during the later part of the Civil Rights Movement and the emergence of the Black Power Movement. Black Theology is a theological perspective which draws on the diverse sources, including religious experience, art, literature, music, and lived narratives. These sources will inform our study. Students will engage critical voices that have shaped the movement such as James Cone, but also engage critiques of Cone and Black Theology. The course will also explore how liberation theologies attempt to deal with the problems of race, class, and gender. Student will be introduced to theological construction in African American communities and analyze the similarities and differences between these theological constructions.

**RLGS 3454 Capitalism, Religion, Democracy (4 Credits)**

The course explores the historical and contemporary relationship between capitalism, religion, and democracy at a theoretical level. Focus will be on the question of what exactly is capitalism as understood by key political philosophers and social theorists in relationship to the religious world views and values that authorize it. At the same time, the course will examine in what measure these world views and values also promote liberal democracy, or work against it, while offering a genealogical account of such phenomena as slavery, colonialism, gender and class domination, along with present day iterations of ethno-nationalism and neoliberal hegemony.

**RLGS 3456 Kant on Religion (4 Credits)**

A study of the philosopher Immanuel Kant's major writings on religion and their subsequent influence on critical theory and the philosophy of religion.

**RLGS 3460 Nietzsche & the Death of God (4 Credits)**

This course will involve an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Cross listed with PHIL 3460.

**RLGS 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with PHIL 3465.

**RLGS 3470 Mysticism & Psychedelics (4 Credits)**

The course will examine various texts, traditions, and practice from indigenous to New Age religions that fall under the general category of what has been historically labelled "mysticism." Special emphasis will be placed on chemical or plant-induced forms of altered consciousness, commonly known as "psychedelics" or "entheogens". that both simulate, and are frequently employed by different peoples in different times and places in tandem with, mystical experiences. The course will also examine the transcultural as well as the syncretic nature of mystical practices, spiritual disciplines, and the use of mind-altering substances, in particular with reference to the misuse of these forms by secular enthusiasts who are responsible for what is known as "cultural appropriation" or "neocolonial" misrepresentation.

**RLGS 3475 Deleuze and Semiotics (4 Credits)**

Examines the development of the thought of the famous French postmodern thinker Gilles Deleuze with special attention to his cultural and semiotic theory to the degree that it is relevant to the philosophy of religion. The course also investigates how Deleuze's work has shaped, and is beginning to push in new directions, contemporary postmodern philosophy. Prerequisites: must be at least junior standing and have completed at least two undergraduate courses in philosophy.

**RLGS 3500 Islam (4 Credits)**

Introduction to the history, faith, practice, culture(s), and politics of Islam, starting with the Judeo-Christian Near Eastern context in which it emerged and tracing its theological development and geographic spread around the world. Proceeding thematically along a broad historical frame, the course ends with an examination of the numerous, often competing, trends in contemporary Muslim communities.

**RLGS 3502 Contemporary Islam (4 Credits)**

This course introduces students to contemporary Islam. After a historical overview, the course looks thematically at different spheres of Muslim life. It considers changes that relate to political systems and forms of governance, styles of education, labor and professional work, changes in daily life habits such as timing and organization, changes in gender relations, and changes in religious authority. It also pays attention to the ways in which faith and practice are articulated through cultural practices like pop music and film.

**RLGS 3503 Quran and Hadith (4 Credits)**

This writing-intensive course introduces students to the key texts of Islam--the Qur'an and hadith--including their origins and meaning as well as how they have been interpreted by Muslims over time, and focusing as well on case studies that highlight issues of crucial relevance for today and the future.

**RLGS 3504 Islam and Gender (4 Credits)**

This upper-level course introduces students to key debates, historical developments, and thematic issues in the study of Islam and gender. It grounds this study in theoretical texts but takes a lived religions approach, focusing primarily on the production of "modern" gender norms in the colonial and post-colonial era. It proceeds thematically, with class sessions on sexualities, dress, reproduction, family roles, masculinities, pious self-construction, and the gendering of pilgrimage, and concludes with a look at contemporary and likely future debates.

**RLGS 3505 Gender and Politics in Muslim Pop Cultures (4 Credits)**

This undergraduate/graduate course introduces students to contemporary Muslim popular cultures, in the United States and around the world. It uses gender and politics as thematic lenses, taking a lived religions approach to phenomena that range from pious television programming to online efforts to spread Islamophobia.

**RLGS 3570 Religion and Morality in the American Public Square (4 Credits)**

Close focus on one or two moral issues in which religion is drawn into public debate in the contemporary U.S. Observation of the debate first hand at demonstrations, town meetings, and discussion groups, etc. Analysis of these observations is facilitated by readings on the subject and class discussion.

**RLGS 3642 Martin Luther King, Jr., Malcolm X and Civil Rights (4 Credits)**

In this course, students will explore the lives and religious thought of Martin Luther King, Jr. and Malcolm X, two of the most prominent black religious leaders during the height of the US Civil Rights Movement, often perceived as ideological opposites. Through engaging with their autobiographies, speeches, students will compare and contrast their thoughts on religion, race, and politics in the United States. During the course, students will be able to identify religious and political similarities and differences between the two leaders. We will also explore the development of their religious and ideological shifts in the context of the struggle for civil rights. Ultimately, we explore how their vision for racial justice developed into a call for social and economic equality and human rights.

**RLGS 3645 Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism (4 Credits)**

This course examines the religious nationalism in the context of South Asia and the US. We investigate the religion, identity, politics, and power with readings/materials that explore historical memory, religious symbols/rituals/canon, political upheavals, and violent actions in both of these regions. In the context of South Asia, we will examine the British colonial period and post-independence India. In the US, we will focus our attention on post-Civil War politics and the development of the modern US polity. We necessarily interrogate the history and dynamism of important terms such as "religion", "nationalism", and "secular" in the context of Hindu Nationalism and white Christian Nationalism in South Asia and the US respectively. At the core of our inquiry is how specific religious traditions have been invoked in political contexts (and vice-versa), public displays of religiosity, and the complex dynamics of religion and the state.

**RLGS 3693 Religion and the Media (4 Credits)**

Interactions between religion and all forms of communications media in American life.

**RLGS 3694 Religion in the Virtual Space: A Critical Theory Approach (4 Credits)**

This course uses a critical theory lens to consider religious praxis, traditions, beliefs, canons, and rituals within virtual/digital spaces (e.g. websites, apps, social media, digital platforms for gaming, etc.). Students will be introduced to several scholars of virtual religious spaces and practices who use both netnography techniques and critical theory approaches (e.g. Wendy Chun, Lisa Nakamura, Michelle Zappavigna, Oliver Roy, etc.) as well classical scholars of semiotics and language (Judith Butler, Jacques Derrida, Walter Benjamin, Julia Kristeva, and others). Theoretical works are paired with ethnographic, historical and/or public scholarship/experiential to offer students a "lived perspective" critical approach to the topic of digital or virtual religion.

**RLGS 3695 Digital Religion (4 Credits)**

This course introduces students to the study of digital religion from a lived religions perspective. It begins with an examination of the history, concepts and methods of the field, and continues with thematic explorations of digital religion scholarship across varied religious traditions. Students develop an understanding of how scholars study religion and spiritual identities, beliefs, and practices online, and how the religious and digital arenas influence and shape one another.

**RLGS 3701 Topics in Religious Studies (1-4 Credits)**

An exploration of various topics and issues related to the academic study of religion. The subject matter of the course varies and may be taught by the regular faculty of the department or a visiting scholar. Some offerings may include a travel component.

**RLGS 3707 Religion and Film (4 Credits)**

Understanding religion requires us to take culture seriously. In doing so, we must consider products of culture, including popular culture. This course engages both classic and more recent films as "texts" to be analyzed, not as mere entertainments or diversions. We focus not only on those films that identify themselves explicitly as "religious" or reflect a particular religious tradition, but also moved that render the subject more obliquely, which reveal – via image and sound – religion as a complex human activity.

**RLGS 3708 First Americans in Film: Religion, Land, and Identity (4 Credits)**

This course will explore, using a chronological approach, the history of Indigenous portrayal in the US Western Cinematic tradition. Students will be exposed to a variety of interweaving historical processes; including colonial history (with particular interest in Indigenous experience), the history of the film industry, the history of Indigenous representation in film, and the history of the 20 Century United States (with particular interest in Indigenous experience). The first two weeks of the course will be dedicated to the development of a theoretical toolbox. This toolbox – consisting of a series of theoretical concepts and analytical approaches – will function as the bedrock of the class and empower students, supplying the necessary lenses through which to analyze the films that will be screened throughout the quarter.

**RLGS 3732 Feminist and Queer Theory in Religion (4 Credits)**

This course explores the intersection of feminist and queer theories with religious studies. Beginning with feminist theory, we will trace the beginning of the feminist movement and consider the ways in which religion participated in and also resisted feminism. Moving into queer theory, we will critically examine gender and sexuality and center these topics in the field of religious studies. During the course, students will reinterpret religious texts through the use of feminist and queer theory, providing a challenging critique, an imaginative reframing, or even a queering of a sacred text.

**RLGS 3740 Bodies and Souls (4 Credits)**

This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a "human" does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How have Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand "out-of-body" experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, JUST 3740.

**RLGS 3760 Globalization and Religion: Theory and Methods (4 Credits)**

This course explores how religious movements around the world both affect, and are affected by, the process of globalization. A major segment of the course is devoted to various theories of globalization and how they account for the increasingly important role of religion. Focus is largely on the relationship between Christianity, Judaism, and Islam.

**RLGS 3814 Modern Hinduism (4 Credits)**

Doctrines, practices and history of South Asian Hinduism; conceptions of Gods and gods; image worship and temples; and the influences of caste and gender on the experience of Hinduism.

**RLGS 3820 Buddhism (4 Credits)**

Buddhist life and thought from origins to present in India, Tibet, Japan and China.

**RLGS 3832 Religious Lives: The Dalai Lamas (4 Credits)**

This course explores the many lives of the Dalai Lamas and the transformation of a reincarnated religious teacher into the political leader of Tibet and, eventually, a worldwide religious personality. In order to understand that transformation, the course investigates the institution of the Dalai Lamas from historical, doctrinal, and ritual perspectives. We will look at the role of the Dalai Lama as an embodiment of the bodhisattva of compassion at the center of a tapestry of religious ceremony and ritual performances. The course will also consider the religious, ethical, and political thought of several of the most prominent Dalai Lamas, with significant attention given to the writings and work of the current, fourteenth, Dalai Lama.

**RLGS 3885 Islamic Mysticism (4 Credits)**

The origins and development of Islamic mysticism, including asceticism and the Sufi orders.

**RLGS 3890 Religion and Diaspora (4 Credits)**

When forced to leave a homeland, displaced communities frequently turn to religion to maintain identity and adapt to—or resist—new surrounding culture(s). This course examines the role of religion and identity in three Jewish and Christian communities living in diaspora and poses questions such as the following: What is the relationship between religion and (home)land? How have the biblical themes of exodus, diaspora, promise and restoration been applied to contemporary experiences? And how have our American stories been interpreted through the lens of the Bible? As part of the service learning component, students have the opportunity to work with religious and immigrant aid organizations in the Denver community. Cross listed with JUST 3890.

**RLGS 3891 Justice: A Biblical Perspective (4 Credits)**

This is a service learning course designed for religious studies undergraduate majors, though non-majors are welcome to enroll. Cross listed with JUST 3891.

**RLGS 3892 Grant Writing for Community Engagement and Research (4 Credits)**

This community engagement course introduces student to non-profit work and to scholarship on non-profit activities. It connects students with community partners, continuing the department's commitment to experiential learning and to engagement with living faith communities. Students spend course time discussing scholarship on grant writing and non-profit grant support and discussing logistical and other issues related to their community engagement partners. This course is intended to help provide advanced undergraduate and graduate students with arenas for future research, including possible thesis topics, while also offering a practical opportunity for professional development. Understanding 501(c)3 corporations and experience in writing grant proposals will be an asset for students planning to work in non-profits as well as for those continuing on to doctoral work.

**RLGS 3893 Buddhism and Social Justice (4 Credits)**

This course examines Buddhist theories and practices of social justice, with a focus on the contemporary global movements known as "Humanistic Buddhism" and "Socially Engaged Buddhism." The course covers topics such as: the roots of engaged Buddhism in social and political movements of 19th and 20-century Asia, the role of meditation and other Buddhist practices as both a support for and a means of social engagement, and Buddhist approaches to contemporary issues of racial justice, equality, economic development, and the environment. In the final analysis, the course asks whether the concept of justice makes sense within a Buddhist worldview, or if Buddhist concerns for social welfare hinge on an entirely different paradigm. This course is a community-engaged service learning course. As part of the course, students work with a local community partner to further their own community engagement work.

**RLGS 3898 Dharamsala: Myth, Land, and Traditions (4 Credits)**

This course explores the myths and stories that root cultural, religious, social and political traditions in the material landscape of India. It will explore the sacred spaces, images, rituals, and belief-traditions of the Himalayan region surrounding Dharamsala, India. As a study-abroad course, the materials, site visits, and community-engaged learning projects interrogate how myths operate as both cultural "glue" and demarcations of difference. Students participate in community-engaged learning placements to learn how myth creates and fosters cultural communities. Through site visits and readings we will learn how the "lived experience" of cultural belief-traditions, social and political practices, and sacred images and spaces are products of a unique marriage of land, story, and community. We will also have lectures and a Canvas site with pre-travel readings that will prepare you for the cultural and social belief-traditions we will encounter within Dharamsala. While in India, we will continue to read about ritual, devotion, stories of the land, social and political identities rooted in the land, and more. This course will be cross-listed with INTS for undergraduate and graduate elective credit.

**RLGS 3991 Independent Study (1-10 Credits)****RLGS 3995 Independent Research (1-10 Credits)****RLGS 4050 History of Islam (4 Credits)****RLGS 4100 Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion (4 Credits)**

This course is designed to train the student in the method and means of engaging in archeo-historical study of the Hebrew Bible. The content of this course focuses on ancient Israelite religion in Iron Age Palestine, particularly on emergent ideas about God ('El) and the development and evolution of the priesthood. Cross listed with JUST 4100.

**RLGS 4150 Biblical Aramaic (4 Credits)**

Reading seminar in Biblical Aramaic. This course focuses on the vocabulary, syntax and expression of Aramaic in the Bible as well as in some related post-biblical texts (Targums, Dead Sea Scrolls, etc.).

**RLGS 4980 Internship (1-4 Credits)**

Designed to provide masters students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For MA students only.

**RLGS 4981 Internship in Religious Community (1-4 Credits)****RLGS 4991 Independent Study (1-10 Credits)****RLGS 4995 Independent Research (1-10 Credits)****Courses****RLGS 3001 Judaism (4 Credits)**

A literary and historical journey through Judaism. This course examines the "Jewish story" from its roots to its modern-day manifestations, focusing on select, classic Jewish texts in their historical contexts. From them, students explore Jewish tradition and practice and actively engage with and in the vivid interpretive imagination of the authors of Judaism throughout the ages. Cross listed with JUST 3001.

**RLGS 3002 Creation & Humanity (4 Credits)**

Why am I here and what is my place in the world? In this class, students engage a wide-variety of answers to this timeless question. We focus on primary texts regarding the creation of the world and humanity's role within the world from multiple religious traditions, from ancient Near Eastern mythologies to modern spiritualities and film. Themes of the course include humanity's relation to the divine, nature, and one another; we also discuss issues of inequality and sustainability. Students also learn to perform fruitful cross-cultural comparison.

**RLGS 3003 The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)**

The "Abrahamic Traditions" (Judaism, Christianity & Islam) are described as such because each tradition situates its origin in the figure of Abraham, yet there is another foundational figure who looms even larger in all three traditions — Moses. The Moses Traditions traces Jewish, Christian, and Islamic traditions about Moses from the Hebrew Bible through modern America, and in so doing brings into the foreground the religious and inter-religious importance of this beloved figure. Drawing from over 2,500 years of texts and traditions, students come away with a deeper understanding of: 1) how the figure of Moses is shaped and reshaped throughout history and across the globe, 2) how religious traditions portray and redescribe foundational figures to suit the ever-changing needs of their communities, and 3) how to engage a multi-faceted, culturally-embedded, and millennia-long collection of traditions in a way that yields fruitful insight into the inner workings of the religious imagination. This course is cross-listed with JUST 3003.

**RLGS 3023 Great Thinkers: Maimonides (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**RLGS 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and PHIL 3024. Prerequisite: Junior standing or instructor's permission.

**RLGS 3086 The Emergence of Monotheism (4 Credits)**

This course is cross-listed with JUST 3086. Monotheism, the belief in a singular deity, did not arise out of nothing. Rather, the emergence of monotheism was a multi-stage process spanning several millennia and involving numerous religious traditions, primarily Judaism, Christianity, and Islam. This process was marked by internal and external conflict, as individuals and communities struggled to distinguish themselves from their non-monotheistic predecessors and neighbors, while often attempting to convince others to do the same. In this class, we begin with the ancient Near Eastern religious environment in which the idea of monotheism first appeared, then turn our attention to how the movement toward monotheism shapes the texts of the Hebrew Bible, New Testament, and Quran. We also look to archaeological sites and case studies in material culture to fill out our understanding of the lived experiences at play in the emergence of monotheism.

**RLGS 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and ANTH 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**RLGS 3102 Early Judaism (4 Credits)**

This course traces the development of Judaism in history and literature from the Babylonian Exile and the end of the biblical period through the origins of Rabbinic Judaism and the completion of the Babylonian Talmud (c. 650 CE). However, special emphasis is placed on Jewish culture in the late Second Temple period (c. 200 BCE to 100 CE) and its impact on the early Christian movement, including Jewish literature from the time of Jesus, lost texts of the Bible, new evidence from the Dead Sea Scrolls, and the few surviving historical sources of the Second Temple Period. In addition, students analyze how the Bible came to be and understand how sacred texts and their interpretations eventually became the new center of both Judaism and Christianity. Cross listed with JUST 3102.

**RLGS 3150 The Bible & Dead Sea Scrolls (4 Credits)**

This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of "Bible" itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with JUST 3150. Prerequisites: None. The Scrolls will be read in English translation, but those with Hebrew reading skills will have an opportunity to read/translate portions of the Scrolls in community.

**RLGS 3151 Dead Sea Scrolls (4 Credits)**

The Dead Sea Scrolls represent one of the greatest manuscript finds of the twentieth century and have been said to be the most important discovery in biblical archaeology. These scrolls offer a rare window into early Judaism and Christianity and offer us the earliest and most important witnesses to the (Hebrew) Bible. This course covers the Dead Sea Scrolls in their historical, literary and religious context in English translation, together with relevant scholarly research. Cross listed with JUST 3151.

**RLGS 3192 Christian Literature (4 Credits)**

Reading and discussion of influential historic books pertaining to Christianity. This course will focus on a selection of primary texts either from a specific period of Christianity (such as early Christianity or medieval Christianity) or on a specific topic within the study of Christianity (such as monasticism or mysticism).

**RLGS 3203 Christianity (4 Credits)**

This is an introductory course about the Christian religion, with a substantial component devoted to experiential learning. The primary goal of the course is to acquaint students with the richness, dynamism and diversity of one of the world's largest and most influential religious traditions. Even those students who have some general knowledge of Christianity benefit from the disciplined approach of the academic study of religion.

**RLGS 3205 Native Americans and Christianity in USA (4 Credits)**

This class will help students explore the forms of Christianity that have emerged among the indigenous peoples of North America. In their struggles against and adaptation to Euro-American cultural forms, indigenous peoples have developed "contextualized" forms of Christian religiosity. Students will develop a careful understanding of the multiplicity and historical contingency of Christianity as it has spread throughout the world.

**RLGS 3300 Psychology of Religion (4 Credits)**

Beliefs, feelings and actions representing human religious response of experience; function of religion in individual life.

**RLGS 3302 Islamic Fundamentalism (4 Credits)**

This writing-intensive course introduces students to the history and scope of fundamentalist movements in the Muslim world, focusing on the Middle East. Beginning with a look at the internal traditions of renewal and reform built around the idea of a return to the fundament or origins of Islam, the course examines the rise of major movements from the 1700s to the present. Students will engage with key questions, including the following: What distinguishes fundamentalism from radicalism? How do Sunni and Shii fundamentalisms differ? What roles have these movements played in politics and society, and how might these evolve in the future? How might policy makers and others best approach fundamentalist groups? A basic knowledge of Islam is assumed; students wishing to enroll without this background knowledge will be provided supplementary readings.

**RLGS 3315 Religion & Moral Psychology (4 Credits)**

Philosophical foundations and research strategies of psychological studies of moral thought; Aristotelian, Kantian and utilitarian thought included, as well as religious dimensions of morality.

**RLGS 3350 Culture, Psyche, and Religion (4 Credits)****RLGS 3370 Freud, Psychology, & Religion (4 Credits)**

Readings, discussion, and papers help students learn about the life, intellectual and social environment, and clinical and theoretical work of Sigmund Freud. Attention is given to the influence of Freud's work on the understanding of religion at the beginning of the 21st century.

**RLGS 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault's thesis with reference to different theoretical models of subjectivity and "subjectification" (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault's 1981-82 lectures entitled *The Hermeneutics of the Subject*. This course is cross-listed with PHIL 3448.

**RLGS 3452 Political Theology (4 Credits)**

A general inquiry, focusing on the modern and postmodern eras, into various forms of philosophical reflection on the relationship between religion and political theory. Survey of the seminal ideas of such major thinkers as Kant, Hegel, Schmidt, Strauss, Derrida, Agamben, Asad, and Žižek.

**RLGS 3453 Is God a Racist Sexist?: Black Liberation and Womanist Theology (4 Credits)**

What is God's race? Does God have a gender? Is God on the side of the oppressed? Black liberation and Womanist theologies have asked these questions based on experience of black oppression in the context of the United States. African Americans have compelled to make sense of God in light of chattel slavery, Jim Crow laws, the Civil Rights Movement, and the Black Power Movement. This questioning continues in light of today's social environment. This seminar course will discuss the many strands of liberation theology in the United States, including Womanist theology. In addition to black liberation theology's methodologies and its challenges to the theological discipline, we will explore the origins and development of theological discourse in the late 1960s during the later part of the Civil Rights Movement and the emergence of the Black Power Movement. Black Theology is a theological perspective which draws on the diverse sources, including religious experience, art, literature, music, and lived narratives. These sources will inform our study. Students will engage critical voices that have shaped the movement such as James Cone, but also engage critiques of Cone and Black Theology. The course will also explore how liberation theologies attempt to deal with the problems of race, class, and gender. Student will be introduced to theological construction in African American communities and analyze the similarities and differences between these theological constructions.

**RLGS 3454 Capitalism, Religion, Democracy (4 Credits)**

The course explores the historical and contemporary relationship between capitalism, religion, and democracy at a theoretical level. Focus will be on the question of what exactly is capitalism as understood by key political philosophers and social theorists in relationship to the religious world views and values that authorize it. At the same time, the course will examine in what measure these world views and values also promote liberal democracy, or work against it, while offering a genealogical account of such phenomena as slavery, colonialism, gender and class domination, along with present day iterations of ethno-nationalism and neoliberal hegemony.

**RLGS 3456 Kant on Religion (4 Credits)**

A study of the philosopher Immanuel Kant's major writings on religion and their subsequent influence on critical theory and the philosophy of religion.

**RLGS 3460 Nietzsche & the Death of God (4 Credits)**

This course will involve an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Cross listed with PHIL 3460.

**RLGS 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with PHIL 3465.

**RLGS 3470 Mysticism & Psychedelics (4 Credits)**

The course will examine various texts, traditions, and practice from indigenous to New Age religions that fall under the general category of what has been historically labelled "mysticism." Special emphasis will be placed on chemical or plant-induced forms of altered consciousness, commonly known as "psychedelics" or "entheogens". that both simulate, and are frequently employed by different peoples in different times and places in tandem with, mystical experiences. The course will also examine the transcultural as well as the syncretic nature of mystical practices, spiritual disciplines, and the use of mind-altering substances, in particular with reference to the misuse of these forms by secular enthusiasts who are responsible for what is known as "cultural appropriation" or "neocolonial" misrepresentation.

**RLGS 3475 Deleuze and Semiotics (4 Credits)**

Examines the development of the thought of the famous French postmodern thinker Gilles Deleuze with special attention to his cultural and semiotic theory to the degree that it is relevant to the philosophy of religion. The course also investigates how Deleuze's work has shaped, and is beginning to push in new directions, contemporary postmodern philosophy. Prerequisites: must be at least junior standing and have completed at least two undergraduate courses in philosophy.

**RLGS 3500 Islam (4 Credits)**

Introduction to the history, faith, practice, culture(s), and politics of Islam, starting with the Judeo-Christian Near Eastern context in which it emerged and tracing its theological development and geographic spread around the world. Proceeding thematically along a broad historical frame, the course ends with an examination of the numerous, often competing, trends in contemporary Muslim communities.

**RLGS 3502 Contemporary Islam (4 Credits)**

This course introduces students to contemporary Islam. After a historical overview, the course looks thematically at different spheres of Muslim life. It considers changes that relate to political systems and forms of governance, styles of education, labor and professional work, changes in daily life habits such as timing and organization, changes in gender relations, and changes in religious authority. It also pays attention to the ways in which faith and practice are articulated through cultural practices like pop music and film.

**RLGS 3503 Quran and Hadith (4 Credits)**

This writing-intensive course introduces students to the key texts of Islam--the Qur'an and hadith--including their origins and meaning as well as how they have been interpreted by Muslims over time, and focusing as well on case studies that highlight issues of crucial relevance for today and the future.

**RLGS 3504 Islam and Gender (4 Credits)**

This upper-level course introduces students to key debates, historical developments, and thematic issues in the study of Islam and gender. It grounds this study in theoretical texts but takes a lived religions approach, focusing primarily on the production of "modern" gender norms in the colonial and post-colonial era. It proceeds thematically, with class sessions on sexualities, dress, reproduction, family roles, masculinities, pious self-construction, and the gendering of pilgrimage, and concludes with a look at contemporary and likely future debates.

**RLGS 3505 Gender and Politics in Muslim Pop Cultures (4 Credits)**

This undergraduate/graduate course introduces students to contemporary Muslim popular cultures, in the United States and around the world. It uses gender and politics as thematic lenses, taking a lived religions approach to phenomena that range from pious television programming to online efforts to spread Islamophobia.

**RLGS 3570 Religion and Morality in the American Public Square (4 Credits)**

Close focus on one or two moral issues in which religion is drawn into public debate in the contemporary U.S. Observation of the debate first hand at demonstrations, town meetings, and discussion groups, etc. Analysis of these observations is facilitated by readings on the subject and class discussion.

**RLGS 3642 Martin Luther King, Jr., Malcolm X and Civil Rights (4 Credits)**

In this course, students will explore the lives and religious thought of Martin Luther King, Jr. and Malcolm X, two of the most prominent black religious leaders during the height of the US Civil Rights Movement, often perceived as ideological opposites. Through engaging with their autobiographies, speeches, students will compare and contrast their thoughts on religion, race, and politics in the United States. During the course, students will be able to identify religious and political similarities and differences between the two leaders. We will also explore the development of their religious and ideological shifts in the context of the struggle for civil rights. Ultimately, we explore how their vision for racial justice developed into a call for social and economic equality and human rights.

**RLGS 3645 Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism (4 Credits)**

This course examines the religious nationalism in the context of South Asia and the US. We investigate the religion, identity, politics, and power with readings/materials that explore historical memory, religious symbols/rituals/canon, political upheavals, and violent actions in both of these regions. In the context of South Asia, we will examine the British colonial period and post-independence India. In the US, we will focus our attention on post-Civil War politics and the development of the modern US polity. We necessarily interrogate the history and dynamism of important terms such as "religion", "nationalism", and "secular" in the context of Hindu Nationalism and white Christian Nationalism in South Asia and the US respectively. At the core of our inquiry is how specific religious traditions have been invoked in political contexts (and vice-versa), public displays of religiosity, and the complex dynamics of religion and the state.

**RLGS 3693 Religion and the Media (4 Credits)**

Interactions between religion and all forms of communications media in American life.

**RLGS 3694 Religion in the Virtual Space: A Critical Theory Approach (4 Credits)**

This course uses a critical theory lens to consider religious praxis, traditions, beliefs, canons, and rituals within virtual/digital spaces (e.g. websites, apps, social media, digital platforms for gaming, etc.). Students will be introduced to several scholars of virtual religious spaces and practices who use both netnography techniques and critical theory approaches (e.g. Wendy Chun, Lisa Nakamura, Michelle Zappavigna, Oliver Roy, etc.) as well classical scholars of semiotics and language (Judith Butler, Jacques Derrida, Walter Benjamin, Julia Kristeva, and others). Theoretical works are paired with ethnographic, historical and/or public scholarship/experiential to offer students a "lived perspective" critical approach to the topic of digital or virtual religion.

**RLGS 3695 Digital Religion (4 Credits)**

This course introduces students to the study of digital religion from a lived religions perspective. It begins with an examination of the history, concepts and methods of the field, and continues with thematic explorations of digital religion scholarship across varied religious traditions. Students develop an understanding of how scholars study religion and spiritual identities, beliefs, and practices online, and how the religious and digital arenas influence and shape one another.

**RLGS 3701 Topics in Religious Studies (1-4 Credits)**

An exploration of various topics and issues related to the academic study of religion. The subject matter of the course varies and may be taught by the regular faculty of the department or a visiting scholar. Some offerings may include a travel component.



**RLGS 3707 Religion and Film (4 Credits)**

Understanding religion requires us to take culture seriously. In doing so, we must consider products of culture, including popular culture. This course engages both classic and more recent films as “texts” to be analyzed, not as mere entertainments or diversions. We focus not only on those films that identify themselves explicitly as “religious” or reflect a particular religious tradition, but also moved that render the subject more obliquely, which reveal – via image and sound – religion as a complex human activity.

**RLGS 3708 First Americans in Film: Religion, Land, and Identity (4 Credits)**

This course will explore, using a chronological approach, the history of Indigenous portrayal in the US Western Cinematic tradition. Students will be exposed to a variety of interweaving historical processes; including colonial history (with particular interest in Indigenous experience), the history of the film industry, the history of Indigenous representation in film, and the history of the 20 Century United States (with particular interest in Indigenous experience). The first two weeks of the course will be dedicated to the development of a theoretical toolbox. This toolbox – consisting of a series of theoretical concepts and analytical approaches – will function as the bedrock of the class and empower students, supplying the necessary lenses through which to analyze the films that will be screened throughout the quarter.

**RLGS 3732 Feminist and Queer Theory in Religion (4 Credits)**

This course explores the intersection of feminist and queer theories with religious studies. Beginning with feminist theory, we will trace the beginning of the feminist movement and consider the ways in which religion participated in and also resisted feminism. Moving into queer theory, we will critically examine gender and sexuality and center these topics in the field of religious studies. During the course, students will reinterpret religious texts through the use of feminist and queer theory, providing a challenging critique, an imaginative reframing, or even a queering of a sacred text.

**RLGS 3740 Bodies and Souls (4 Credits)**

This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a “human” does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How have Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand “out-of-body” experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, JUST 3740.

**RLGS 3760 Globalization and Religion: Theory and Methods (4 Credits)**

This course explores how religious movements around the world both affect, and are affected by, the process of globalization. A major segment of the course is devoted to various theories of globalization and how they account for the increasingly important role of religion. Focus is largely on the relationship between Christianity, Judaism, and Islam.

**RLGS 3814 Modern Hinduism (4 Credits)**

Doctrines, practices and history of South Asian Hinduism; conceptions of Gods and gods; image worship and temples; and the influences of caste and gender on the experience of Hinduism.

**RLGS 3820 Buddhism (4 Credits)**

Buddhist life and thought from origins to present in India, Tibet, Japan and China.

**RLGS 3832 Religious Lives: The Dalai Lamas (4 Credits)**

This course explores the many lives of the Dalai Lamas and the transformation of a reincarnated religious teacher into the political leader of Tibet and, eventually, a worldwide religious personality. In order to understand that transformation, the course investigates the institution of the Dalai Lamas from historical, doctrinal, and ritual perspectives. We will look at the role of the Dalai Lama as an embodiment of the bodhisattva of compassion at the center of a tapestry of religious ceremony and ritual performances. The course will also consider the religious, ethical, and political thought of several of the most prominent Dalai Lamas, with significant attention given to the writings and work of the current, fourteenth, Dalai Lama.

**RLGS 3885 Islamic Mysticism (4 Credits)**

The origins and development of Islamic mysticism, including asceticism and the Sufi orders.

**RLGS 3890 Religion and Diaspora (4 Credits)**

When forced to leave a homeland, displaced communities frequently turn to religion to maintain identity and adapt to—or resist—new surrounding culture(s). This course examines the role of religion and identity in three Jewish and Christian communities living in diaspora and poses questions such as the following: What is the relationship between religion and (home)land? How have the biblical themes of exodus, diaspora, promise and restoration been applied to contemporary experiences? And how have our American stories been interpreted through the lens of the Bible? As part of the service learning component, students have the opportunity to work with religious and immigrant aid organizations in the Denver community. Cross listed with JUST 3890.

**RLGS 3891 Justice: A Biblical Perspective (4 Credits)**

This is a service learning course designed for religious studies undergraduate majors, though non-majors are welcome to enroll. Cross listed with JUST 3891.

**RLGS 3892 Grant Writing for Community Engagement and Research (4 Credits)**

This community engagement course introduces student to non-profit work and to scholarship on non-profit activities. It connects students with community partners, continuing the department's commitment to experiential learning and to engagement with living faith communities. Students spend course time discussing scholarship on grant writing and non-profit grant support and discussing logistical and other issues related to their community engagement partners. This course is intended to help provide advanced undergraduate and graduate students with arenas for future research, including possible thesis topics, while also offering a practical opportunity for professional development. Understanding 501(c)3 corporations and experience in writing grant proposals will be an asset for students planning to work in non-profits as well as for those continuing on to doctoral work.

**RLGS 3893 Buddhism and Social Justice (4 Credits)**

This course examines Buddhist theories and practices of social justice, with a focus on the contemporary global movements known as "Humanistic Buddhism" and "Socially Engaged Buddhism." The course covers topics such as: the roots of engaged Buddhism in social and political movements of 19th and 20-century Asia, the role of meditation and other Buddhist practices as both a support for and a means of social engagement, and Buddhist approaches to contemporary issues of racial justice, equality, economic development, and the environment. In the final analysis, the course asks whether the concept of justice makes sense within a Buddhist worldview, or if Buddhist concerns for social welfare hinge on an entirely different paradigm. This course is a community-engaged service learning course. As part of the course, students work with a local community partner to further their own community engagement work.

**RLGS 3898 Dharamsala: Myth, Land, and Traditions (4 Credits)**

This course explores the myths and stories that root cultural, religious, social and political traditions in the material landscape of India. It will explore the sacred spaces, images, rituals, and belief-traditions of the Himalayan region surrounding Dharamsala, India. As a study-abroad course, the materials, site visits, and community-engaged learning projects interrogate how myths operate as both cultural "glue" and demarcations of difference. Students participate in community-engaged learning placements to learn how myth creates and fosters cultural communities. Through site visits and readings we will learn how the "lived experience" of cultural belief-traditions, social and political practices, and sacred images and spaces are products of a unique marriage of land, story, and community. We will also have lectures and a Canvas site with pre-travel readings that will prepare you for the cultural and social belief-traditions we will encounter within Dharamsala. While in India, we will continue to read about ritual, devotion, stories of the land, social and political identities rooted in the land, and more. This course will be cross-listed with INTS for undergraduate and graduate elective credit.

**RLGS 3991 Independent Study (1-10 Credits)****RLGS 3995 Independent Research (1-10 Credits)****RLGS 4050 History of Islam (4 Credits)****RLGS 4100 Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion (4 Credits)**

This course is designed to train the student in the method and means of engaging in archeo-historical study of the Hebrew Bible. The content of this course focuses on ancient Israelite religion in Iron Age Palestine, particularly on emergent ideas about God ('El) and the development and evolution of the priesthood. Cross listed with JUST 4100.

**RLGS 4150 Biblical Aramaic (4 Credits)**

Reading seminar in Biblical Aramaic. This course focuses on the vocabulary, syntax and expression of Aramaic in the Bible as well as in some related post-biblical texts (Targums, Dead Sea Scrolls, etc.).

**RLGS 4980 Internship (1-4 Credits)**

Designed to provide masters students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For MA students only.

**RLGS 4981 Internship in Religious Community (1-4 Credits)****RLGS 4991 Independent Study (1-10 Credits)****RLGS 4995 Independent Research (1-10 Credits)**

## Daniel Felix Ritchie School of Engineering and Computer Science

The Daniel Felix Ritchie School of Computer Science and Engineering is dedicated to preparing the next generation of innovators to build solutions for some of the world's most challenging problems. We not only ask "can we do this?" but also "should we do this?" and "how can we make a difference for the public good?". Research forms the backbone of graduate education in the Ritchie School. Our researchers work to design new artificial joints, create educational games and develop renewable energy systems. We impact fields ranging from cardiac health to cybersecurity to robotics. In addition to our traditional thesis-based graduate programs, we offer professional graduate programs in Cybersecurity, Data Science, and Systems Engineering to help you build the skills employers need and want. Throughout all our programs we prioritize social responsibility, inclusive excellence, ethical applications of technology.

# Computer Science

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 Email: [info@cs.du.edu](mailto:info@cs.du.edu)  
 Website: Computer Science (<http://www.du.edu/rsecs/departments/cs/>)

## Master's and Doctoral degrees

### Why study Computer Science at the University of Denver?

DU's Department of Computer Science (CS) is creating the future of technology by providing a graduate education that emphasizes both multi-disciplinary and cross-disciplinary knowledge. The distinguished faculty are creating multi-disciplinary education programs that cover both depth and breadth, and research programs that incorporate and account for technological trends in research and development, along with industry. Graduate students join the faculty in conducting cutting-edge basic and applied research in emerging disciplines developing novel and unique solutions to old and new problems and opportunities. Additionally, students are not required to have a computer science background as we offer foundational courses to prepare students for the road ahead.

All laboratories in the Department contain state-of-the-art equipment and software to support research in algorithms, artificial intelligence, computational geometry, humane games, networks, programming languages, robotics, human-robot interaction, security and privacy, and software engineering, among other research areas. Small classes support our multi-disciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students' individual career goals.

Denver is a first-rate location for business, government and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and DU is located just minutes from the Denver Technological Center, the site of many top technology companies. The Department of Computer Science is committed to active collaboration with these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector that is second to none!

### Degree Programs

We offer the following graduate computer science degrees:

- MS in Computer Science
- MS in Cybersecurity
- MS in Data Science
- PhD in Computer Science

## Doctor of Philosophy in Computer Science

The PhD in Computer Science is, above all, a research degree. When the faculty award a PhD, they certify that the student has a broad foundation and awareness of core concepts in computer science, has advanced the field by performing significant original research and has reported that work in a scholarly fashion. Through this degree, students will be qualified to hold academic positions at universities across the world, to lead research groups in government or industry research laboratories, to be creators of new ideas and approaches in computer science through research, and to be leaders in technology. Our faculty are strong in research and particularly noted in software engineering, robotics, cybersecurity and privacy, and humane games.

## Master of Science in Computer Science

The MS in Computer Science prepares students for advancement in academic or industrial careers. The program is designed to provide students with a breadth of advanced knowledge in computer science, while permitting them to achieve depth in areas of current interest within the computing field through electives, as well as the emerging technologies that will have great importance in the future. Students of this degree will be eminently qualified for more advanced careers using computer science given the ubiquitous nature of computing today in every single discipline. Students may also pursue a thesis option, enabling them to begin to perform research and be prepared for a PhD in Computer Science or related discipline.

## Master of Science in Cybersecurity

The MS in Cybersecurity prepares students for a change of careers into the cybersecurity field, or for advancement of a current career. Malicious actors, from small-time hackers to nation states, are an ever present threat to users on the internet today. Cybersecurity expertise is invaluable in any field, as nearly all important personal information is stored online and business is increasingly done online. The cybersecurity MS program is designed to provide students with a strong technical foundation in computer science, along with advanced domain knowledge in the field of cybersecurity.

## Master of Science in Data Science

The MS in Data Science prepares students for advancement in professional careers. Data Scientists enable knowledge discovery in almost all of the subfields of science, social science, business, and policy. As businesses and government continue to turn to data-informed decision making,

data scientists will become more necessary and influential within society as a whole. This program is designed to provide students with a breadth of knowledge in computer science, probability and statistics, data management and exploration, and machine learning, as well as the emerging technologies that will be gaining importance in the future.

## Doctor of Philosophy in Computer Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- **Program GPA requirement:** The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites:

- Prerequisite courses for the PhD include: COMP 1671 Introduction to Computer Science I, COMP 1672 Introduction to Computer Science II, COMP 2673 Introduction to Computer Science III, COMP 2300 Discrete Structures in Computer Science, COMP 2370 Introduction to Algorithms & Data Structures, and COMP 2691 Introduction to Computer Organization (or equivalent).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Computer Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Prerequisite courses for the MS include: COMP 1671 Introduction to Computer Science I, COMP 1672 Introduction to Computer Science II, COMP 2673 Introduction to Computer Science III, COMP 2300 Discrete Structures in Computer Science, COMP 2370 Introduction to Algorithms & Data Structures, and COMP 2691 Introduction to Computer Organization (or equivalent).

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- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Cybersecurity

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must have the prerequisite knowledge equivalent to an undergraduate minor or greater in computer science and are required to pass a computer science placement exam prior to matriculation into the graduate program. Students with deficiencies will be eligible to complete the foundational courses or pass the computer science placement exam prior to matriculation. The foundational courses are COMP 3003: Foundations in Computer Systems, COMP 3004: Foundational in Discrete Structures & Algorithms, and COMP 3005: Foundations in Python Programming.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Data Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

# Doctoral Program

## Doctor of Philosophy in Computer Science

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
	Three quarters minimum of COMP 4600 : Seminar in Computer Science	
	At least 36 credits must be at the 4000-level courses	
	Up to 24 credits may be taken in other relevant disciplines, as approved by the Computer Science Department Graduate Committee.	
	Courses should be chosen in consultation with, and are subject to the approval of, the student's advisor.	
<b>Total Credits</b>		<b>90</b>

Minimum credit hours required: 90 beyond BA or BS degree

#### Additional degree requirements applicable to PhD students without a master's degree in Computer Science

- Must complete the requirements of the Master of Science in Computer Science with a thesis at a reasonable pace to remain on pace to complete the PhD in Computer Science on the expected timeline established by the advisor.

#### Additional Degree Requirements applicable to PhD Students with a 2-year master's degree in Computer Science or related field

- May take a proficiency test in the four required courses for master's degree (COMP 3351 Programming Languages, COMP 3361 Operating Systems I, COMP 3371 Data Structures & Algorithms and COMP 3200 Discrete Structures). The test may be offered at a time other than the official final exam time of the term. A grade of B+ (B plus) or better must be obtained in the test.
- If the student chooses not to take the proficiency test, the student must register and attend classes for the four required courses (COMP 3351 Programming Languages, COMP 3361 Operating Systems I, COMP 3371 Data Structures & Algorithms and COMP 3200 Discrete Structures). A grade of B+ (B plus) or better must be obtained in the courses.

#### Non-coursework Requirements:

- Written dissertation and oral defense that makes a significant contribution to the research literature in computer sciences
- Tool requirement
- Qualifying examination
- Preliminary examination

#### Qualifying & Dissertation Examinations

##### Qualifying Examination

Every PhD student must pass the qualifying exam. It consists of two parts, the breadth requirement and the written and oral exam.

1. Breadth Requirement: To fulfill the breadth requirement the student must take 5 graded courses (20 quarter credits) at the 3000- and 4000-level (not including independent study, internship, or independent research). At most, two may be at the 3000-level. At least three must be at the 4000-level. The course work should cover at least three distinct areas. Five areas should include a sequence of 3000- and 4000-level courses. The GPA in these courses must be at least 3.7/4.0. No course with a grade below a B may be used to fulfill this requirement. Graduate Computer Science courses taken at another university and transferred for credit at DU may be applied to the breadth requirement up to a maximum of 2 courses (8 quarter credits).
2. Written and Oral Exam: Before being admitted to this exam, the student must have fulfilled the breadth requirement.

The student selects an area of examination from the list of areas in Table 1. The written part of the exam is a take-home exam. It is handed out on a Friday and is due the following Tuesday. The oral exam is held the following Friday. The take-home exam consists of a set of research questions, a set of related papers and instructions. The student should prepare a written report of at least 10 but no more than 20 pages with answers to the questions. Study guides or other relevant material to prepare for the exam can be obtained from the chair of the examination committee. The oral portion of the exam is based on a student presentation in which the student explains and defends his/her answers. During the oral exam, questions in other areas of computer science may also be asked.

A failed exam may be retaken once (in the same or another area). Sufficiently prior to the exam date, the department chair will appoint an examination committee of three tenure-track faculty. One of the committee members must be in the area in which the examination will be held. The student's advisor is allowed to be on the committee. The committee creates the take home exam and grades it. After the oral exam, the committee makes a recommendation to the Computer Science faculty on whether the student passes or fails. If the faculty agrees, the committee recommendation stands. If there is a disagreement, the faculty as a whole decides.

### Preliminary Examination

Following successful completion of the Qualifying Examination, each student will prepare a dissertation proposal and take the preliminary examination. Passing this examination admits the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the examination. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the problem to be solved, motivation for pursuing the research, and evidence to the effect that there is a good likelihood the problem is solvable with reasonable effort.

For full-time students, the preliminary examination must be taken within 5 quarters of passing the qualifying examination. Successful completion of the preliminary examination results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The committee may choose to reconvene the examination to allow the student to further research the problem, complete additional course work, or revise the dissertation proposal document.

The examining committee consists of at least three Computer Science faculty members, including the advisor. The preliminary exam is a one hour oral closed exam. If a student passed the preliminary exam, but subsequently switches advisor and hence topic, the preliminary exam must be repeated within one year to ensure capability of the student and feasibility of the project.

### Dissertation Defense

After the dissertation has been completed, the student must defend it in a final examination, as specified by the Office of Graduate Studies.

### Tool Requirement

It is strongly recommended that students satisfy their tool requirement by demonstrating proficiency in a modern computer typesetting system suitable for writing technical papers that include mathematical equations and graphics. The faculty advisor must approve the specific system used to satisfy this requirement. Other options include reading competency in two languages selected from French, German, and Russian; a series of outside courses in another discipline; or significant laboratory experience involving computer science.

## Master's Degree Programs

### Master of Science in Computer Science

#### Degree Requirements

##### Coursework Requirements

The Master of Science in Computer Science offers great flexibility in studying computer science beyond an undergraduate degree. Students without a background in computer science will typically begin with foundational courses that prepare them for more advanced work in computer science. An assessment is taken through the department that helps them determine where to begin.

Students are required to take 16 credits of required courses and 32 credits of electives. Of these 32 credits of elective computer science courses, 12 must be at the 4000-level, including 4 credits designated as "Theory". In addition, 8 of the 32 credits must be designated as advanced programming (and may also be 4000-level credits). Students wishing to pursue a thesis may apply up to 12 credits of Independent Research (COMP 4995) towards their 32 elective credits. Finally, students must take 3 quarters of Seminar in Computer Science (COMP 4600).

Code	Title	Credits
<b>Foundational Courses <sup>1</sup></b>		<b>16</b>
COMP 3003	Foundations in Computer Systems	4
COMP 3004	Foundations in Discrete Structures & Algorithms	4
COMP 3005	Foundations in Python Programming	4
<b>Required Courses</b>		<b>16</b>
COMP 3200	Discrete Structures	4
COMP 3351	Programming Languages	4
COMP 3361	Operating Systems I	4
COMP 3371	Data Structures & Algorithms	4
<b>Electives</b>		<b>32</b>
Students must complete graduate-level electives to satisfy the following requirements.		
<b>4000-level requirement</b>		<b>12</b>
12 computer science elective credits at the 4000-level (excluding COMP 499X) are required, of which one must be designated as "Theory" (see below).		
<b>Theory Requirement</b>		<b>4</b>
4 credits of COMP at the 4000-level designated as "Theory". The current pre-approved list of theory courses includes, but is not limited to:		
COMP 4705	Advanced Topics-Programming (Advanced Programming Languages, Performance Modeling & Analysis)	
COMP 4591	Computational Geometry	
COMP 4372	Advanced Algorithms	
<b>Advanced Programming Requirement</b>		<b>8</b>

8 credits of COMP electives must include an advanced programming component. These courses must be approved by an advisor. The current pre-approved list includes but is not limited to:

COMP 3352	Elements of Compiler Design
COMP 3353	Compiler Construction
COMP 3411	Web Programming II
COMP 3432	Machine Learning
COMP 3621	Computer Networking
COMP 3801	Introduction Computer Graphics
COMP 4510	Software for AI Robotics
COMP 4621	Computer Networking

#### Seminar Attendance Requirement

COMP 4600	Seminar in Computer Science <sup>2</sup>
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#### Non-Thesis Option

A maximum of 12 quarter hours may be earned in Independent Study (COMP 4991), provided the student can find an advisor for such independent study. No thesis is required. Not eligible for support (GTA, GRA).

#### Thesis Option

A maximum of 12 credits may be earned for thesis credits (COMP 4995 - Independent Research). A thesis of publishable quality and oral defense are required. A student receiving any support from the department (GTA, GRA) must complete the degree requirements as per the Thesis Option.

#### Total Credits

**48-60**

<sup>1</sup> Foundation Courses serve to provide a mathematical and programming background for students without a computer science undergraduate degree. Foundation course needs are determined by pre-assessments. Students may test out of one or more Foundation courses.

<sup>2</sup> Thesis-track students must complete **three** quarters of COMP 4600 - Seminar (0 credits).  
GTA's/GRA's are required to attend all seminars.

#### Outside Coursework

A maximum of 8 quarter hours may be earned in approved courses outside the COMP designation, including transfer credits from another university. Such credit must be approved in writing by an advisor from the computer science faculty.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

#### Non-Coursework Requirements

##### Thesis Option

- Thesis and Oral Defense

##### Non-Thesis Option

- None

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## Master of Science in Cybersecurity

### Degree Requirements

### Coursework Requirements

Minimum credits required for degree: 48-60

Code	Title	Credits
<b>Foundational Courses <sup>1</sup></b>		<b>0-12</b>
COMP 3003	Foundations in Computer Systems	4
COMP 3004	Foundations in Discrete Structures & Algorithms	4
COMP 3005	Foundations in Python Programming	4
<b>Required Courses</b>		<b>48</b>
COMP 3006	Python Software Development	4
COMP 3356	Introductory C/C++ Programming	4
COMP 3361	Operating Systems I	4
COMP 3731	Computer Forensics	4
COMP 4455	Shell Scripting and System Tools	4



COMP 4384	Secure Software Engineering	4
COMP 4621	Computer Networking	4
COMP 4721	Computer Security	4
COMP 4722	Network Security	4
COMP 4723	Ethical Hacking	4
COMP 4799	Capstone Project in Cybersecurity <sup>2</sup>	4
<b>Cybersecurity Electives</b>		<b>4</b>
Elective credits must be either a pre-approved cybersecurity course at DU, or with advisor approval. Pre-approved courses include COMP 4732, COMP 3421 and COMP 3424. Other courses with cyber security content at the discretion of the advisor or program director.		
Total Credits		48-60

<sup>1</sup> Foundational Courses serve to provide a computer science foundation for students without a computer science background. Foundational Course needs are determined by pre-assessment by the department. Students may test out of one or more Foundational Courses.

<sup>2</sup> Capstone Project in Cybersecurity (COMP 4799) is required; however, with advisor approval, 0 credit Internship/Co-Op in Computing (COMP 3904) may be used as the basis for the capstone course. If using the Internship/Co-Op option, students will register for 4799 normally, and apply through pioneercareers (PCO) for their internship.

No thesis is required.

Students should follow the rules and regulations stated in the departmental Graduate Student Manual.

#### GTA/GRA Support

Due to the intensive nature of this program, Cybersecurity students are not eligible for graduate teaching or research support.

Consult with Financial Aid at [finaid@du.edu](mailto:finaid@du.edu) or at 303-871-4020 to discuss financial aid options.

## Master of Science in Data Science

### Degree Requirements

The MS in Data Science requires 48 credits. Students without prerequisite knowledge may take Foundations in Python Programming (COMP 3005) at DU prior to fully matriculating into the program.

Code	Title	Credits
<b>Required Courses</b>		<b>40</b>
COMP 3007	Foundations in Data Science Mathematics I	4
COMP 3008	Foundations in Data Science Mathematics II	4
COMP 3006	Python Software Development	4
COMP 3421	Database Organization & Management I	4
COMP 4432	Machine Learning	4
COMP 4433	Data Visualization	4
COMP 4441	Introduction to Probability and Statistics for Data Science	4
COMP 4442	Advanced Probability and Statistics for Data Science	4
COMP 4531	Deep Learning: Model Design and Application	4
COMP 4581	Algorithms for Data Science	4
<b>Elective Courses</b>		<b>8</b>
COMP 4334	Parallel and Distributed Computing for Data Science	4
COMP 4447	Data Science Tools 1	4
COMP 4448	Data Science Tools 2	4
COMP 4449	Data Science Capstone	4
COMP 3904	Internship/Co-Op in Computing <sup>1</sup>	4
Total Credits		48

<sup>1</sup> Only one for-credit Internship/Co-Op in Computing (COMP 3904) can be applied towards the graduation requirements.

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## Master of Science in Data Science (Online)

### Degree Requirements

The MS in Data Science (Online) requirements are identical to those listed in the Master of Science in Data Science listed above.

## Dual Undergraduate-Graduate Degree Programs

### 4+1 Dual degree BS in Computer Science and MS in Computer Science

The Department of Computer Science at the University of Denver offers a Dual Degree Bachelor of Science in Computer Science (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>) and Master of Science in Computer Science (p. ). The BS/MS combines the strong foundation of a BS in Computer Science and further depth and breadth in more advanced computer science topics through the MS in Computer Science.

Total Credit Hours: 183 at the undergraduate level (UG) for the Bachelor degree + 36 at the graduate level (GR) for the Master of Science degree = 219 credits

#### Undergraduate Requirements

Students who intend to obtain a BS/MS in Computer Science must satisfy all the requirements of the Bachelor of Science degree as outlined in the University of Denver Undergraduate Bulletin (<http://bulletin.du.edu/undergraduate/>), which includes completing two minors and all of the requirements for the Bachelor of Science in Computer Science (<http://bulletin.du.edu/undergraduate/majorsminorscoursedescriptions/traditionalbachelorsprogrammajorandminors/computerscience/#programofstudytext>) degree, including the Mathematics cognate requirements. In addition, 12 credits of the Breadth requirements for the BS in Computer Science are taken from the following list of **required** courses by the MS in Computer Science, but may be substituted for cross-listed COMP 3000-level undergraduate/graduate courses if these courses were taken prior to entry into the 4+1 program:

#### 12 credits of the required MS in Computer Science courses that may be used for the Breadth requirement of the BS in Computer Science:

COMP 3200	Discrete Structures	4
COMP 3351	Programming Languages	4
COMP 3361	Operating Systems I	4
COMP 3371	Data Structures & Algorithms	4

#### Graduate Requirements

The student must complete 36 credit hours at the graduate level of required coursework for the MS. These 36 hours include the **required** courses for the MS in Computer Science (the 4 classes listed above), unless they were taken as part of the Breadth requirement for the BS in Computer Science. In this case, other graduate-level courses will be substituted for them to meet the 36 credit hour requirement of the degree. Internship/Co-Op in Computing (COMP 3904) may not be used to substitute for these requirements.

#### Advanced Programming, Theory, and 4000-level Elective Requirements

As with the MS in Computer Science, students are also required to satisfy the Advanced Programming, Theory, and 4000-level elective requirements of the MS in Computer Science (p. ) in their 36 credit hours of graduate coursework.

All electives, especially the MATH and COMP electives, should be selected in close consultation with an academic advisor from the Computer Science Department.

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## 4:1 Dual Degree: BS in Computer Science and MS Data Science

The 4:1 dual degree enables DU students to earn a BS in Computer Science (CS) and an MS in Data Science (DS) in 5 years. A key benefit to the 4:1 student is the combination of disciplinary depth afforded by undergraduate work in CS, coupled with an applied, professional, focus provided by the DS program. Upon earning their BS degree, a 4:1 student will matriculate into the online track of the data science graduate program, enabling them to combine full-time employment with evening classes.

The MS in Data Science is a 48-credit program comprising 10 required courses and 2 electives and two admission tracks, online and on-campus. The online track provides maximum flexibility in course choice and timing. Students can matriculate into the program at the start of any term, with the full set of courses available to them. In contrast, the on-campus track is cohort-based; students start in the fall term and take a preset sequence of courses during their first year and part of the second. Due to these limitations, the 4:1 option will be limited to matriculation into the online MS in Data Science program track.

## Sample schedule

The following is a sample schedule for the BS in Computer Science + MS in Computer Science. Note that other MS requirements would replace the Theory and Adv. Programming requirements, instead coming from the requirements of those degrees.

### First Year

Fall	Credits	Winter	Credits	Spring	Credits
First-year Seminar		4 WRIT 1122		4 WRIT 1133	4
COMP 1201	2	COMP 1202	2	COMP 1203	2
COMP 1351	3	COMP 1352	3	COMP 1353	3
Common Curriculum Courses	4	Math cognate	4	Math cognate	4
Math cognate	4	Common Curriculum Courses	4	Common Curriculum Course	4
	17		17		17

### Second Year

Fall	Credits	Winter	Credits	Spring	Credits
COMP 2300		4 COMP 2370		4 COMP 2361	4
COMP 2381	4	Common Curriculum Courses	4	Common Curriculum Courses	4
Common Curriculum Courses	4	Common Curriculum Courses	4	Common Curriculum Courses	4
Common Curriculum Courses	4			1st Minor Course	4
	16		12		16

### Third Year

Fall	Credits	Winter	Credits	Spring	Credits
COMP 2362		4 COMP 3xxx Elective		4 COMP 3xxx Elective	4
COMP 3xxx Elective	4	1st Minor Course	4	1st Minor Course	4
1st Minor Course	4	2nd Minor Course	4	2nd Minor Course	4
2nd Minor Course	4	Common Curriculum Courses	4	Common Curriculum Courses	4
	16		16		16

### Fourth Year

Fall	Credits	Winter	Credits	Spring	Credits
COMP 3351		4 COMP 3200		4 COMP 3371	4
COMP 3361	4	2nd Minor Course	4	Elective	4
1st Minor Course	4	Elective	4	Elective	4
2nd Minor Course	4	COMP 4xxx Grad Course	4	COMP 4xxx Grad Course	4
	16		16		16

### Fifth Year

Fall	Credits	Winter	Credits	Spring	Credits
COMP 4xxx Theory		4 COMP 4xxx Adv Programming		4 COMP 4xxx Adv Programming	4
COMP 4xxx Grad Course	4	COMP 4xxx Grad Course	4	COMP 4xxx Grad Course	4
COMP 4xxx Grad Course	4	COMP 4600	0	COMP 4600	0
COMP 4600	0				
	12		8		8

Total Credits: 219

### COMP 3001 C and C++ Programming Foundations for New Graduate Students (4 Credits)

This accelerated course covers the basics of discrete mathematics including functions, relations, counting, logic, proofs etc that is necessary to attend CS graduate school. In addition, it includes an introduction to programming and algorithm analysis. Enrollment restricted to graduate students.

### COMP 3002 C and C++ Foundations II for New Graduate Students (4 Credits)

This accelerated course continues to build on the basics of discrete mathematics by covering material including advanced counting, recurrences, graphs, trees, traversals, automata etc. that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to additional algorithms and data structures. Prerequisite: COMP 3001.

### COMP 3003 Foundations in Computer Systems (4 Credits)

This course introduces computer systems, including instruction set architectures; memory hierarchies including registers, caching, virtual memory, paging, and segmentation; number representations; binary arithmetic and operations; assembly language instructions; and pipelining in the CPU.

### COMP 3004 Foundations in Discrete Structures & Algorithms (4 Credits)

Both discrete mathematics and an understanding of algorithms along with their analysis form principle foundations in computer science. In this course, the fundamentals of discrete mathematics including functions, relations, counting, logic, proofs, counting, recurrences, and probability are covered. In addition, beginning data structures and algorithms are covered including linked-lists, graphs, hash-tables, sorting, and binary search. An analysis of these data structures and algorithms is also covered through big-O notation and proof methods.

**COMP 3005 Foundations in Python Programming (4 Credits)**

This accelerated course covers the basics of Python programming. By the end of the course students will be able to develop, design and implement Python programs, explain the differences between data types, learn to read from and write to files, understand and use data structures, understand and use recursion, and use Python packages.

**COMP 3006 Python Software Development (4 Credits)**

This accelerated course covers advanced Python programming for data scientists and cybersecurity professionals. Course Objectives: name and demonstrate proficiency using advanced Python programming techniques; analyze a programming task and create a development plan and high-level software design that accomplishes the task; relate common portions of the Python standard library to specific programming tasks; understand and apply aspects of the Python scientific programming ecosystem to achieve an analysis goal. Prerequisite: COMP 3005.

**COMP 3007 Foundations in Data Science Mathematics I (4 Credits)**

This course presents the elements of calculus essential for work in data science. Students will study differentiation and integration in the context of probability density and of optimization.

**COMP 3008 Foundations in Data Science Mathematics II (4 Credits)**

This course presents the elements of linear algebra and discrete math essential for subsequent coursework in data science.

**COMP 3200 Discrete Structures (4 Credits)**

Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: (COMP 2300 or MATH 2200) and (COMP 2673 or COMP 1353).

**COMP 3351 Programming Languages (4 Credits)**

Learn the fundamentals of programming languages through functional programming through an in-depth understanding of syntax and semantics around program structures and how programming languages are parsed and interpreted. Understand recursion as a fundamental problem-solving paradigm and the important role that higher order types and kinds play in eliminating errors and simplifying software development. Prerequisites: COMP 2370 and ((COMP 2355, COMP 2691) or COMP 2362).

**COMP 3352 Elements of Compiler Design (4 Credits)**

Techniques required to design and implement a compiler; topics include lexical analysis, grammars and parsers, type-checking, storage allocation and code generation. Prerequisite: COMP 3351.

**COMP 3353 Compiler Construction (4 Credits)**

Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

**COMP 3356 Introductory C/C++ Programming (4 Credits)**

This course introduces unmanaged programming language concepts to students whose primary programming experience is in a managed language (Java/Python, etc.). Concepts like type safety, manual memory management and "unsafe" library functions are covered. Common pitfalls in these languages from which most security issues arise are explained and students gain experience in understanding such code and evaluating it for program errors. Students will also be introduced to important compiled language concepts of static/dynamic linking, compilation and debugging. Prerequisites: COMP 3006.

**COMP 3361 Operating Systems I (4 Credits)**

Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: for undergraduates: (COMP 2355 and COMP 2691) or COMP 2361; COMP 2370; for graduate students: COMP 3003, 3004, and 3005.

**COMP 3371 Data Structures & Algorithms (4 Credits)**

Design and analysis of algorithms and data structures; asymptotic complexity, recurrence relations, lower bounds; algorithm design techniques such as incremental, divide-and-conquer, dynamic programming, iterative improvement, greedy algorithms; randomized data structures and algorithms. Prerequisites: COMP 2370 or equivalent and COMP 3200.

**COMP 3372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks.

**COMP 3381 Software Engineering I (4 Credits)**

An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Cross-listed with COMP 4381. Prerequisites: COMP 3351; COMP 3361 or COMP 2362; or instructor permission.

**COMP 3382 Software Engineering II (4 Credits)**

Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

**COMP 3400 Advanced Unix Tools (4 Credits)**

Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

**COMP 3411 Web Programming II (4 Credits)**

In this course you will learn how to develop a full-stack web application that is capable of serving dynamic content from a database. Furthermore, you will learn the core design concepts and principles that will enable you to develop scalable and easy to maintain webapplications - a set of skills that will serve you well in both your personal and professional projects in the future. Prerequisite: COMP 3410.

**COMP 3412 Web Projects: Web Development III (4 Credits)**

In this course you will learn how to develop, as a group, a full-stack web application that is capable of serving dynamic content from a database. We will use the MongoDB, ExpressJS, Angular, and Node.js (MEAN) software stack to work on a real-life problem presented to us by an external product owner. In the class we will use the Scrum framework for Agile development to work, as a software team, through several sprints of development. You will be peer reviewing each other throughout the course, and the product owner will also be reviewing your product through end-of-sprint demos as features are completed. The goal for this class is for it to be a fun, collaborative, and educational environment that demonstrates what it is like to work as a real software team. Prerequisite: COMP 3411.

**COMP 3421 Database Organization & Management I (4 Credits)**

An introductory class in database management systems covering both relational and non-relational databases with an emphasis on relational. Topics include database design, ER modeling, relational algebra, SQL, scripting, and embedded SQL. Each student will design, load, query and update a nontrivial database using a relational database management system (RDBMS). In addition, an introduction to a NoSQL database will be included. Graduate students will read one or two relevant technical papers and write a summary report. Prerequisites: for undergraduates: COMP 1353 or COMP 2673; for graduates: COMP 3005.

**COMP 3424 NoSQL Databases (4 Credits)**

In this course, students learn what NoSQL databases are, learn to identify the differences between them, and gain a fundamental understanding between SQL, relational databases, and NoSQL databases. Students further explore which type of NoSQL database is the correct one given a use-cases, examining types, methods of communicating with it, contrasts to other NoSQL databases, performance and scalability. Prerequisites: for undergraduates, COMP 2355 or COMP 2361; for graduates: COMP 3005.

**COMP 3431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 2370.

**COMP 3501 Introduction to Artificial Intelligence (4 Credits)**

Introduces a variety of Artificial Intelligence concepts and techniques, relevant to a broad range of applications. Students survey multiple techniques including search, knowledge representation and reasoning, probabilistic inference, machine learning, and natural language processing. Examines concepts of constraint programming, evolutionary computation and non-standard computation. Prerequisites: COMP 2370.

**COMP 3621 Computer Networking (4 Credits)**

An introduction to computer networks with an emphasis on Internet protocols. Topics include: internet design, application layer protocols such as SMTP and HTTP, session layer protocols including TCP and UDP, the internet protocol (IP), link layer technology such as Ethernet, and security issues related to networking. Programming experience of client/server architectures using sockets and TCP/UDP through projects is emphasized. Prerequisites: for undergraduates: (COMP 2355 or COMP 2361) and COMP 2370; for graduates COMP 3004 and COMP 3006. Cross listed with COMP 4621.

**COMP 3681 Networking for Games (4 Credits)**

Implementing the networking code for multiplayer games is a complex task that requires an understanding of performance, security, game design, and advanced programming concepts. In this course, students are introduced to the networking stack and how this is connected to the Internet, learn how to write protocols for games, and implement several large games using a game engine that demonstrate the kind of networking and protocols required by different genres of games. In addition, tools are introduced that help understand and debug networking code, simplify the creation of protocols, and make the development of networking code easier.

**COMP 3701 Topics in Computer Graphics (4 Credits)****COMP 3702 Topics in Database (4 Credits)****COMP 3703 Topics-Artificial Intelligence (4 Credits)****COMP 3704 Advanced Topics: Systems (4 Credits)****COMP 3705 Topics in Computer Science (1-4 Credits)****COMP 3731 Computer Forensics (4 Credits)**

Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide students an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis). Prerequisites: COMP 3361; COMP 2355 or 2361 for undergraduates; COMP 3006 for graduates.

**COMP 3801 Introduction Computer Graphics (4 Credits)**

Fundamentals of 3D rendering including the mathematics behind coordinate systems, projections, clipping, hidden surface removal, shadows, lighting models, shading models, and mapping techniques. Significant use of 3D APIs through shader programming is covered along with the basics of 3D model representation and animations. Satisfies "Advanced Programming" requirements for graduate students. Prerequisites: COMP 2370, MATH 1952 or 1962.

**COMP 3821 Game Programming I (4 Credits)**

Introduces the fundamentals of digital game programming that are essential as future game programmers or game designers. Students have the opportunity to learn game engine architecture, 2D and 3D linear algebra for graphics, sprites and animations, input handling, finite state machines, particle systems, user interfaces, game audio, and artificial intelligence for games. Prerequisites: COMP 2370 and COMP 2821.

**COMP 3822 Game Programming II (4 Credits)**

In this course, students learn how to work with a 3D game engine and build 3D games. Topics include algorithms, mathematics for 3D game engines, scene management, animations, 3D shaders, particle systems, physics for games, UIs, terrain systems, and working with higher-level scripting languages on top of the low-level implementation language. Prerequisites: COMP 3821. Suggested corequisite or prerequisite: COMP 3801.

**COMP 3904 Internship/Co-Op in Computing (0-10 Credits)**

Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

**COMP 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**COMP 4100 Human-Computer Interaction (4 Credits)**

Introduces students in computer science and other disciplines to principles of and research methods in human-computer interaction (HCI). HCI is an interdisciplinary area concerned with the study of interaction between humans and interactive computing systems. Research in HCI looks at cognitive and social phenomena surrounding human use of computers with the goal of understanding their impact and creating guidelines for the design and evaluation of software, interfaces, physical products, and services in industry. No prerequisites are required to take the course and students from all disciplines are welcome. Cross listed with COMP 3100.

**COMP 4333 Parallel and Distributed Computing (4 Credits)**

Current techniques for effective use of parallel processing and large scale distributed systems. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course qualifies for the Computer Science "Advanced Programming" requirement. Prerequisites: COMP2370 and COMP2355, or equivalent.

**COMP 4334 Parallel and Distributed Computing for Data Science (4 Credits)**

Current techniques for effective use of parallel processing and large-scale distributed systems for data science. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course is not to be used for the MS Computer Science. Prerequisite: COMP 4581.

**COMP 4355 Advanced System Programming (4 Credits)**

This course covers programming in a UNIX environment, including use of common command line utilities, scripting, source control via Git, and integration of POSIX system calls into C/C++ code. These features will be leveraged to solve practical problems cleanly and efficiently. More emphasis will be placed on using these features than on how those features work. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4362 Operating Systems II (4 Credits)**

Continuation of COMP 3361. Case studies of existing operating systems programing. Prerequisite: COMP 3621.

**COMP 4370 Algorithmic Problem Solving (4 Credits)**

The course is intended for students who are familiar with programming syntax but have not had much experience writing computer programs to solve a problem stated as a high-level description. The course will run through multiple such problem descriptions, discuss the design of programs to solve those problems using popular data structures, and have students implement those designs using a programming language. This course does not count for MS Computer Science requirements. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks. Prerequisite: COMP 3371. Cross listed with COMP 3372.

**COMP 4384 Secure Software Engineering (4 Credits)**

This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software. There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3006, COMP 3361, COMP 3356.

**COMP 4401 Introduction to Python for Data Science (2 Credits)**

This eight-week course enables aspiring graduate students in data science to meet their Python programming proficiency prior to matriculation. Students who complete this course will be able to write and modularize code, design efficient control structures, perform basic data operations, debug errors, distinguish data types and basic structures, and work within an integrated development environment.

**COMP 4431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 4441 and COMP 4581.

**COMP 4432 Machine Learning (4 Credits)**

This course will give an overview of traditional machine learning techniques, their strengths and weaknesses, and the problems they are designed to solve. This will include the broad differences between supervised/unsupervised and reinforcement learning as well as associated learning problems such as classification and regression. Techniques covered, at the discretion of the instructor, may include approaches such as linear and logistic regression, support vector machines, kNN, decision trees, random forests, Naive Bayes, EM, k-Means, and PCA. After course completion, students will have a working knowledge of these approaches and experience applying them to learning problems. Enforced Prerequisites: COMP 4442 and COMP 3006.

**COMP 4433 Data Visualization (4 Credits)**

This course explores visualization techniques and theory. The course covers how to use visualization tools to effectively present data as part of quantitative statements within a publication/report and as an interactive system. Both design principles (color, layout, scale, and psychology of vision) as well as technical visualization tools/languages will be covered. Prerequisites: COMP 3006.

**COMP 4441 Introduction to Probability and Statistics for Data Science (4 Credits)**

The course introduces fundamentals of probability for data science. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. The techniques will include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Prerequisites: COMP 3007 and 3008; or permission of Data Science Faculty Director.

**COMP 4442 Advanced Probability and Statistics for Data Science (4 Credits)**

This course builds on material in Probability and Statistics 1. Students will carry out model fitting and diagnostics for multiple regression, ANOVA, ANCOVA, and generalized linear models. Dimension reductions techniques such as PCA and Lasso are introduced, as are techniques for handling dependent data. The course introduces the principles of resampling and Bayesian Analysis. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Enforced Prerequisites: COMP 4441.

**COMP 4447 Data Science Tools 1 (4 Credits)**

Organizations are using data science to extract actionable insight from data. To highlight the hidden patterns in the data, this course equips students with essential skills for data collection, cleanup, transformation, feature engineering, summarization, visualization, and collaboration. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, API requests, web-scraping, GitHub and various data sets to perform these activities. Prerequisites: COMP 3006.

**COMP 4448 Data Science Tools 2 (4 Credits)**

Building a successful predictive model is a multi-faceted process. This course focuses on hypothesis testing and the development of predictive models. Students will learn the data science process for model development while learning to program a variety of predictive algorithms. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Prerequisite: COMP 4447.

**COMP 4449 Data Science Capstone (4 Credits)**

Data Science Capstone provides students an opportunity to demonstrate their expertise as data scientists. Students are expected to integrate prior knowledge and skills to design, develop, test, and present 'full-cycle' data science products, and apply them in real-world contexts. This includes assessing and communicating their value to decision-making. Two sets of challenges of increasing complexity are presented as mid-term and term projects. These two projects are implemented, documented, tested, and presented by the students or students' two-person teams. Prerequisites: COMP 4442.

**COMP 4455 Shell Scripting and System Tools (4 Credits)**

This course covers navigating and utilizing tools in a UNIX environment, including use of common command line utilities, Bash and Python shell scripting, source control via Git, pipes and I/O redirection, networking in Python and OS multi-processing/multi-threading. More emphasis will be placed on using these tools than on how those tools work. Prerequisite: COMP 3006.

**COMP 4510 Software for AI Robotics (4 Credits)**

This course provides an introduction to the key artificial intelligence issues involved in the development of intelligent robotics. We will examine a variety of algorithms for autonomous mobile robot behavior, exploring issues that include software control architectures, localization, navigation, sensing, planning, and uncertainty. We also introduce the Robot Operating System (ROS) middleware, which is popular in academic, industry, and government research. This course does not assume any prior knowledge of artificial intelligence or robotics. The course will be project focused. In the project assignments you will learn ROS and learn to implement algorithms essential for conducting AI robotics research. Prerequisites: COMP 3005 and proficiency in Python and Unix command-line tools.

**COMP 4531 Deep Learning: Model Design and Application (4 Credits)**

This course addresses the foundational concepts and components of Artificial Neural Networks (ANN), highlighting their capabilities, strengths, and weaknesses as a machine learning algorithm. Students taking this course will develop ANN models from scratch in Python as a basis for understanding their design as well as the underlying mechanics and calculations that shape their behavior. Key topics such as forward-backward propagation, loss function characteristics and optimization will be considered in relation to model design and computational efficiency as well as to problems such as exploding and vanishing gradients. Training strategies (e.g., dropout, initialization, batch normalization) will further enable students to assess trade-offs in model bias & variance. Coupled with hands-on assignments, these building blocks provide the knowledge and skills required to effectively design and implement ANN models that are ethically and technically sound. As well as foreground important architectures such as Convolutional ANNs, Recurrent ANNs, LSTMs, and Transformers as well as their applicability to modern problems. Student learning and proficiency will be assessed based on a combination of quizzes, coding assignments, exams, and a culminating project. Prerequisite: COMP 4432.

**COMP 4581 Algorithms for Data Science (4 Credits)**

This course introduces the design and analysis of algorithms within the context of data science. Topics include; asymptotic complexity and algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, and advanced sorting techniques. Examples to illustrate techniques are drawn from multi-dimensional clustering (k-means and probabilistic), regression, decision trees, order statistics, data mining using apriori algorithms, and algorithms for generating combinatorial objects. Prerequisites: COMP 3006.

**COMP 4591 Computational Geometry (4 Credits)**

This class deals with the design and implementation of efficient algorithms for problems defined over geometric objects, such as points, lines, polygons, surfaces, etc. The methods and algorithms covered find applications in many areas, including computer graphics (e.g., hidden surface removal), computer-aided design and manufacturing (e.g., 3D printing), machine learning (e.g., supervised and unsupervised classification), geographic information systems (e.g. terrain visibility), robotics (e.g., motion planning), data mining (e.g., dimensionality reduction), and computer vision (3D reconstruction), to name a few. Fundamental geometric problems such as partitioning, proximity, intersection, convexity, visibility, point location, and motion planning are focused on. Efficient data structures and algorithms for their solutions and design techniques germane to the field, such as divide-and-conquer, plane sweep, randomization, duality, etc. are discussed in detail. Practical methods for the robust implementation of geometric algorithms are also covered. Prerequisites: COMP 3200 and COMP 3371. This course satisfies the Theory requirement for graduate students.

**COMP 4600 Seminar in Computer Science (0-4 Credits)**

Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15- page paper with bibliography required.

**COMP 4621 Computer Networking (4 Credits)**

The Internet is arguably the most transformative invention in recent history and is at its core a massive global computer network (of networks). Students in this course learn how the Internet works, from the highest-level application layer to the lowest-level hardware layer. Topics covered include the OSI and TCP/IP reference models, physical transmission methods, error detection and correction, addressing, routing algorithms, congestion control and more. Prerequisites: COMP 3006, COMP 3361 (or instructor approval). Cross listed with COMP 3621.

**COMP 4701 Special Tpcs-Computer Graphics (1-4 Credits)****COMP 4702 Advanced Topics-Database (3 Credits)****COMP 4703 Adv Topics-Artificial Intell (1-4 Credits)****COMP 4704 Advanced Topics-Systems (3-4 Credits)****COMP 4705 Advanced Topics-Programming (1-4 Credits)****COMP 4709 Special Tpcs-Computer Security (3 Credits)****COMP 4721 Computer Security (4 Credits)**

This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisites: COMP 3006, COMP 3361 (or advisor/instructor approval).

**COMP 4722 Network Security (4 Credits)**

Network Security covers tools and techniques employed to protect data during transmission. It spans a broad range of topics including authentication systems, cryptography, key distribution, firewalls, secure protocols and standards, and overlaps with system security concepts as well. This course will provide an introduction to these topics, and supplement them with hands-on experience. In addition, students will perform an extensive analysis, or development of a security related product independently. Prerequisites: COMP 4721.

**COMP 4723 Ethical Hacking (4 Credits)**

Ethical hacking is the process of probing computer systems for vulnerabilities and exposing their presence through proof-of-concept attacks. The results of such probes are then utilized in making the system more secure. This course will cover the basics of vulnerability research, foot printing targets, discovering systems and configurations on a network, sniffing protocols, firewall hacking, password attacks, privilege escalation, rootkits, social engineering attacks, web attacks, and wireless attacks, among others. Prerequisites: COMP 3361, or COMP 3001, 3002, 3003, and 3004.



**COMP 4724 Systems Security Management (4 Credits)**

This course covers basic system administration tasks on a Unix environment, with a special focus on command line navigation, file/process access control, setting up network configurations, and managing services related to networks and their security. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4732 Human-Centered Data Security and Privacy (4 Credits)**

With an increasing digital presence, it is critical to understand users' needs and requirements in using technological equipment to secure interactions and adhere to privacy perceptions. Thus, it is essential to analyze the cognitive, social, organizational, commercial, and cultural factors in mind. This course will provide a socio-technical approach for analyzing critical user interaction with devices encountered in everyday life, including web, mobiles, and wearables. This course will help students develop an understanding of technological interactions from the perspectives of multiple stakeholders such as users, developers, system administrators, and others and build tools to protect user data.

**COMP 4799 Capstone Project in Cybersecurity (1-8 Credits)**

The purpose of the cybersecurity capstone project is to provide an integrative experience that ties together the learning outcomes from academic coursework undertakings and industry skills necessary to be productive in delivering an end product. Students will engage in one of many options available, such as involvement in a research project, a case study, a product development project, or an extensive survey paper. Capstone projects are presented at the end of the quarter in front of a representative group. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4991 Independent Study (1-12 Credits)**

Independent study on a particular topic supervised by a faculty member. Student must find a faculty member who will supervise work on the topic. Cannot be arranged for any course that appears in regular course schedule for that particular year.

**COMP 4995 Independent Research (1-17 Credits)**

Research projects undertaken in conjunction with a faculty member.

**COMP 5991 Independent Study (1-17 Credits)****COMP 5995 Independent Research (1-17 Credits)****Courses****COMP 3001 C and C++ Programming Foundations for New Graduate Students (4 Credits)**

This accelerated course covers the basics of discrete mathematics including functions, relations, counting, logic, proofs etc that is necessary to attend CS graduate school. In addition, it includes an introduction to programming and algorithm analysis. Enrollment restricted to graduate students.

**COMP 3002 C and C++ Foundations II for New Graduate Students (4 Credits)**

This accelerated course continues to build on the basics of discrete mathematics by covering material including advanced counting, recurrences, graphs, trees, traversals, automata etc. that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to additional algorithms and data structures. Prerequisite: COMP 3001.

**COMP 3003 Foundations in Computer Systems (4 Credits)**

This course introduces computer systems, including instruction set architectures; memory hierarchies including registers, caching, virtual memory, paging, and segmentation; number representations; binary arithmetic and operations; assembly language instructions; and pipelining in the CPU.

**COMP 3004 Foundations in Discrete Structures & Algorithms (4 Credits)**

Both discrete mathematics and an understanding of algorithms along with their analysis form principle foundations in computer science. In this course, the fundamentals of discrete mathematics including functions, relations, counting, logic, proofs, counting, recurrences, and probability are covered. In addition, beginning data structures and algorithms are covered including linked-lists, graphs, hash-tables, sorting, and binary search. An analysis of these data structures and algorithms is also covered through big-O notation and proof methods.

**COMP 3005 Foundations in Python Programming (4 Credits)**

This accelerated course covers the basics of Python programming. By the end of the course students will be able to develop, design and implement Python programs, explain the differences between data types, learn to read from and write to files, understand and use data structures, understand and use recursion, and use Python packages.

**COMP 3006 Python Software Development (4 Credits)**

This accelerated course covers advanced Python programming for data scientists and cybersecurity professionals. Course Objectives: name and demonstrate proficiency using advanced Python programming techniques; analyze a programming task and create a development plan and high-level software design that accomplishes the task; relate common portions of the Python standard library to specific programming tasks; understand and apply aspects of the Python scientific programming ecosystem to achieve an analysis goal. Prerequisite: COMP 3005.

**COMP 3007 Foundations in Data Science Mathematics I (4 Credits)**

This course presents the elements of calculus essential for work in data science. Students will study differentiation and integration in the context of probability density and of optimization.

**COMP 3008 Foundations in Data Science Mathematics II (4 Credits)**

This course presents the elements of linear algebra and discrete math essential for subsequent coursework in data science.

**COMP 3200 Discrete Structures (4 Credits)**

Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: (COMP 2300 or MATH 2200) and (COMP 2673 or COMP 1353).

**COMP 3351 Programming Languages (4 Credits)**

Learn the fundamentals of programming languages through functional programming through an in-depth understanding of syntax and semantics around program structures and how programming languages are parsed and interpreted. Understand recursion as a fundamental problem-solving paradigm and the important role that higher order types and kinds play in eliminating errors and simplifying software development. Prerequisites: COMP 2370 and ((COMP 2355, COMP 2691) or COMP 2362).

**COMP 3352 Elements of Compiler Design (4 Credits)**

Techniques required to design and implement a compiler; topics include lexical analysis, grammars and parsers, type-checking, storage allocation and code generation. Prerequisite: COMP 3351.

**COMP 3353 Compiler Construction (4 Credits)**

Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

**COMP 3356 Introductory C/C++ Programming (4 Credits)**

This course introduces unmanaged programming language concepts to students whose primary programming experience is in a managed language (Java/Python, etc.). Concepts like type safety, manual memory management and "unsafe" library functions are covered. Common pitfalls in these languages from which most security issues arise are explained and students gain experience in understanding such code and evaluating it for program errors. Students will also be introduced to important compiled language concepts of static/dynamic linking, compilation and debugging. Prerequisites: COMP 3006.

**COMP 3361 Operating Systems I (4 Credits)**

Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: for undergraduates: (COMP 2355 and COMP 2691) or COMP 2361; COMP 2370; for graduate students: COMP 3003, 3004, and 3005.

**COMP 3371 Data Structures & Algorithms (4 Credits)**

Design and analysis of algorithms and data structures; asymptotic complexity, recurrence relations, lower bounds; algorithm design techniques such as incremental, divide-and-conquer, dynamic programming, iterative improvement, greedy algorithms; randomized data structures and algorithms. Prerequisites: COMP 2370 or equivalent and COMP 3200.

**COMP 3372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks.

**COMP 3381 Software Engineering I (4 Credits)**

An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Cross-listed with COMP 4381. Prerequisites: COMP 3351; COMP 3361 or COMP 2362; or instructor permission.

**COMP 3382 Software Engineering II (4 Credits)**

Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

**COMP 3400 Advanced Unix Tools (4 Credits)**

Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

**COMP 3411 Web Programming II (4 Credits)**

In this course you will learn how to develop a full-stack web application that is capable of serving dynamic content from a database. Furthermore, you will learn the core design concepts and principles that will enable you to develop scalable and easy to maintain webapplications - a set of skills that will serve you well in both your personal and professional projects in the future. Prerequisite: COMP 3410.

**COMP 3412 Web Projects: Web Development III (4 Credits)**

In this course you will learn how to develop, as a group, a full-stack web application that is capable of serving dynamic content from a database. We will use the MongoDB, ExpressJS, Angular, and Node.js (MEAN) software stack to work on a real-life problem presented to us by an external product owner. In the class we will use the Scrum framework for Agile development to work, as a software team, through several sprints of development. You will be peer reviewing each other throughout the course, and the product owner will also be reviewing your product through end-of-sprint demos as features are completed. The goal for this class is for it to be a fun, collaborative, and educational environment that demonstrates what it is like to work as a real software team. Prerequisite: COMP 3411.

**COMP 3421 Database Organization & Management I (4 Credits)**

An introductory class in database management systems covering both relational and non-relational databases with an emphasis on relational. Topics include database design, ER modeling, relational algebra, SQL, scripting, and embedded SQL. Each student will design, load, query and update a nontrivial database using a relational database management system (RDBMS). In addition, an introduction to a NoSQL database will be included. Graduate students will read one or two relevant technical papers and write a summary report. Prerequisites: for undergraduates: COMP 1353 or COMP 2673; for graduates: COMP 3005.

**COMP 3424 NoSQL Databases (4 Credits)**

In this course, students learn what NoSQL databases are, learn to identify the differences between them, and gain a fundamental understanding between SQL, relational databases, and NoSQL databases. Students further explore which type of NoSQL database is the correct one given a use-cases, examining types, methods of communicating with it, contrasts to other NoSQL databases, performance and scalability. Prerequisites: for undergraduates, COMP 2355 or COMP 2361; for graduates: COMP 3005.

**COMP 3431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 2370.

**COMP 3501 Introduction to Artificial Intelligence (4 Credits)**

Introduces a variety of Artificial Intelligence concepts and techniques, relevant to a broad range of applications. Students survey multiple techniques including search, knowledge representation and reasoning, probabilistic inference, machine learning, and natural language processing. Examines concepts of constraint programming, evolutionary computation and non-standard computation. Prerequisites: COMP 2370.

**COMP 3621 Computer Networking (4 Credits)**

An introduction to computer networks with an emphasis on Internet protocols. Topics include: internet design, application layer protocols such as SMTP and HTTP, session layer protocols including TCP and UDP, the internet protocol (IP), link layer technology such as Ethernet, and security issues related to networking. Programming experience of client/server architectures using sockets and TCP/UDP through projects is emphasized. Prerequisites: for undergraduates: (COMP 2355 or COMP 2361) and COMP 2370; for graduates COMP 3004 and COMP 3006. Cross listed with COMP 4621.

**COMP 3681 Networking for Games (4 Credits)**

Implementing the networking code for multiplayer games is a complex task that requires an understanding of performance, security, game design, and advanced programming concepts. In this course, students are introduced to the networking stack and how this is connected to the Internet, learn how to write protocols for games, and implement several large games using a game engine that demonstrate the kind of networking and protocols required by different genres of games. In addition, tools are introduced that help understand and debug networking code, simplify the creation of protocols, and make the development of networking code easier.

**COMP 3701 Topics in Computer Graphics (4 Credits)****COMP 3702 Topics in Database (4 Credits)****COMP 3703 Topics-Artificial Intelligence (4 Credits)****COMP 3704 Advanced Topics: Systems (4 Credits)****COMP 3705 Topics in Computer Science (1-4 Credits)****COMP 3731 Computer Forensics (4 Credits)**

Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide students an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis). Prerequisites: COMP 3361; COMP 2355 or 2361 for undergraduates; COMP 3006 for graduates.

**COMP 3801 Introduction Computer Graphics (4 Credits)**

Fundamentals of 3D rendering including the mathematics behind coordinate systems, projections, clipping, hidden surface removal, shadows, lighting models, shading models, and mapping techniques. Significant use of 3D APIs through shader programming is covered along with the basics of 3D model representation and animations. Satisfies "Advanced Programming" requirements for graduate students. Prerequisites: COMP 2370, MATH 1952 or 1962.

**COMP 3821 Game Programming I (4 Credits)**

Introduces the fundamentals of digital game programming that are essential as future game programmers or game designers. Students have the opportunity to learn game engine architecture, 2D and 3D linear algebra for graphics, sprites and animations, input handling, finite state machines, particle systems, user interfaces, game audio, and artificial intelligence for games. Prerequisites: COMP 2370 and COMP 2821.

**COMP 3822 Game Programming II (4 Credits)**

In this course, students learn how to work with a 3D game engine and build 3D games. Topics include algorithms, mathematics for 3D game engines, scene management, animations, 3D shaders, particle systems, physics for games, UIs, terrain systems, and working with higher-level scripting languages on top of the low-level implementation language. Prerequisites: COMP 3821. Suggested corequisite or prerequisite: COMP 3801.

**COMP 3904 Internship/Co-Op in Computing (0-10 Credits)**

Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

**COMP 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**COMP 4100 Human-Computer Interaction (4 Credits)**

Introduces students in computer science and other disciplines to principles of and research methods in human-computer interaction (HCI). HCI is an interdisciplinary area concerned with the study of interaction between humans and interactive computing systems. Research in HCI looks at cognitive and social phenomena surrounding human use of computers with the goal of understanding their impact and creating guidelines for the design and evaluation of software, interfaces, physical products, and services in industry. No prerequisites are required to take the course and students from all disciplines are welcome. Cross listed with COMP 3100.

**COMP 4333 Parallel and Distributed Computing (4 Credits)**

Current techniques for effective use of parallel processing and large scale distributed systems. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course qualifies for the Computer Science "Advanced Programming" requirement. Prerequisites: COMP2370 and COMP2355, or equivalent.

**COMP 4334 Parallel and Distributed Computing for Data Science (4 Credits)**

Current techniques for effective use of parallel processing and large-scale distributed systems for data science. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course is not to be used for the MS Computer Science. Prerequisite: COMP 4581.

**COMP 4355 Advanced System Programming (4 Credits)**

This course covers programming in a UNIX environment, including use of common command line utilities, scripting, source control via Git, and integration of POSIX system calls into C/C++ code. These features will be leveraged to solve practical problems cleanly and efficiently. More emphasis will be placed on using these features than on how those features work. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4362 Operating Systems II (4 Credits)**

Continuation of COMP 3361. Case studies of existing operating systems programing. Prerequisite: COMP 3621.

**COMP 4370 Algorithmic Problem Solving (4 Credits)**

The course is intended for students who are familiar with programming syntax but have not had much experience writing computer programs to solve a problem stated as a high-level description. The course will run through multiple such problem descriptions, discuss the design of programs to solve those problems using popular data structures, and have students implement those designs using a programming language. This course does not count for MS Computer Science requirements. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks. Prerequisite: COMP 3371. Cross listed with COMP 3372.

**COMP 4384 Secure Software Engineering (4 Credits)**

This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software. There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3006, COMP 3361, COMP 3356.

**COMP 4401 Introduction to Python for Data Science (2 Credits)**

This eight-week course enables aspiring graduate students in data science to meet their Python programming proficiency prior to matriculation. Students who complete this course will be able to write and modularize code, design efficient control structures, perform basic data operations, debug errors, distinguish data types and basic structures, and work within an integrated development environment.

**COMP 4431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 4441 and COMP 4581.

**COMP 4432 Machine Learning (4 Credits)**

This course will give an overview of traditional machine learning techniques, their strengths and weaknesses, and the problems they are designed to solve. This will include the broad differences between supervised/unsupervised and reinforcement learning as well as associated learning problems such as classification and regression. Techniques covered, at the discretion of the instructor, may include approaches such as linear and logistic regression, support vector machines, kNN, decision trees, random forests, Naive Bayes, EM, k-Means, and PCA. After course completion, students will have a working knowledge of these approaches and experience applying them to learning problems. Enforced Prerequisites: COMP 4442 and COMP 3006.

**COMP 4433 Data Visualization (4 Credits)**

This course explores visualization techniques and theory. The course covers how to use visualization tools to effectively present data as part of quantitative statements within a publication/report and as an interactive system. Both design principles (color, layout, scale, and psychology of vision) as well as technical visualization tools/languages will be covered. Prerequisites: COMP 3006.

**COMP 4441 Introduction to Probability and Statistics for Data Science (4 Credits)**

The course introduces fundamentals of probability for data science. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. The techniques will include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Prerequisites: COMP 3007 and 3008; or permission of Data Science Faculty Director.

**COMP 4442 Advanced Probability and Statistics for Data Science (4 Credits)**

This course builds on material in Probability and Statistics 1. Students will carry out model fitting and diagnostics for multiple regression, ANOVA, ANCOVA, and generalized linear models. Dimension reductions techniques such as PCA and Lasso are introduced, as are techniques for handling dependent data. The course introduces the principles of resampling and Bayesian Analysis. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Enforced Prerequisites: COMP 4441.

**COMP 4447 Data Science Tools 1 (4 Credits)**

Organizations are using data science to extract actionable insight from data. To highlight the hidden patterns in the data, this course equips students with essential skills for data collection, cleanup, transformation, feature engineering, summarization, visualization, and collaboration. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, API requests, web-scraping, GitHub and various data sets to perform these activities. Prerequisites: COMP 3006.

**COMP 4448 Data Science Tools 2 (4 Credits)**

Building a successful predictive model is a multi-faceted process. This course focuses on hypothesis testing and the development of predictive models. Students will learn the data science process for model development while learning to program a variety of predictive algorithms. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Prerequisite: COMP 4447.

**COMP 4449 Data Science Capstone (4 Credits)**

Data Science Capstone provides students an opportunity to demonstrate their expertise as data scientists. Students are expected to integrate prior knowledge and skills to design, develop, test, and present 'full-cycle' data science products, and apply them in real-world contexts. This includes assessing and communicating their value to decision-making. Two sets of challenges of increasing complexity are presented as mid-term and term projects. These two projects are implemented, documented, tested, and presented by the students or students' two-person teams. Prerequisites: COMP 4442.

**COMP 4455 Shell Scripting and System Tools (4 Credits)**

This course covers navigating and utilizing tools in a UNIX environment, including use of common command line utilities, Bash and Python shell scripting, source control via Git, pipes and I/O redirection, networking in Python and OS multi-processing/multi-threading. More emphasis will be placed on using these tools than on how those tools work. Prerequisite: COMP 3006.

**COMP 4510 Software for AI Robotics (4 Credits)**

This course provides an introduction to the key artificial intelligence issues involved in the development of intelligent robotics. We will examine a variety of algorithms for autonomous mobile robot behavior, exploring issues that include software control architectures, localization, navigation, sensing, planning, and uncertainty. We also introduce the Robot Operating System (ROS) middleware, which is popular in academic, industry, and government research. This course does not assume any prior knowledge of artificial intelligence or robotics. The course will be project focused. In the project assignments you will learn ROS and learn to implement algorithms essential for conducting AI robotics research. Prerequisites: COMP 3005 and proficiency in Python and Unix command-line tools.

**COMP 4531 Deep Learning: Model Design and Application (4 Credits)**

This course addresses the foundational concepts and components of Artificial Neural Networks (ANN), highlighting their capabilities, strengths, and weaknesses as a machine learning algorithm. Students taking this course will develop ANN models from scratch in Python as a basis for understanding their design as well as the underlying mechanics and calculations that shape their behavior. Key topics such as forward-backward propagation, loss function characteristics and optimization will be considered in relation to model design and computational efficiency as well as to problems such as exploding and vanishing gradients. Training strategies (e.g., dropout, initialization, batch normalization) will further enable students to assess trade-offs in model bias & variance. Coupled with hands-on assignments, these building blocks provide the knowledge and skills required to effectively design and implement ANN models that are ethically and technically sound. As well as foreground important architectures such as Convolutional ANNs, Recurrent ANNs, LSTMS, and Transformers as well as their applicability to modern problems. Student learning and proficiency will be assessed based on a combination of quizzes, coding assignments, exams, and a culminating project. Prerequisite: COMP 4432.

**COMP 4581 Algorithms for Data Science (4 Credits)**

This course introduces the design and analysis of algorithms within the context of data science. Topics include; asymptotic complexity and algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, and advanced sorting techniques. Examples to illustrate techniques are drawn from multi-dimensional clustering (k-means and probabilistic), regression, decision trees, order statistics, data mining using apriori algorithms, and algorithms for generating combinatorial objects. Prerequisites: COMP 3006.

**COMP 4591 Computational Geometry (4 Credits)**

This class deals with the design and implementation of efficient algorithms for problems defined over geometric objects, such as points, lines, polygons, surfaces, etc. The methods and algorithms covered find applications in many areas, including computer graphics (e.g., hidden surface removal), computer-aided design and manufacturing (e.g., 3D printing), machine learning (e.g., supervised and unsupervised classification), geographic information systems (e.g. terrain visibility), robotics (e.g., motion planning), data mining (e.g., dimensionality reduction), and computer vision (3D reconstruction), to name a few. Fundamental geometric problems such as partitioning, proximity, intersection, convexity, visibility, point location, and motion planning are focused on. Efficient data structures and algorithms for their solutions and design techniques germane to the field, such as divide-and-conquer, plane sweep, randomization, duality, etc. are discussed in detail. Practical methods for the robust implementation of geometric algorithms are also covered. Prerequisites: COMP 3200 and COMP 3371. This course satisfies the Theory requirement for graduate students.

**COMP 4600 Seminar in Computer Science (0-4 Credits)**

Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15- page paper with bibliography required.

**COMP 4621 Computer Networking (4 Credits)**

The Internet is arguably the most transformative invention in recent history and is at its core a massive global computer network (of networks). Students in this course learn how the Internet works, from the highest-level application layer to the lowest-level hardware layer. Topics covered include the OSI and TCP/IP reference models, physical transmission methods, error detection and correction, addressing, routing algorithms, congestion control and more. Prerequisites: COMP 3006, COMP 3361 (or instructor approval). Cross listed with COMP 3621.

**COMP 4701 Special Tpcs-Computer Graphics (1-4 Credits)****COMP 4702 Advanced Topics-Database (3 Credits)****COMP 4703 Adv Topics-Artificial Intell (1-4 Credits)****COMP 4704 Advanced Topics-Systems (3-4 Credits)****COMP 4705 Advanced Topics-Programming (1-4 Credits)****COMP 4709 Special Tpcs-Computer Security (3 Credits)****COMP 4721 Computer Security (4 Credits)**

This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisites: COMP 3006, COMP 3361 (or advisor/instructor approval).

**COMP 4722 Network Security (4 Credits)**

Network Security covers tools and techniques employed to protect data during transmission. It spans a broad range of topics including authentication systems, cryptography, key distribution, firewalls, secure protocols and standards, and overlaps with system security concepts as well. This course will provide an introduction to these topics, and supplement them with hands-on experience. In addition, students will perform an extensive analysis, or development of a security related product independently. Prerequisites: COMP 4721.

**COMP 4723 Ethical Hacking (4 Credits)**

Ethical hacking is the process of probing computer systems for vulnerabilities and exposing their presence through proof-of-concept attacks. The results of such probes are then utilized in making the system more secure. This course will cover the basics of vulnerability research, foot printing targets, discovering systems and configurations on a network, sniffing protocols, firewall hacking, password attacks, privilege escalation, rootkits, social engineering attacks, web attacks, and wireless attacks, among others. Prerequisites: COMP 3361, or COMP 3001, 3002, 3003, and 3004.

**COMP 4724 Systems Security Management (4 Credits)**

This course covers basic system administration tasks on a Unix environment, with a special focus on command line navigation, file/process access control, setting up network configurations, and managing services related to networks and their security. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4732 Human-Centered Data Security and Privacy (4 Credits)**

With an increasing digital presence, it is critical to understand users' needs and requirements in using technological equipment to secure interactions and adhere to privacy perceptions. Thus, it is essential to analyze the cognitive, social, organizational, commercial, and cultural factors in mind. This course will provide a socio-technical approach for analyzing critical user interaction with devices encountered in everyday life, including web, mobiles, and wearables. This course will help students develop an understanding of technological interactions from the perspectives of multiple stakeholders such as users, developers, system administrators, and others and build tools to protect user data.

**COMP 4799 Capstone Project in Cybersecurity (1-8 Credits)**

The purpose of the cybersecurity capstone project is to provide an integrative experience that ties together the learning outcomes from academic coursework undertakings and industry skills necessary to be productive in delivering an end product. Students will engage in one of many options available, such as involvement in a research project, a case study, a product development project, or an extensive survey paper. Capstone projects are presented at the end of the quarter in front of a representative group. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4991 Independent Study (1-12 Credits)**

Independent study on a particular topic supervised by a faculty member. Student must find a faculty member who will supervise work on the topic. Cannot be arranged for any course that appears in regular course schedule for that particular year.

**COMP 4995 Independent Research (1-17 Credits)**

Research projects undertaken in conjunction with a faculty member.

**COMP 5991 Independent Study (1-17 Credits)**

**COMP 5995 Independent Research (1-17 Credits)**

## Electrical and Computer Engineering

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### Master's and Doctoral Degrees

#### Why study engineering at the University of Denver?

DU's Department of Electrical and Computer Engineering (ECE) is creating the future of technology by providing a graduate education that emphasizes both multi-disciplinary and cross-disciplinary knowledge. The distinguished faculty is creating multi-disciplinary education programs that cover both depth and breadth, and research programs that incorporate and account for technological trends in research and development, along with industry. Graduate students join the faculty in conducting cutting-edge basic and applied research in emerging disciplines developing novel and unique solutions to old and new problems and opportunities.

All laboratories in the Department contain state-of-the-art equipment and software to support basic and applied research in hardware and software design, hardware/software interfacing, communications and signal processing, image processing, computer vision and pattern recognition, optoelectronics, power and energy systems, robotics, mechatronic systems, intelligent systems, unmanned systems, among other research areas. Small classes support our multi-disciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students' individual career goals.

Denver is a first-rate location for business, government and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and DU is located just minutes from the Denver Technological Center, the site of many top technology companies. The Department of Electrical and Computer Engineering is committed to active collaboration with these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector that is second to none!

The ECE Department offers, among other degrees, a master's and a PhD degree in Mechatronic Systems Engineering (MSE). DU/ECE is the only University in the United States that offers BS, MS and PhD degrees in MSE.

### Doctor of Philosophy in Electrical and Computer Engineering

The objective of the PhD in Electrical and Computer Engineering degree program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of science, engineering and technology, through independent research. The PhD students of the 21<sup>st</sup> century may pursue academic, research, entrepreneurial, and/or industrial careers. We offer opportunities to develop individualized plans of study based on the students' previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in ECE degree requirements.

Research requires an in-depth study of engineering problems with a broad knowledge base in science and engineering. Therefore, advanced courses are offered to strengthen the fundamentals and to broaden the engineering and science perspective. The minimum credit requirements are different for individuals entering a program with a closely related master's degree and for those entering with a bachelor's only. All requirements for the degree must be completed within seven years (eight years without a master's degree) from admission to candidacy. A grade of C or better must be obtained in each course in order for that course to count toward the credit hour requirements. An overall minimum GPA of 3.0 is also required for graduation.

The PhD in ECE is appealing to students because it offers the much needed specialization component and the 'degree identity' required to be competitive in the job market. Graduates from this program will be well equipped to follow academic careers, or be hired in federal laboratories, industry and the private sector.

### Doctor of Philosophy in Mechatronics Systems Engineering

The objective of the PhD in Mechatronics Systems Engineering (MSE) degree program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of science, engineering and technology, through independent research. The PhD students of the 21<sup>st</sup> century may pursue academic, research, entrepreneurial, and/or industrial careers. We offer opportunities to develop individualized plans of study based on the students' previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in MSE degree requirements.

Research requires an in-depth study of engineering problems with a broad knowledge base in science and engineering. Therefore, advanced courses are offered to strengthen the fundamentals and to broaden the engineering and science perspective. The minimum credit requirements are different

for individuals entering a program with a closely related master's degree and for those entering with a bachelor's only. All requirements for the degree must be completed within seven years (eight years without a master's degree) from admission to candidacy. A grade of C or better must be obtained in each course in order for that course to count toward the credit hour requirements. An overall minimum GPA of 3.0 is also required for graduation.

The PhD in MSE is at the forefront and intersection of the coupled disciplines of Electrical, Mechanical, Computer Engineering, and Computer Science. This unique degree is appealing to students because they will acquire the knowledge and ability to deal with and solve highly complex problems where integration is a key component. This degree provides a holistic approach to graduate education focusing on the ability to cover both breadth and depth of knowledge. Graduates of this program will lay the foundation for the modern engineering departments of the future, where 'integration' will be the key ingredient of studies.

## **Master of Science in Computer Engineering**

The Master of Science in Computer Engineering (MSCpE) is designed to advance the student's knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this program is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MSCpE program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

## **Master of Science in Electrical Engineering**

The Master of Science in Electrical Engineering (MSEE) is designed to advance the student's knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this programs is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

## **Master of Science in Mechatronic Systems Engineering**

The Master of Science in Mechatronic Systems Engineering (MSMSE) is designed to advance the student's knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses, has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this programs is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are



working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

## Master of Science in Systems Engineering (Online)

This Master of Science degree in Systems Engineering ([MSSY](#)) along with the three Specialized Graduate Certificates will cover the depth and breadth in systems design, analysis, synthesis, integration, testing, validation, and verification. We will train our students with expertise in fundamentals of the discipline of systems engineering. Our program will have emphasis on support for proposals after contract award, through critical design reviews, as well as system design and integration and associated validation and verification activities, which are necessarily traceable to system requirements. We will also provide practical exposure to the analytical and digital tools which are paramount to the evolving practice of systems engineering. This practical exposure is designed to enable the student to participate in rigorous post-test data analysis, to participate in model based design and model based systems engineering, as well as statistically relevant process improvement projects. Learned skills, knowledges and case studies will be applicable to engineering professionals in many industries, particularly regulated industries such as aerospace, biomedical, and autonomous vehicles.

The program is built for graduate students and industry professionals. The MSSY program is comprised of three Stackable Certificates that lead to the MS degree in Systems Engineering degree: (1) Fundamentals of Systems Engineering; (2) Systems Design & Architecture; (3) Systems Analytics and Practice. The program is delivered primarily online.

The MS degree program can generally be completed in about three years if two courses are taken each quarter, with each certificate being completed in a year.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 9 QH earned as a special status student may be applied toward a MS degree.

## Doctor of Philosophy in Electrical & Computer Engineering

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Students with a MS in CpE, MS in MSE, MS in EE, MS in ME, or closely related areas may apply for admission to the PhD in ECE or PhD in MSE programs. Admission with only a BS in this field is also possible, but students with only a BS degree are strongly encouraged to enroll first in the MS (CpE, EE, MSE) programs. All graduate engineering courses presuppose mastery of the subject matter of a modern ABET-accredited curriculum in engineering. Students with a BS in other engineering or related science fields and students with a BSCpE, BSEE, or BSME who have not taken graduate academic work for some time may be required to complete preparatory courses that are prerequisites for the core courses of the engineering concentrations on which the qualifying exams are based. These courses carry no credit toward the graduate degree.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Doctor of Philosophy in Mechatronic Systems Engineering

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Students with a MS in CpE, MS in MSE, MS in EE, MS in ME, or closely related areas may apply for admission to the PhD in ECE or PhD in MSE programs. Admission with only a BS in this field is also possible, but students with only a BS degree are strongly encouraged to enroll first in the MS (CpE, EE, MSE) programs. All graduate engineering courses presuppose mastery of the subject matter of a modern ABET-accredited curriculum in engineering. Students with a BS in other engineering or related science fields and students with a BSCpE, BSEE, or BSME who have not taken graduate academic work for some time may be required to complete preparatory courses that are prerequisites for the core courses of the engineering concentrations on which the qualifying exams are based. These courses carry no credit toward the graduate degree.

### Other Required Materials

- We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master's program only.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Science in Electrical Engineering, Computer Engineering or Mechatronic Systems Engineering

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- A Bachelor of Science (BS) degree in computer engineering (BSCpE), electrical engineering (BSEE), or closely related field from a regionally accredited college or university is required for admission to the programs. Those students whose backgrounds differ significantly from EAC/ABET-accredited BS computer, electrical programs may be required to complete prerequisite undergraduate courses. Such courses are not considered part of the 45 quarter hour requirements for the degree. A competency examination may be required of candidates who do not possess a 3.0 GPA or a BS in electrical, electronic, or computer from an EAC/ABET accredited program. Students with BS degrees in physics, mathematics, computer science, engineering science, electrical engineering technology, engineering physics, or similar BS degrees from a regionally accredited college or university may also be admitted. However, these students should be able to demonstrate competency in the following basic subjects by passing an appropriate competency examination: MSCpE: Circuits and Electronics, Digital Systems, Computer Organization, a high- or low-level computer language; MSEE: Digital Design Methods, Physical Electronics, Introductory Electromagnetics, Signals and Systems, Principles of Communications, Circuits and Electronics; MSE: Controls, Robotics, Signals and Systems, Circuits and Electronics, Digital Design Methods, Mechanics, Electromagnetics.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Masters of Science in Systems Engineering (Online)**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Specialized Graduate Certificate in Fundamentals of Systems Engineering**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Specialized Graduate Certificate in Systems Design and Architecture**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Degree Programs

### Doctor of Philosophy in Electrical and Computer Engineering

#### Program requirements

All PhD students who have been admitted to the PhD in ECE program must successfully complete three milestones before the PhD degree can be conferred. These milestones refer to:

- Demonstrating that the student is qualified to begin PhD studies
- Demonstrating that the student may identify and formulate a research problem
- Demonstrating that the student can defend her/his dissertation

These three milestones are referred to as the "PhD Qualifying Exam", the "Comprehensive Exam" (also known as the "PhD Proposal"), and the "Dissertation Defense", respectively.

#### Coursework requirements

The PhD in ECE does not have specific course requirements. The coursework plan needs to be approved by the student's advisor and the department chair.

#### Graduate Assessment Requirement

##### ECE Graduate Assessment (ENEE 4950)

This graduate assessment course is required for all ECE graduate students to be taken in their last quarter (the term they have applied as the graduation term). All required assessment materials are uploaded to the course Assignments online to meet the course requirements. Students will receive Canvas course announcements and/or emails from the instructor notifying the students of what are required to be uploaded. As part of the graduate assessment effort, students' advisors and members of Master's thesis Committee / PhD Committee will be asked to provide related information online.

Specifically, (1) Master's degree thesis-option students are required to complete a written self-reflection essay on entire MS program including thesis research and upload the final OGE approved thesis, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (2) Master's degree non-thesis-option students are required to complete a written self-reflection essay on entire MS program and upload an assembled portfolio that includes reports from at least two course projects or homework from the core or depth courses, presentation slides from any course projects, along with the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (3) PhD students are required to complete a written self-reflection essay on entire PhD program including dissertation research and upload the final OGE approved dissertation, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation.

#### Minimum credit requirements

##### Students with a Bachelor of Science in Engineering/Science

For students admitted to the PhD program with a bachelor's degree, 90 QH are required, 75 of which must be completed at the University of Denver. A minimum of 48 QH must be at the 4000-level or higher and may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and department chair. The student with his/her advisor will develop an appropriate plan of study with core requirements, an area of specialization (depth requirement), breadth requirement and advanced mathematics. The core will consist of 8 QH of coursework. The area of specialization will consist of 16 QH of coursework. An additional 6 QH of coursework (excluding independent research) is required as related breadth requirement. The student must complete a minimum of 16 QH at the 4000-level courses, excluding independent research. Prior to completion of the comprehensive exam, the plan of study must be approved by the student's PhD committee and the chair.

If a student is entering the PhD program without a relevant master's degree, the student should work with his/her advisor in order to meet the degree requirements for a master's degree. All requirements for the given master's degree must be met.

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
A minimum of 48 QH must be at the 4000-level or higher, may include Independent Research or Independent Study as considered appropriate by advisor and assuming a minimum of 16 QH are earned excluding independent research		48
Core Requirement		8
Depth Requirement - Specialization Area		16
Breadth Requirement <sup>1</sup>		6
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> The breadth requirement must be pre-approved by the student's advisor.

### Students with a Master of Science in Engineering/Science

If a student is admitted with a closely related master's degree, up to 45 hours may be transferred and applied to the doctorate degree. The student with his or her advisor will develop an appropriate program consisting of a minimum of 28 quarter hours at the 4000-level, which may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and the department chair. The student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics. Prior to completion of the comprehensive exam, the student's plan of study must be approved by the student's PhD committee and the department chair.

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
A minimum of 36QH must be at the 4000-level or higher, may include Independent Research or Independent Study as considered appropriate by advisor		36
Student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics		
<b>Total Credits</b>		<b>90</b>

### Non-coursework Requirements

#### Qualifying Examination

Each student must demonstrate sufficient breadth and depth of basic engineering knowledge relevant to electrical and computer engineering and be able to demonstrate ability to organize and present her/his thoughts in a convincing manner. To achieve this, each admitted student is required to demonstrate proficiency in five chosen courses by receiving a final grade of B or better. Students may either enroll or test out these courses. These criteria do not necessarily have to be met within a single quarter; however, a maximum of two attempts is allowed for each course or test.

The five courses will be one from the list of Core Courses, two from two Subject Area Courses, and two courses approved by the advisor. The list of courses is subject to modification with the approval of the department.

#### Core Courses - Choose one course

Code	Title	Credits
<b>Core Courses</b>		<b>12</b>
MATH 3151	Advanced Linear Algebra	
ENGR 3621	Advanced Engineering Mathematics	
ENGR 3650	Probability and Statistics for Engineers	
Subject Area Courses – choose two courses from two areas		16
<b>Circuits, Electronics and Electromagnetics</b>		
ENGR 4100	Instrumentation and Data Acquisition	
ENEE 3011	Physical Electronics	
ENEE 3641	Introduction to Electromagnetic Compatibility	
ENEE 4030	Optoelectronics	
ENCE 4110	Modern Digital Systems Design	
<b>Computer Engineering</b>		
ENCE 3231	Embedded Systems Programming	
ENCE 3321	Network Design	
ENCE 4631	Advanced Machine Learning	
<b>Control and Communication Systems</b>		
ENEE 3670	Introduction to Digital Signal Processing	

ENGR 3721	Controls
ENGR 4723	Digital Control
ENGR 4735	Linear Systems
ENGR 4740	Adaptive Control Systems
<b>Biomedical Engineering</b>	
ENGR 3450	Biosensing Technology
ENGR 4455	Fluorescence and its applications in biomedical sensors
ENBI 4620	Bioelectronics
ESEE 4630	Optical Networking
<b>Robotics</b>	
ENCE 4620	Advanced Computer Vision
ENGR 4730	Introduction to Robotics
<b>Power and Energy Systems</b>	
ENGR 3510	Renewable and Efficient Power and Energy Systems
ENGR 4530	Intro to Power and Energy

### Qualifier Transfer Policy

#### Policy Statement

The Electrical and Computer Engineering (ECE) Department at Denver University (DU) acknowledges the Qualifying Exam achievements of PhD students transferring from other institutions. Subject to the student having successfully passed the Qualifying Exam at their original institution and upon receiving endorsement from their advisor, the departmental faculty will consider and vote on granting an exemption from the DU ECE Qualifying Exam on a case-by-case basis. A majority decision will be required for approval.

This policy applies exclusively to PhD students transferring to DU ECE under the guidance of their advisor. This scenario primarily arises when the department seeks to attract top talent, with advisors bringing only those students who have already demonstrated their qualifications. In alignment with our strategy to recruit outstanding individuals, it is appropriate for the ECE Department to recognize and accept the results of Qualifying Exams from other reputable institutions. This approach allows both faculty and newly admitted students to devote their efforts towards achieving significant research contributions for the department.

#### Timeline

Each admitted graduate student must complete/satisfy all Qualifying Exam requirements within at most 5 quarters from initial admittance. Failure to pass any component of the PhD Qualifying Exam within the given time constraints will prevent the student from continuing in the PhD program.

#### Comprehensive Examination

The purpose of the Comprehensive Examination is to ascertain the potential of the student for PhD quality research. At least two quarters prior to the final defense, the student shall schedule and take the Comprehensive Examination. This oral and written examination will be attended by a minimum of three faculty members, the same faculty who will attend the student's final dissertation defense. The Comprehensive Exam may be open to other students based on the requirements of the student's advisor. The student is expected to make a 30 to 40 minute concise presentation on her/his dissertation topic. The oral and written presentation will highlight previous work in this area, demonstrate a need for the given research, and explain how the given research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. In addition, the student will be expected to answer general fundamental questions in the area of her/his concentration and detailed questions in the area of the student's graduate course work.

The PhD Qualifying Examination must be taken and passed prior to the student taking the Comprehensive Examination. The Comprehensive Examination can be taken at most 2 times. If the student does not pass the Comprehensive Exam on the second try, the student will be terminated from the program. The comprehensive exam will be graded on a pass/fail system.

#### Dissertation

The student is required to complete and defend a dissertation of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's Graduate School guidelines. A summary of the dissertation must be presented in a public seminar and subsequently defended by the student in the final oral defense. The defense committee will consist of the student's entire PhD committee.

#### Residence Requirement

Enrollment in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

**PhD Committee**

The PhD committee should consist of at least four faculty members. Three faculty members must be from within the student's specialty area; these can include the student's advisor, other faculty in that degree program and, if necessary, off-campus experts. Finally, for the final oral defense of the dissertation, an oral defense chair, who must be a tenured faculty member outside the Department of Electrical and Computer Engineering and Mechanical and Materials Engineering, needs to be identified in consultation with the DU Graduate Studies Office. The PhD committee needs to be identified with the dissertation advisor and approved by the chair of the department and the Office of Graduate Studies.

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**Doctor of Philosophy in Mechatronics Systems Engineering****Program requirements**

All PhD students who have been admitted to the PhD in ECE or PhD in MSE programs must successfully complete three milestones before the PhD degree can be conferred. These milestones refer to:

- Demonstrating that the student is qualified to begin PhD studies
- Demonstrating that the student may identify and formulate a research problem
- Demonstrating that the student can defend her/his dissertation

These three milestones are referred to as the "PhD Qualifying Exam", the "Comprehensive Exam" (also known as the "PhD Proposal"), and the "Dissertation Defense", respectively.

**Coursework requirements**

The PhD in MSE does not have specific course requirements. The coursework plan needs to be approved by the student's advisor and the department chair.

**Graduate Assessment Requirement**

ECE Graduate Assessment (ENEE 4950)

This graduate assessment course is required for all ECE graduate students to be taken in their last quarter (the term they have applied as the graduation term). All required assessment materials are uploaded to the course Assignments online to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. As part of the graduate assessment effort, students' advisors and members of Master's thesis Committee / PhD Committee will be asked to provide related information online.

Specifically, (1) Master's degree thesis-option students are required to complete a written self-reflection essay on entire MS program including thesis research and upload the final OGE approved thesis, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (2) Master's degree non-thesis-option students are required to complete a written self-reflection essay on entire MS program and upload an assembled portfolio that includes reports from at least two course projects or homework from the core or depth courses, presentation slides from any course projects, along with the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (3) PhD students are required to complete a written self-reflection essay on entire PhD program including dissertation research and upload the final OGE approved dissertation, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation.

**Minimum credit requirements****Students with a Bachelor of Science in Engineering/Science**

For students admitted to the PhD program with a bachelor's degree, 90 QH are required, 75 of which must be completed at the University of Denver. A minimum of 48 QH must be at the 4000-level or higher and may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor and department chair. The student with his/her advisor will develop an appropriate plan of study with core requirements, an area of specialization (depth requirement), breadth requirement and advanced mathematics. The core will consist of 8 QH of coursework. The area of specialization will consist of 16 QH of coursework. An additional 6 QH of coursework (excluding independent research) is required as related breadth requirement. The student must complete a minimum of 16 QH at the 4000-level courses, excluding independent research. Prior to completion of the comprehensive exam, the plan of study must be approved by the student's PhD committee and the department chair.

If a student is entering the PhD program without a relevant master's degree, the student should work with their advisor in order to meet the degree requirements for a master's degree. All requirements for the given master's degree must be met.

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
A minimum of 48 QH must be at the 4000-level or higher, may include Independent Research or Independent Study as considered appropriate by advisor and assuming a minimum of 16 QH are earned excluding independent research		48
Core Requirement		8
Depth Requirement - Specialization Area		16

Breadth Requirement <sup>1</sup>	6
<b>Total Credits</b>	<b>90</b>

<sup>1</sup> The breadth requirement must be pre-approved by the student's advisor.

### Students with a Master of Science in Engineering/Science

If a student is admitted with a closely related master's degree, up to 45 hours may be transferred and applied to the doctorate degree. The student with his or her advisor will develop an appropriate program consisting of a minimum of 28 quarter hours at the 4000-level, which may include as many dissertation research hours (Independent Research and Independent Study) as considered appropriate by the advisor. The student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics. Prior to completion of the comprehensive exam, the student's plan of study must be approved by the student's PhD committee.

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
A minimum of 36QH must be at the 4000-level or higher, may include Independent Research or Independent Study as considered appropriate by advisor		36
Student with his or her advisor will develop an appropriate plan of study with an area of specialization, breadth requirements and advanced mathematics		
<b>Total Credits</b>		<b>90</b>

### Non-coursework Requirements

#### Qualifying Examination

Each student must demonstrate sufficient breadth and depth of basic engineering knowledge relevant to electrical and computer engineering and be able to demonstrate ability to organize and present her/his thoughts in a convincing manner. To achieve this, each admitted student is required to demonstrate proficiency in five chosen courses by receiving a final grade of B or better. Students may either enroll or test out these courses. These criteria do not necessarily have to be met within a single quarter; however, a maximum of two attempts is allowed for each course or test.

The five courses will be one from the list of Core Courses, two from two Subject Area Courses, and two courses approved by the advisor. The list of courses is subject to modification with the approval of the department.

Code	Title	Credits
<b>Core Courses - Choose one course</b>		<b>4</b>
MATH 3151	Advanced Linear Algebra	
ENGR 3650	Probability and Statistics for Engineers	
ENGR 3621	Advanced Engineering Mathematics	
Subject Area Courses – choose two courses from two areas		16
<b>Circuits, Electronics and Electromagnetics</b>		
ENGR 4100	Instrumentation and Data Acquisition	
ENCE 4110	Modern Digital Systems Design	
ENEE 3011	Physical Electronics	
ENEE 3641	Introduction to Electromagnetic Compatibility	
ENGR 3455	Fluorescence and Its Applications in Biomedical Sensors	
<b>Computer Engineering</b>		
ENCE 3321	Network Design	
ENCE 4620	Advanced Computer Vision	
ENCE 4630	Advanced Pattern Recognition	
<b>Control and Communication Systems</b>		
ENEE 3670	Introduction to Digital Signal Processing	
ENGR 3721	Controls	
ENGR 4723	Digital Control	
ENGR 4735	Linear Systems	
ENGR 4740	Adaptive Control Systems	
<b>Biomedical Engineering</b>		
ENGR 3450	Biosensing Technology	
ENGR 4455	Fluorescence and its applications in biomedical sensors	
ENEE 4030	Optoelectronics	
ENBI 4620	Bioelectronics	



**Robotics**

ENCE 3231	Embedded Systems Programming
ENGR 4730	Introduction to Robotics

**Power and Energy Systems**

ENGR 3510	Renewable and Efficient Power and Energy Systems
ENGR 3540	Electric Power Systems
ENGR 4530	Intro to Power and Energy

**Qualifier Transfer Policy****Policy Statement**

The Electrical and Computer Engineering (ECE) Department at Denver University (DU) acknowledges the Qualifying Exam achievements of PhD students transferring from other institutions. Subject to the student having successfully passed the Qualifying Exam at their original institution and upon receiving endorsement from their advisor, the departmental faculty will consider and vote on granting an exemption from the DU ECE Qualifying Exam on a case-by-case basis. A majority decision will be required for approval.

This policy applies exclusively to PhD students transferring to DU ECE under the guidance of their advisor. This scenario primarily arises when the department seeks to attract top talent, with advisors bringing only those students who have already demonstrated their qualifications. In alignment with our strategy to recruit outstanding individuals, it is appropriate for the ECE Department to recognize and accept the results of Qualifying Exams from other reputable institutions. This approach allows both faculty and newly admitted students to devote their efforts towards achieving significant research contributions for the department.

**Timeline**

Each admitted graduate student must complete/satisfy all Qualifying Exam requirements within at most 5 quarters from initial admittance. Failure to pass any component of the PhD Qualifying Exam within the given time constraints will prevent the student from continuing in the PhD program.

**Comprehensive Examination**

The purpose of the Comprehensive Examination is to ascertain the potential of the student for PhD quality research. At least two quarters prior to the final defense, the student shall schedule and take the Comprehensive Examination. This oral and written examination will be attended by a minimum of three faculty members, the same faculty who will attend the student's final dissertation defense. The Comprehensive Exam may be open to other students based on the requirements of the student's advisor. The student is expected to make a 30 to 40 minute concise presentation on her/his dissertation topic. The oral and written presentation will highlight previous work in this area, demonstrate a need for the given research, and explain how the given research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. In addition, the student will be expected to answer general fundamental questions in the area of her/his concentration and detailed questions in the area of the student's graduate course work.

The PhD Qualifying Examination must be taken and passed prior to the student taking the Comprehensive Examination. The Comprehensive Examination can be taken at most 2 times. If the student does not pass the Comprehensive Exam on the second try, the student will be terminated from the program. The comprehensive exam will be graded on a pass/fail system.

**Dissertation**

The student is required to complete and defend a dissertation of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's Graduate School guidelines. A summary of the dissertation must be presented in a public seminar and subsequently defended by the student in the final oral defense. The defense committee will consist of the student's entire PhD committee.

**Residence Requirement**

Enrollment in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

**PhD Committee**

The PhD committee should consist of at least four faculty members. Three faculty members must be from within the student's specialty area; these can include the student's advisor, other faculty in that degree program and, if necessary, off-campus experts. Finally, for the final oral defense of the thesis, an oral defense chair, who must be a tenured faculty member outside the Department of Electrical and Computer Engineering and Mechanical and Materials Engineering, needs to be identified in consultation with the DU Graduate Studies Office. The PhD committee needs to be identified with the dissertation advisor and approved by the chair of the department and the Office of Graduate Studies.

## Master's Degree Programs

### Master of Science in Computer Engineering

#### Minimum Credit Requirements

Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

#### Program Structure

Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

#### Graduate Assessment Requirement

ECE Graduate Assessment (ENEE 4950)

This graduate assessment course is required for all ECE graduate students to be taken in their last quarter (the term they have applied as the graduation term). All required assessment materials are uploaded to the course Assignments online to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. As part of the graduate assessment effort, students' advisors and members of Master's thesis Committee / PhD Committee will be asked to provide related information online.

Specifically, (1) Master's degree thesis-option students are required to complete a written self-reflection essay on entire MS program including thesis research and upload the final OGE approved thesis, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (2) Master's degree non-thesis-option students are required to complete a written self-reflection essay on entire MS program and upload an assembled portfolio that includes reports from at least two course projects or homework from the core or depth courses, presentation slides from any course projects, along with the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (3) PhD students are required to complete a written self-reflection essay on entire PhD program including dissertation research and upload the final OGE approved dissertation, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation.

#### Non-Thesis Option

The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

#### One Year (four quarters) – Non-thesis Option

The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student's plan of study must be approved a-prior by the student's advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

#### Requirements for Non-Thesis Option (minimum QH)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	20
	Mathematics Requirement (requires one approved course at the 3000-level or higher) <sup>1</sup>	3
	Breadth Requirement	14
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> This indicates minimum number of quarter hours. Any credits over the 3 QH from the mathematics courses will count toward the breadth requirement.

#### Thesis Option

A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of

3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

#### Requirements for Thesis Option (minimum QH)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	16
	Breadth Requirement <sup>1</sup>	6
	Thesis	15
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> The breadth requirement must be pre-approved by the student's advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

#### Breadth Requirement (Non-Thesis and Thesis Option)

Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student's advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement.

The MSCpE program offers one area of specialization:

- Computer Systems Engineering

The student's degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

Core courses for all Computer Engineering Students

#### The following courses are required for all computer engineering students:

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
ENCE 4110	Modern Digital Systems Design	4
ENGR 3621	Advanced Engineering Mathematics	4

#### Specialization in Computer Systems Engineering

This area of specialization prepares students with fundamental and working knowledge of methods for analysis, design, and implementation of intelligent systems (IS). Particular attention is given to signal and information processing in IS, design of IS, and implementation of IS using state-of-the-art technology. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:

Code	Title	Credits
ENCE 3321	Network Design	4
ENCE 4231	Embedded Systems Programming	4
ENCE 4250	Advanced Hardware Description Language (HDL) Modeling and Synthesis	4
ENCE 4620	Advanced Computer Vision	4
ENCE 4630	Advanced Pattern Recognition	4
ENEE 3670	Introduction to Digital Signal Processing	4
ENGR 4622	Advanced Optimization	4
ENCE 4631	Advanced Machine Learning	4

## Master of Science in Electrical Engineering

The Master of Science in Electrical Engineering (MSEE) is designed to advance the student's knowledge in several areas of engineering. This degree provides breadth while permitting the student to achieve depth in a specialization area. This specialization area, with thematic sequences of courses,

has been selected to coincide with those of high current interest as well as those emerging technologies that hold promise of increasing importance for the future. The purpose of this programs is to serve the profession of engineering and the Colorado community through advanced study in computer engineering, electrical engineering, and other related fields. This program prepares the student for academic and industrial advancement. The program offer a thesis and a non-thesis option.

The Department of ECE offers both part-time and full-time programs. The Department recognizes that a student may be employed full-time while studying for a degree. Therefore, most courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours.. The MS degree program can generally be completed in about four years if one course is taken each quarter, but it is usually possible to take two courses per quarter, bringing completion time closer to the more common duration of two years. Also, students who select the one-year non-thesis will be able to graduate within 12 months, four academic quarters. For part-time students who are working in industry positions and who have chosen the thesis option, a topic related to the job function may be acceptable as the thesis research topic. Furthermore, a qualified staff member at the place of employment may be approved to serve as an adjunct faculty on the thesis committee.

Students not interested in pursuing a degree but interested in taking an occasional course may register as special status students by following an abbreviated admissions process. However, only 15 QH earned as a special status student may be applied toward a MS degree.

### Minimum Credit Requirements

Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

### Program Structure

Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

### Required Graduate Assessment Course

#### ECE Graduate Assessment (ENEE 4950)

This graduate assessment course is required for all ECE graduate students to be taken in their last quarter (the term they have applied as the graduation term). All required assessment materials are uploaded to the course Assignments online to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. As part of the graduate assessment effort, students' advisors and members of Master's thesis Committee / PhD Committee will be asked to provide related information online.

Specifically, (1) Master's degree thesis-option students are required to complete a written self-reflection essay on entire MS program including thesis research and upload the final OGE approved thesis, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (2) Master's degree non-thesis-option students are required to complete a written self-reflection essay on entire MS program and upload an assembled portfolio that includes reports from at least two course projects or homework from the core or depth courses, presentation slides from any course projects, along with the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (3) PhD students are required to complete a written self-reflection essay on entire PhD program including dissertation research and upload the final OGE approved dissertation, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation.

### Non-Thesis Option

The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

### One Year (four quarters) – Non-thesis Option

The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student's plan of study must be approved a-prior by the student's advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

### Requirements for Non-Thesis Option (minimum QH)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	20
	Mathematics Requirement (requires one approved course at the 3000-level or higher) <sup>1</sup>	3

Breadth Requirement	14
<b>Total Credits</b>	<b>45</b>

<sup>1</sup> This indicates minimum number of quarter hours. Any credits over the required 3 QH from the mathematics courses will count toward the breadth requirement.

### Thesis Option

A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

#### Requirements for Thesis Option (minimum QH)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	16
	Breadth Requirement <sup>1</sup>	6
	Thesis	15
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> The breadth requirement must be pre-approved by the student's advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

### Breadth Requirement (Non-Thesis and Thesis Option)

Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student's advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement.

The MSEE program offers three areas of specialization:

- Control & Communication Systems
- Electric Power & Energy Systems
- Optics/Optoelectronics/Photonics

Each student must choose an area of specialization. The student's degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

Core courses for all Electrical Engineering Students

#### The following courses are required for all electrical engineering students, regardless of area of specialization:

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
ENEE 4640	Electromagnetic Compatibility	4
ENGR 3621	Advanced Engineering Mathematics	4

### Specialization in Control & Communication Systems

This area of specialization prepares students for basic and applied research and development of complex systems, including, electrical, mechanical, bio-inspired, mechatronic systems, robotic systems, and unmanned systems. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:

Code	Title	Credits
ENCE 4231	Embedded Systems Programming	4
ENEE 3670	Introduction to Digital Signal Processing	4
ENGR 3721 & ENGR 3722	Controls and Control Systems Laboratory	4
ENEE 4141	Digital Communications	4
ENGR 4350	Reliability <sup>1</sup>	4
ENGR 4620	Optimization <sup>1</sup>	3,4
ENGR 4622	Advanced Optimization	4
ENGR 4730	Introduction to Robotics	4
ENGR 4735	Linear Systems	4
ENGR 4740	Adaptive Control Systems	4
ENGR 4745	Adv Non-Linear Control System	4
ENGR 4750	Networked Control Systems	4
ENGR 4755	Optimal Control	4
ENGR 4760	Multivariable Control	4

<sup>1</sup> This course may count toward the specialization with advisors pre-approval. This course may not be offered on a regular basis.

### Specialization in Electric Power and Energy Systems

This area of specialization prepares students with the basic foundation and advanced knowledge, required for the research and development in the area of power systems, renewable energy systems, and power electronic devices. This is accomplished through several theoretical courses and applied courses. Students must choose from the following courses:

Code	Title	Credits
ENGR 3510	Renewable and Efficient Power and Energy Systems	4
ENGR 3540	Electric Power Systems	4
ENGR 3721 & ENGR 3722	Controls and Control Systems Laboratory	4
ENGR 4530	Intro to Power and Energy	4
ENGR 4545	Electric Power Economy	4
ENGR 4560	Power Generation Operation and Control	4
ENGR 4590	Power System Protection	4
ENGR 4735	Linear Systems	4
ENGR 4740	Adaptive Control Systems	4

### Specialization in Optics/Optoelectronics/Photonics

This area of specialization prepares students for research, development, and design of devices and systems operating based on wave theory; focusing on laser, optics, light wave devices, and systems.

Code	Title	Credits
ENEE 4030	Optoelectronics	4
ENEE 4141	Digital Communications	4
ENGR 4200	Introduction to Nanotechnology	4
ENCE 4250	Advanced Hardware Description Language (HDL) Modeling and Synthesis	4
ENGR 4735	Linear Systems	4
ENGR 4740	Adaptive Control Systems	4

## Master of Science in Mechatronic Systems Engineering

### Minimum Credit Requirements

Every candidate for the MS degree must complete 45 QH of credit, at least 36 of which must be completed at the University of Denver.

### Program Structure

Candidates may elect either the thesis or non-thesis option. This choice may be made at any time, although a delay in declaration may impact the completion date. Students who are GTAs or who receive financial support from a University research grant, such as GRAs, are required to elect the thesis option. The program is designed to be completed in about six quarters if two courses (usually 8 QH) are taken each quarter.

### Required Graduate Assessment Course

ECE Graduate Assessment (ENEE 4950)

This graduate assessment course is required for all ECE graduate students to be taken in their last quarter (the term they have applied as the graduation term). All required assessment materials are uploaded to the course Assignments online to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. As part of the graduate assessment effort, students' advisors and members of Master's thesis Committee / PhD Committee will be asked to provide related information online.

Specifically, (1) Master's degree thesis-option students are required to complete a written self-reflection essay on entire MS program including thesis research and upload the final OGE approved thesis, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (2) Master's degree non-thesis-option students are required to complete a written self-reflection essay on entire MS program and upload an assembled portfolio that includes reports from at least two course projects or homework from the core or depth courses, presentation slides from any course projects, along with the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation. (3) PhD students are required to complete a written self-reflection essay on entire PhD program including dissertation research and upload the final OGE approved dissertation, defense presentation slides, and the completed and signed degree program plan, by the published OGE "Deadline for thesis/dissertation formatting approval" of the students' last quarter before graduation.

### Non-Thesis Option

The non-thesis option is the more flexible of the two options. This program is designed with the working professional in mind. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the requirement of 45 QH. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree, after approval by their advisor and the Chair. Each student must take a minimum of 24 quarter hours at the 4000-level.

### One Year (four quarters) – Non-thesis Option

The Department of Electrical and Computer Engineering (ECE) offers a one-year, non-thesis option. Students who select the one-year program will be able to graduate within 12 months, four academic quarters, as there are enough courses offered in each specialization to meet the 20 QH depth requirement. The breadth requirement (14 QH) is fulfilled by taking courses offered in other specializations. In addition, every year courses that satisfy the mathematics requirement (3 QH) are offered. The MS non-thesis structure is shown below. QH in each category denote minimum requirements that must be satisfied. Any changes in the student's plan of study must be approved a-prior by the student's advisor.

The basic structure of the minimum 45 QH for the non-thesis option is as follows:

#### Requirements for Non-Thesis Option (minimum quarter hours)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	20
	Mathematics Requirement (requires one approved course at the 3000-level or higher) <sup>1</sup>	3
	Breadth Requirement	14
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> This indicates minimum number of quarter hours. Any credits over the required 3 QH from the mathematics courses will count toward the breadth requirement.

### Thesis Option

A thesis permits a candidate to obtain depth in an area of study and it is especially useful for individuals who seek to pursue a subsequent degree, for example, a PhD degree. Thesis candidates work closely with a thesis advisor. The thesis option is required for all GRAs and GTAs. For this option, a grade of C or better must be obtained in each course in order for that course to count toward the 45 QH hour requirements. An overall minimum GPA of 3.0 is also required for graduation. Students may only take up to 8 quarter hours of independent study to be counted toward the degree. Each student must take a minimum of 16 quarter hours at the 4000-level. The basic structure of the minimum 45 QH for the thesis option is as follows:

#### Requirements for Thesis Option (minimum quarter hours)

Code	Title	Credits
	Graduate Assessment Requirement	0
	Core Requirement	8
	Depth Requirement - Specialization Area	16
	Breadth Requirement <sup>1</sup>	6

Thesis	15
<b>Total Credits</b>	<b>45</b>

<sup>1</sup> The breadth requirement must be pre-approved by the student's advisor.

If a student who has elected to pursue a thesis option, then at any time thereafter elects to change to a non-thesis option, all requirements for the non-thesis must be met. Any independent research taken may be forfeited and students must adhere to the grade requirements of the non-thesis option.

### Breadth Requirement (Non-Thesis and Thesis Option)

Breadth Requirement courses (each with not less than 3 QH of credit) may be chosen from courses offered in other specialization areas. A course that appears in more than one specialization area may only be counted toward either the specialization requirement or the breadth requirement. The remaining courses are chosen from appropriate courses numbered 3000 or higher, offered by the Department Mechanical & Materials Engineering, Department of Computer Science or NSM (Natural Sciences and Mathematics). Prior approval by the student's advisor is required. It is strongly recommended that students choose math related courses to satisfy the breadth requirement

The MSE program offers one area of specialization:

- Robotic Systems

The student's degree program will be a combination of the core courses, specialization areas (depth requirement) and the breadth requirement. Each student is required to complete the 2 core courses. Students may choose from any of the courses from their area of specialization but should keep in mind the 4000-level requirement of the degree.

Core courses for all Mechatronic Systems Engineering Students

The following courses are required for all mechatronic systems engineering students regardless of area of specialization:

Code	Title	Credits
ENEE 4950	ECE Graduate Assessment	0
ENEE 4640 or ENCE 4110	Electromagnetic Compatibility Modern Digital Systems Design	4
ENGR 3621	Advanced Engineering Mathematics	4

### Specialization in Robotics Systems

This area of specialization is designed to meet the needs of industry and federal research laboratories for engineers with multidisciplinary experience and ability to design and integrate complex systems requiring knowledge from diverse engineering disciplines. Said differently, mechatronic systems involves integration of mechanical, electrical, and computer engineering to design complex systems that perform real-world tasks. This program includes a broad set of common course requirements along with a selection of appropriate technical electives providing both breadth and depth of knowledge in a student's area of interest.

Code	Title	Credits
ENCE 4231	Embedded Systems Programming	4
ENCE 4250	Advanced Hardware Description Language (HDL) Modeling and Synthesis	4
ENCE 4620	Advanced Computer Vision	4
ENGR 3630	Finite Element Methods <sup>1</sup>	4
ENGR 4620	Optimization <sup>1</sup>	4
ENGR 4730	Introduction to Robotics	4
ENGR 4735	Linear Systems	4
ENME 4020	Adv Finite Element Analysis <sup>1</sup>	4
ENMT 4220	Mechatronics II	4
ENGR 4740	Adaptive Control Systems	4
ENGR 4745	Adv Non-Linear Control System	4

<sup>1</sup> This course may count toward the specialization with advisors preapproval. This course may not or may not be offered on a regular basis.

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## Master of Science in Systems Engineering (Online)

Minimum of 45 credit hours are required for the degree.



Code	Title	Credits
<b>Specialized Graduate Certificate in The Fundamentals of Systems Engineering</b>		
Required Courses		
ENSY 4010	Systems Engineering Fundamentals	
ENSY 4050	Digital Transformation for Advanced Integration	
ENSY 4090	Project Management in Relation to Systems Engineering	
Required Elective Courses (Choose at least two courses totaling 6 credit hours)		6
ENMT 4000	Space Systems Design I <sup>2</sup>	
ENMT 4010	Space Systems Design II <sup>2</sup>	
ENSY 4021	Design of Space Systems Part 1	
ENSY 4022	Design of Space Systems Part 2	
ENSY 4040	Systems Optimization	
ENSY 4060	Practical Model Based Systems Engineering	
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	
ENGR 4991	Independent Study	
<b>Specialized Graduate Certificate in The Systems Design and Architecture</b>		
Required Courses		
ENSY 4012	Systems Engineering Requirements Development	
ENSY 4014	Complex System Architectures	
ENSY 4016	Conceptual Design of Systems	
Required Elective Courses (Choose at least two courses totaling 6 credit hours)		6
ENSY 4024	Applied Electrical, Mechanical and Software Systems	
ENSY 4030	Introduction to Aerospace Missions	
ENSY 4040	Systems Optimization	
ENSY 4060	Practical Model Based Systems Engineering	
ENSY 4112	Practical Validation and Verification Test Planning	
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	
ENGR 4991	Independent Study	
<b>Specialized Graduate Certificate in The Systems Analytics &amp; Practice</b>		
Required Courses		
ENSY 4180	Applied Mathematics for Systems Engineering	
ENSY 4181	Introductory Probability and Statistics for Systems Engineering	
ENSY 4182	Data Analytics for Systems Engineering	
Required Elective Courses (Choose two courses totaling at least 6 credit hours)		6
ENSY 4042	Optimization for Advanced Systems	
ENSY 4112	Practical Validation and Verification Test Planning	
ENSY 4170	Practical Approaches to Continuous Improvement	
ENSY 4200	Applied Machine Learning for Advanced Systems Modeling	
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	
ENGR 4991	Independent Study	

<sup>1</sup> A maximum of 9 credit hours of the Graduate Capstone Design series will be applied as Required Elective Credit. Only Lockheed Martin employees in the Engineering Leadership Development Program (ELDP) may take the Graduate Capstone Design series courses.

<sup>2</sup> These courses are only available to Lockheed Martin Employees at this time.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in the Fundamentals of Systems Engineering

This Specialized Graduate Certificate provides expertise in fundamentals of the discipline of systems engineering, applicable to engineering professionals in many industries, particularly regulated industries such as aerospace, biomedical, and autonomous vehicles.

Please note that this is the first of the three stackable certificates leading to the MS in Systems Engineering (Online) and is available as a singular Specialized Graduate Certificate.

#### Minimum Credit Requirements

Every candidate for the Specialized Graduate Certificate must complete 15 credit hours.

Code	Title	Credits
Required Courses		
ENSY 4010	Systems Engineering Fundamentals	3
ENSY 4050	Digital Transformation for Advanced Integration	3
ENSY 4090	Project Management in Relation to Systems Engineering	3
Required Elective Courses (Choose at least two courses totaling 6 credit hours)		
ENSY 4021	Design of Space Systems Part 1	3
ENSY 4022	Design of Space Systems Part 2	3
ENSY 4040	Systems Optimization	3
ENSY 4060	Practical Model Based Systems Engineering	3
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	3
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	3
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	3
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	3
ENGR 4991	Independent Study	1-5
Total Credits		15

<sup>1</sup> A maximum of 9 credit hours of Graduate Capstone Design courses will be applied as Required Elective Credit. Only Lockheed Martin employees in the current ELDP cohort may take the Graduate Capstone Design series courses.

### Specialized Graduate Certificate in Systems Analytics & Practice

This Specialized Graduate Certificate provides systems engineering expertise with practical exposure to the analytical and digital tools which are paramount to the evolving practice of systems engineering. This practical exposure is designed to enable the student to participate in rigorous post-test data analysis, to participate in model based design and model based systems engineering, as well as statistically relevant process improvement projects. Case studies are applicable to engineering professionals in many industries, particularly regulated industries such as aerospace, biomedical, and autonomous vehicles.

Please note that this is the third of the three stackable certificates leading to the MS in Systems Engineering (Online) and is available as a singular Specialized Graduate Certificate.

#### Minimum Credit Requirements

Every candidate for the Specialized Graduate Certificate must complete 15 credit hours.

Code	Title	Credits
Required Courses		
ENSY 4180	Applied Mathematics for Systems Engineering	
ENSY 4181	Introductory Probability and Statistics for Systems Engineering	
ENSY 4182	Data Analytics for Systems Engineering	
Required Elective Courses (Choose two courses totaling at least 6 credit hours)		
ENSY 4042	Optimization for Advanced Systems	
ENSY 4112	Practical Validation and Verification Test Planning	
ENSY 4170	Practical Approaches to Continuous Improvement	

ENSY 4200	Applied Machine Learning for Advanced Systems Modeling	
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	
ENGR 4991	Independent Study	
Total Credits		15

<sup>1</sup> A maximum of 9 credit hours of Graduate Capstone Design courses will be applied as Required Elective Credit. Only Lockheed Martin employees in the current ELDP cohort may take the Graduate Capstone Design series courses.

## Specialized Graduate Certificate in Systems Design and Architecture

This Specialized Graduate Certificate provides systems engineering expertise with emphasis on support for proposals after contract award, through critical design reviews, as well as system design and integration and associated validation and verification activities, which are necessarily traceable to system requirements. Case studies are applicable to engineering professionals in many industries, particularly regulated industries such as aerospace, biomedical, and autonomous vehicles.

Please note that this is the second of the three stackable certificates leading to the MS in Systems Engineering (Online) and is available as a singular Specialized Graduate Certificate.

### Minimum Credit Requirements

Every candidate for the Specialized Graduate Certificate must complete 15 credit hours.

Code	Title	Credits
Required Courses		
ENSY 4012	Systems Engineering Requirements Development	3
ENSY 4014	Complex System Architectures	3
ENSY 4016	Conceptual Design of Systems	3
Required Elective Courses (Choose at least two courses totaling at least 6 credit hours)		6
ENSY 4024	Applied Electrical, Mechanical and Software Systems	
ENSY 4030	Introduction to Aerospace Missions	
ENSY 4040	Systems Optimization	
ENSY 4060	Practical Model Based Systems Engineering	
ENSY 4112	Practical Validation and Verification Test Planning	
ENGR 4501	Graduate Capstone Design I <sup>1</sup>	
ENGR 4502	Graduate Capstone Design II <sup>1</sup>	
ENGR 4503	Graduate Capstone Design III <sup>1</sup>	
ENGR 4504	Graduate Capstone Design IV <sup>1</sup>	
ENGR 4991	Independent Study	
Total Credits		15

<sup>1</sup> A maximum of 9 credit hours of Graduate Capstone Design courses will be applied as Required Elective Credit. Only Lockheed Martin employees in the current ELDP cohort may take the Graduate Capstone Design series courses.

## Engineering, Computer (ENCE)

### ENCE 2101 Digital Design (3 Credits)

Basic logic concepts. Boolean algebra, truth tables and logic diagrams. Karnaugh maps; programmable devices including ROM's, PLA's and PAL's; data selectors and multiplexors; flip-flops, and memory design of sequential logic circuits. State diagrams, counters, latches and registers; realization of sequential and arbitrary counters; monostable multivibrators. Course includes engineering ethics. Laboratory.

**ENCE 3100 Advanced Digital System Design (4 Credits)**

Design of logic machines. Finite state machines, gate array designs, ALU and control unit designs, microprogrammed systems. Hardware design of digital circuits using SSI and MSI chips. Introduction to probability and statistics. Application of probability and stochastic processes for cache and paging performance. Laboratories incorporate specification, top-down design, modeling, implementation and testing of actual digital design systems hardware. Simulation of circuits using VHDL before actual hardware implementation. Laboratory. Cross listed with ENCE 4110. Prerequisite: ENCE 2101.

**ENCE 3210 Microprocessor Systems I (4 Credits)**

Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Laboratory. Cross listed with ENCE 4210. Prerequisite: ENCE 2101.

**ENCE 3231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems. Prerequisite: ENCE 3210.

**ENCE 3241 Computer Organization and Architecture (3 Credits)**

Organization of digital computers; memory, register transfer and datapath; Arithmetic Logic Unit; computer architecture; control unit; I/O systems. Prerequisite: ENCE 2101.

**ENCE 3250 HDL Modeling & Synthesis (3 Credits)**

Introduction to Hardware Design Language (HDL). Language syntax and synthesis. Applications related to digital system implementation are developed. Project. Prerequisite: ENCE 2101 or instructor's permission.

**ENCE 3260 Python for Engineers (3 Credits)**

This course introduces python programming to students and gives them programming and mathematical tools that will be useful in different areas of engineering. The course is divided into 2 main parts. Part 1 (Introduction to Python Programming), covers the fundamental concepts of python programming, covering topics from variables and data structures, functions, algorithm complexity, representation of numbers and basics of parallel computing. Part 2 (Introduction to Numerical Methods), gives an overview of a variety of numerical methods that are useful for engineers. The course reviews the basics of linear algebra, discusses the importance of eigenvalues and eigenvectors, regressions and concepts of "discrete Fourier transform" and "fast Fourier transform".

**ENCE 3321 Network Design (4 Credits)**

Introduction to network components. Layering of network architecture. Analysis of Local Area Network (LAN) concepts and architecture based on IEEE standards. Design principles including switching and multiplexing techniques, physical link, signal propagation, synchronization, framing and error control. Application of probability and statistics in error detecting and control. Ethernet, Token-ring, FDDI (Fiber Distributed Data Interface), ATM (Asynchronous Transfer Mode), ISDN (Integrated Service Data Networks). Prerequisite: ENEE 3111, ENCE 2101 or permission of instructor.

**ENCE 3501 VLSI Design (3 Credits)**

Design of Very Large Scale Integration systems. Examination of layout and simulation of digital VLSI circuits using a comprehensive set of CAD tools in a laboratory setting. Studies of layouts of CMOS combinational and sequential circuits using automatic layout generators. Fundamental structures of the layout of registers, adders, decoders, ROM, PLA's, counters, RAM and ALU. Application of statistics and probability to chip performance. CAD tools allow logic verification and timing simulation of the circuits designed. Cross listed with ENCE 4501. Prerequisite: ENCE 3231.

**ENCE 3620 Computer Vision (4 Credits)**

This course is an introduction to the basic concepts in image processing and computer vision. First, an introduction to low-level image analysis methods, including radiometry and geometric image formation, edge detection, feature detection, and image segmentation are presented. Then, geometric-based image transformations (e.g., image warping and morphing) for image synthesis will be presented in the course. Furthermore, methods for reconstructing three-dimensional scenes including camera calibration, Epipolar geometry, and stereo feature matching are introduced. Other important topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 4620. Prerequisite: ENEE 3111.

**ENCE 3630 Pattern Recognition (4 Credits)**

This class provides an introduction to classical pattern recognition. Pattern recognition is the assignment of a physical object or event to one of several prescribed categories. Applications includes automated object recognition in image and videos, face identification, and optical character recognition. Major topics include Bayesian decision theory, Parametric estimation and supervised learning, Linear discriminant functions, Nonparametric methods, Feature extraction for representation and classification, Support Vector Machines. Cross listed with ENCE 4630.

**ENCE 3631 Machine Learning (4 Credits)**

This class covers topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep learning, neural networks, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE-4631.

**ENCE 3830 Topics in Computer Engineering (1-5 Credits)**

Special topics in computer engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENCE 3991 Independent Study (1-5 Credits)**

Topics in computer engineering investigated under faculty supervision. May be taken more than once. Students must obtain and complete an Independent Study form from the Office of the Registrar. Prerequisite: permission of instructor.

**ENCE 3995 Independent Research (1-10 Credits)****ENCE 4110 Modern Digital Systems Design (4 Credits)**

This course focuses on the design of digital systems using combinational, sequential, and programmable logic devices and Hardware Description Languages (HDL). Techniques for logic design including asynchronous logic, physical world interfaces to digital systems, and system performance analysis methods are studied. Students also learn HDL-Verilog to program CPLD devices and FPGA systems. Cross listed with ENCE 3100.

**ENCE 4210 Microprocessor Systems I (4 Credits)**

Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Cross listed with ENCE 3210.

**ENCE 4231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems.

**ENCE 4250 Advanced Hardware Description Language (HDL) Modeling and Synthesis (4 Credits)**

This course covers advanced concepts in Hardware Description and Language (HDL) modeling and Synthesis. It covers topics including but not limited to digital system design, simulation, and synthesis using Verilog HDL and VHDL. The course also covers RTL design, behavioral description, system Verilog, and timing analysis using CAD tools.

**ENCE 4501 Advanced VLSI Design (4 Credits)**

Advanced techniques in the fabrication and design of VLSI circuits and systems. Modeling of parasitic components. Floor-planning, clock distribution, routing, and low power design. Cross listed with ENCE 3501. Prerequisite: ENCE 3501 or permission of instructor.

**ENCE 4620 Advanced Computer Vision (4 Credits)**

This course covers advanced concepts in image processing and computer vision including but not limited to image radiometry and geometric formation, edge detection, geometric based transformations (e.g., image warping and morphing), camera calibration, Epipolar geometry, and stereo feature matching. Other advanced topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice advanced topics in image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 3620. Prerequisite: ENEE 3311.

**ENCE 4630 Advanced Pattern Recognition (4 Credits)**

This class covers advanced topics in pattern recognition including but not limited to Bayesian decision theory, parametric estimation and supervised learning, linear discriminant functions, nonparametric methods, feature extraction for representation and classification, manifold learning, bag of words, and Support Vector Machines. Cross listed with.

**ENCE 4631 Advanced Machine Learning (4 Credits)**

This class covers advanced topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep neural networks, deep learning, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE 3631.

**ENCE 4800 Advanced Topics (CPE) (1-5 Credits)**

Various topics in computer engineering as announced. May be taken more than once. Cross-listed with ENCE 3321, ENCE 3620.

**ENCE 4991 Independent Study (1-10 Credits)****ENCE 4995 Independent Research (1-18 Credits)****ENCE 5995 Independent Research (1-18 Credits)**

## Engineering, Electrical (ENEE)

**ENEE 3011 Physical Electronics (4 Credits)**

The basic physical concepts of electronics, electrons and holes in semiconductors, transport and optical processes. Concentration on device concepts, including material synthesis and device processing, P-N junction diodes, junctions with other materials, bipolar transistors, field effect transistors (JFET, MESFET, MOSFET) and optoelectronic effect transistors (JFET, MESFET, MOSFET) and optoelectronic devices (lasers, detectors). Prerequisites: CHEM 1010 or CHEM 1610, PHYS 1213 or PHYS 1214 or permission of instructor.

**ENEE 3111 Signals & Systems (4 Credits)**

Introduces continuous time and discrete time linear system analysis, Fourier series, Fourier transforms and Laplace transforms. Specific engineering tools for discrete time linear system analysis include discrete time convolution, Z-transform techniques, discrete Fourier transform and fast Fourier transform (DFT/FFT), and the design and analysis of analog and digital filters for real-world signal processing applications. Prerequisites: ENEE 2012, MATH 2070.

**ENEE 3141 Digital Communications (3 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels. Prerequisites: ENEE 3111, ENGR 3611 or permission of instructor.

**ENEE 3620 Optical Fiber Communications (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users with a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA) and ultra-fast optical time-division multiplexing (OTDM). Laboratory. Cross listed with ENEE 4620. Prerequisite: ENEE 3030 or permission of instructor.

**ENEE 3641 Introduction to Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Cross listed with ENEE 4640. Prerequisites: ENEE 3111, ENEE 2611 and ENEE 2223.

**ENEE 3670 Introduction to Digital Signal Processing (4 Credits)**

Introduction to the theory and applications of Digital Signal Processing. Special attention is paid to the fast Fourier transform and convolution and to the design and implementation of both FIR and IIR digital filters. Prerequisite: ENEE 3111.

**ENEE 4030 Optoelectronics (4 Credits)**

Optical fibers: structures, waveguiding, and fabrication; attenuation and dispersion; optical sources (LED, LASER, Fiber laser); power launching and coupling; photodetectors (APD, PIN, MSM); and practical optical transmitter and receivers. Cross listed with ENEE 3030.

**ENEE 4141 Digital Communications (4 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels.

**ENEE 4620 Adv Optical Fiber Comm (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users who have a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA), and ultra-fast optical time division multiplexing (OTDM). Advanced Project. Cross listed with ENEE 3620. Prerequisite: instructor permission.

**ENEE 4630 Optical Networking (4 Credits)**

This course provides a technical overview of optical networking. It gives students a solid understanding of optical networking field principles and practice. Underlying principles are reviewed along with common optical solutions and practices. It explains and provides practical tips on how to design and implement Networks. Examples are used to demonstrate key concepts of ATM, SONET/SDH and DWDM implementation. Prerequisite: ENEE 3011 or instructor approval.

**ENEE 4640 Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include: Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Final Project. Cross listed with ENEE 3641.

**ENEE 4800 Advanced Topics (EE) (1-5 Credits)**

Various advanced topics in electrical engineering as announced. May be taken more than once. Cross-listed with ENEE 3035.

**ENEE 4950 ECE Graduate Assessment (0 Credits)**

This class does not meet. All graduate (MS and PhD) ECE students will enroll in this class during their last quarter. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. The purpose is to collect data for the assessment and continuous improvement of the graduate programs.

**ENEE 4991 Independent Study (1-10 Credits)****ENEE 4995 Independent Research (1-16 Credits)****ENEE 5995 PhD Independent Research (1-10 Credits)****ENEE 6991 Ph.D Independent Study (1-10 Credits)****ENEE 6995 Independent Research (1-16 Credits)**

## Engineering, Systems (ENSY)

**ENSY 4010 Systems Engineering Fundamentals (3 Credits)**

An overview of systems engineering, including V-diagrams, functional architecture, physical architecture, system assembly and integration, verification and validation, and milestones to monitor the progress of the design.

**ENSY 4012 Systems Engineering Requirements Development (3 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. Spanning the requirements engineering phase, topics include: decomposition, derivation, allocation, verification and validation planning. Prerequisite: ENSY 4010, or permission of instructor.

**ENSY 4014 Complex System Architectures (3 Credits)**

The course focuses on mission requirements and how an overall mission should function by examining different architecture configurations and tools for modeling purposes. Topics include: allocation of functional and non-functional requirements, Service Oriented Architecture (SOA) and architectural modeling using the System Modeling Language (SysML). Prerequisite: ENSY 4010.

**ENSY 4016 Conceptual Design of Systems (3 Credits)**

Conceptual design is the part of the design process that yields a basic solution path, which leads to the principle solution. The focus of the course is on two important decision making principles: understanding a problem and devising a plan. Topics include: intellectual property and the development of engineering drawings, schematics and 3D models.

**ENSY 4021 Design of Space Systems Part 1 (3 Credits)**

This course is part one of a two-part series on spacecraft design by integrated systems and subsystems. Topics include: spacecraft overview, subsystem interfaces, concepts of operation (CONOPS) and the systems engineer's role as a generalist as opposed to specialists.

**ENSY 4022 Design of Space Systems Part 2 (3 Credits)**

This course is part two of a two-part series on spacecraft design by integrated systems and subsystems. Topics correspond to decomposition of the spacecraft into classical spacecraft subsystems. Practical applications and core functionality of these subsystems are presented, including required testing and integration at the subsystem and spacecraft levels. Prerequisite: ENSY 4021.

**ENSY 4024 Applied Electrical, Mechanical and Software Systems (3 Credits)**

This is a practice-centered course. Assess case studies of design, implementation and testing, validation and verification of complete complex (e.g. spacecraft) systems to meet mission requirements with performance guarantees. Prerequisites: ENSY 4012, ENSY 4014, and ENSY 4016, or permission by the Instructor.

**ENSY 4030 Introduction to Aerospace Missions (3 Credits)**

This class is for individuals working in aerospace engineering and related fields. Topics include: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic).

**ENSY 4040 Systems Optimization (3 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Assignments are in context of Systems Engineering case studies.

**ENSY 4042 Optimization for Advanced Systems (3 Credits)**

Advanced optimization algorithms are presented, as a pillar of data science and machine learning. Topics include: linear, nonlinear and integer programming models. Students will learn to understand tractability of models, particularly complex models as are central to the discipline of Systems Engineering. Prerequisite: ENSY 4040.

**ENSY 4050 Digital Transformation for Advanced Integration (3 Credits)**

Digital engineering technologies address the difficulties of managing complex and evolving technologies over their lifecycles of (i) development and (ii) operations & maintenance. This course will focus on digital technologies to integrate data across the enterprise, break organizational silos, and drive culture to realize risk reduction. Topics include: elements of the digital thread, such as digital twins and simulation, as well as machine learning and data analytics to inform decision-making throughout the lifecycle.

**ENSY 4060 Practical Model Based Systems Engineering (3 Credits)**

MBSE is part of a long-term trend toward model-centric approaches adopted by other engineering disciplines, including mechanical, electrical and software. In this course, students will be given hands-on access to MBSE tools in order to learn the UML/SysML language of MBSE and to practice systems engineering methods using the digital thread that is enabled by MBSE. Students will also gain an understanding of MBSE being a subset of Model Based Design (MBD). Prerequisite: ENSY 4050, or permission of instructor.

**ENSY 4090 Project Management in Relation to Systems Engineering (3 Credits)**

An overview of the skills and strategies for managing people, risks, schedules, and information to meet goals and objectives in large, complicated engineering projects. Includes managing project constraints, and best practices for working with project managers. Emphasis is on People, Process and the Business Environment.

**ENSY 4112 Practical Validation and Verification Test Planning (3 Credits)**

In this course, students gain a practical understanding of V-diagrams, and the path that must be traveled to fully validate and verify any system. Topics include: traceability between requirements and validation and verification test plans, including practical development of detailed test procedures at any level of integration. Prerequisite ENSY 4012, or permission by the instructor.

**ENSY 4170 Practical Approaches to Continuous Improvement (3 Credits)**

In this course, students learn practical differences between Continuous Improvement (CI) methods, such as Kaizen, Lean, Six Sigma, and Total Quality Management (TQM). Current events will be used as case studies to apply practical understanding of these CI methods. Practical application of the methods will leverage principles taught in ENSY 4010, ENSY 4071 and ENSY 4072. Case studies and assignments are based on illustrations of value added CI engineering in the Systems Engineering discipline. Prerequisites: ENSY 4010, ENSY 4071 and ENSY 4072; or instructor approval.

**ENSY 4180 Applied Mathematics for Systems Engineering (3 Credits)**

The course reviews topics in continuous and discrete mathematics (integral and differential calculus, matrices, vector calculus, discrete math: matrices, graphs, sets) and introductory probability, as they apply to engineering, and introduces students to more advanced concepts aiding the understanding and design of complex engineering systems. Examples are drawn from engineering systems applications. Students apply the techniques using engineering computing platform.

**ENSY 4181 Introductory Probability and Statistics for Systems Engineering (3 Credits)**

This course introduces fundamentals of probability for Systems Engineers. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. Techniques include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will apply methods to real-world engineering data, primarily using R.

**ENSY 4182 Data Analytics for Systems Engineering (3 Credits)**

This course is designed for students to develop skills in data analytics specifically tailored for systems engineering applications. It combines theoretical understanding with practical applications, covering various models for data inference, statistical methodologies, and the use of data analytics tools and software.

**ENSY 4200 Applied Machine Learning for Advanced Systems Modeling (3 Credits)**

This course covers topics in Machine Learning including Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, linear classification techniques such as Support Vector Machines, as well as Artificial Neural Networks and Deep Learning methods.

**ENSY 4950 Graduate Assessment for Master of Science degree in Systems Engineering (0 Credits)**

This class does not meet. All MS in Systems Engineering (MSSY) graduate students will enroll in this class during their last quarter. The purpose is to collect data for the assessment and continuous improvement of the graduate programs. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded.

## Engineering, Computer Courses

**ENCE 3231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems. Prerequisite: ENCE 3210.

**ENCE 3250 HDL Modeling & Synthesis (3 Credits)**

Introduction to Hardware Design Language (HDL). Language syntax and synthesis. Applications related to digital system implementation are developed. Project. Prerequisite: ENCE 2101 or instructor's permission.

**ENCE 3321 Network Design (4 Credits)**

Introduction to network components. Layering of network architecture. Analysis of Local Area Network (LAN) concepts and architecture based on IEEE standards. Design principles including switching and multiplexing techniques, physical link, signal propagation, synchronization, framing and error control. Application of probability and statistics in error detecting and control. Ethernet, Token-ring, FDDI (Fiber Distributed Data Interface), ATM (Asynchronous Transfer Mode), ISDN (Integrated Service Data Networks). Prerequisite: ENEE 3111, ENCE 2101 or permission of instructor.

**ENCE 3501 VLSI Design (3 Credits)**

Design of Very Large Scale Integration systems. Examination of layout and simulation of digital VLSI circuits using a comprehensive set of CAD tools in a laboratory setting. Studies of layouts of CMOS combinational and sequential circuits using automatic layout generators. Fundamental structures of the layout of registers, adders, decoders, ROM, PLA's, counters, RAM and ALU. Application of statistics and probability to chip performance. CAD tools allow logic verification and timing simulation of the circuits designed. Cross listed with ENCE 4501. Prerequisite: ENCE 3231.



**ENCE 3620 Computer Vision (4 Credits)**

This course is an introduction to the basic concepts in image processing and computer vision. First, an introduction to low-level image analysis methods, including radiometry and geometric image formation, edge detection, feature detection, and image segmentation are presented. Then, geometric-based image transformations (e.g., image warping and morphing) for image synthesis will be presented in the course. Furthermore, methods for reconstructing three-dimensional scenes including camera calibration, Epipolar geometry, and stereo feature matching are introduced. Other important topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 4620. Prerequisite: ENEE 3111.

**ENCE 3630 Pattern Recognition (4 Credits)**

This class provides an introduction to classical pattern recognition. Pattern recognition is the assignment of a physical object or event to one of several prescribed categories. Applications includes automated object recognition in image and videos, face identification, and optical character recognition. Major topics include Bayesian decision theory, Parametric estimation and supervised learning, Linear discriminant functions, Nonparametric methods, Feature extraction for representation and classification, Support Vector Machines. Cross listed with ENCE 4630.

**ENCE 3631 Machine Learning (4 Credits)**

This class covers topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep learning, neural networks, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE-4631.

**ENCE 4110 Modern Digital Systems Design (4 Credits)**

This course focuses on the design of digital systems using combinational, sequential, and programmable logic devices and Hardware Description Languages (HDL). Techniques for logic design including asynchronous logic, physical world interfaces to digital systems, and system performance analysis methods are studied. Students also learn HDL-Verilog to program CPLD devices and FPGA systems. Cross listed with ENCE 3100.

**ENCE 4210 Microprocessor Systems I (4 Credits)**

Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Cross listed with ENCE 3210.

**ENCE 4231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems.

**ENCE 4250 Advanced Hardware Description Language (HDL) Modeling and Synthesis (4 Credits)**

This course covers advanced concepts in Hardware Description and Language (HDL) modeling and Synthesis. It covers topics including but not limited to digital system design, simulation, and synthesis using Verilog HDL and VHDL. The course also covers RTL design, behavioral description, system Verilog, and timing analysis using CAD tools.

**ENCE 4501 Advanced VLSI Design (4 Credits)**

Advanced techniques in the fabrication and design of VLSI circuits and systems. Modeling of parasitic components. Floor-planning, clock distribution, routing, and low power design. Cross listed with ENCE 3501. Prerequisite: ENCE 3501 or permission of instructor.

**ENCE 4620 Advanced Computer Vision (4 Credits)**

This course covers advanced concepts in image processing and computer vision including but not limited to image radiometry and geometric formation, edge detection, geometric based transformations (e.g., image warping and morphing), camera calibration, Epipolar geometry, and stereo feature matching. Other advanced topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice advanced topics in image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 3620. Prerequisite: ENEE 3311.

**ENCE 4630 Advanced Pattern Recognition (4 Credits)**

This class covers advanced topics in pattern recognition including but not limited to Bayesian decision theory, parametric estimation and supervised learning, linear discriminant functions, nonparametric methods, feature extraction for representation and classification, manifold learning, bag of words, and Support Vector Machines. Cross listed with.

**ENCE 4631 Advanced Machine Learning (4 Credits)**

This class covers advanced topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep neural networks, deep learning, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE 3631.

**ENCE 4800 Advanced Topics (CPE) (1-5 Credits)**

Various topics in computer engineering as announced. May be taken more than once. Cross-listed with ENCE 3321, ENCE 3620.

**ENCE 4991 Independent Study (1-10 Credits)****ENCE 4995 Independent Research (1-18 Credits)****ENCE 5995 Independent Research (1-18 Credits)****Engineering, Electrical Courses****ENEE 3011 Physical Electronics (4 Credits)**

The basic physical concepts of electronics, electrons and holes in semiconductors, transport and optical processes. Concentration on device concepts, including material synthesis and device processing, P-N junction diodes, junctions with other materials, bipolar transistors, field effect transistors (JFET, MESFET, MOSFET) and optoelectronic effect transistors (JFET, MESFET, MOSFET) and optoelectronic devices (lasers, detectors). Prerequisites: CHEM 1010 or CHEM 1610, PHYS 1213 or PHYS 1214 or permission of instructor.

**ENEE 3111 Signals & Systems (4 Credits)**

Introduces continuous time and discrete time linear system analysis, Fourier series, Fourier transforms and Laplace transforms. Specific engineering tools for discrete time linear system analysis include discrete time convolution, Z-transform techniques, discrete Fourier transform and fast Fourier transform (DFT/FFT), and the design and analysis of analog and digital filters for real-world signal processing applications. Prerequisites: ENEE 2012, MATH 2070.

**ENEE 3141 Digital Communications (3 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels. Prerequisites: ENEE 3111, ENGR 3611 or permission of instructor.

**ENEE 3620 Optical Fiber Communications (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users with a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA) and ultra-fast optical time-division multiplexing (OTDM). Laboratory. Cross listed with ENEE 4620. Prerequisite: ENEE 3030 or permission of instructor.

**ENEE 3641 Introduction to Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Cross listed with ENEE 4640. Prerequisites: ENEE 3111, ENEE 2611 and ENEE 2223.

**ENEE 3670 Introduction to Digital Signal Processing (4 Credits)**

Introduction to the theory and applications of Digital Signal Processing. Special attention is paid to the fast Fourier transform and convolution and to the design and implementation of both FIR and IIR digital filters. Prerequisite: ENEE 3111.

**ENEE 4030 Optoelectronics (4 Credits)**

Optical fibers: structures, waveguiding, and fabrication; attenuation and dispersion; optical sources (LED, LASER, Fiber laser); power launching and coupling; photodetectors (APD, PIN, MSM); and practical optical transmitter and receivers. Cross listed with ENEE 3030.

**ENEE 4141 Digital Communications (4 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels.

**ENEE 4620 Adv Optical Fiber Comm (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users who have a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA), and ultra-fast optical time division multiplexing (OTDM). Advanced Project. Cross listed with ENEE 3620. Prerequisite: instructor permission.

**ENEE 4630 Optical Networking (4 Credits)**

This course provides a technical overview of optical networking. It gives students a solid understanding of optical networking field principles and practice. Underlying principles are reviewed along with common optical solutions and practices. It explains and provides practical tips on how to design and implement Networks. Examples are used to demonstrate key concepts of ATM, SONET/SDH and DWDM implementation. Prerequisite: ENEE 3011 or instructor approval.

**ENEE 4640 Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include: Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Final Project. Cross listed with ENEE 3641.

**ENEE 4800 Advanced Topics (EE) (1-5 Credits)**

Various advanced topics in electrical engineering as announced. May be taken more than once. Cross-listed with ENEE 3035.

**ENEE 4950 ECE Graduate Assessment (0 Credits)**

This class does not meet. All graduate (MS and PhD) ECE students will enroll in this class during their last quarter. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. The purpose is to collect data for the assessment and continuous improvement of the graduate programs.

**ENEE 4991 Independent Study (1-10 Credits)****ENEE 4995 Independent Research (1-16 Credits)****ENEE 5995 PhD Independent Research (1-10 Credits)****ENEE 6991 Ph.D Independent Study (1-10 Credits)****ENEE 6995 Independent Research (1-16 Credits)****Engineering, Systems Courses****ENSY 4010 Systems Engineering Fundamentals (3 Credits)**

An overview of systems engineering, including V-diagrams, functional architecture, physical architecture, system assembly and integration, verification and validation, and milestones to monitor the progress of the design.

**ENSY 4012 Systems Engineering Requirements Development (3 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. Spanning the requirements engineering phase, topics include: decomposition, derivation, allocation, verification and validation planning. Prerequisite: ENSY 4010, or permission of instructor.

**ENSY 4014 Complex System Architectures (3 Credits)**

The course focuses on mission requirements and how an overall mission should function by examining different architecture configurations and tools for modeling purposes. Topics include: allocation of functional and non-functional requirements, Service Oriented Architecture (SOA) and architectural modeling using the System Modeling Language (SysML). Prerequisite: ENSY 4010.

**ENSY 4016 Conceptual Design of Systems (3 Credits)**

Conceptual design is the part of the design process that yields a basic solution path, which leads to the principle solution. The focus of the course is on two important decision making principles: understanding a problem and devising a plan. Topics include: intellectual property and the development of engineering drawings, schematics and 3D models.

**ENSY 4021 Design of Space Systems Part 1 (3 Credits)**

This course is part one of a two-part series on spacecraft design by integrated systems and subsystems. Topics include: spacecraft overview, subsystem interfaces, concepts of operation (CONOPS) and the systems engineer's role as a generalist as opposed to specialists.

**ENSY 4022 Design of Space Systems Part 2 (3 Credits)**

This course is part two of a two-part series on spacecraft design by integrated systems and subsystems. Topics correspond to decomposition of the spacecraft into classical spacecraft subsystems. Practical applications and core functionality of these subsystems are presented, including required testing and integration at the subsystem and spacecraft levels. Prerequisite: ENSY 4021.

**ENSY 4024 Applied Electrical, Mechanical and Software Systems (3 Credits)**

This is a practice-centered course. Assess case studies of design, implementation and testing, validation and verification of complete complex (e.g. spacecraft) systems to meet mission requirements with performance guarantees. Prerequisites: ENSY 4012, ENSY 4014, and ENSY 4016, or permission by the Instructor.

**ENSY 4030 Introduction to Aerospace Missions (3 Credits)**

This class is for individuals working in aerospace engineering and related fields. Topics include: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic).

**ENSY 4040 Systems Optimization (3 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Assignments are in context of Systems Engineering case studies.

**ENSY 4042 Optimization for Advanced Systems (3 Credits)**

Advanced optimization algorithms are presented, as a pillar of data science and machine learning. Topics include: linear, nonlinear and integer programming models. Students will learn to understand tractability of models, particularly complex models as are central to the discipline of Systems Engineering. Prerequisite: ENSY 4040.

**ENSY 4050 Digital Transformation for Advanced Integration (3 Credits)**

Digital engineering technologies address the difficulties of managing complex and evolving technologies over their lifecycles of (i) development and (ii) operations & maintenance. This course will focus on digital technologies to integrate data across the enterprise, break organizational silos, and drive culture to realize risk reduction. Topics include: elements of the digital thread, such as digital twins and simulation, as well as machine learning and data analytics to inform decision-making throughout the lifecycle.

**ENSY 4060 Practical Model Based Systems Engineering (3 Credits)**

MBSE is part of a long-term trend toward model-centric approaches adopted by other engineering disciplines, including mechanical, electrical and software. In this course, students will be given hands-on access to MBSE tools in order to learn the UML/SysML language of MBSE and to practice systems engineering methods using the digital thread that is enabled by MBSE. Students will also gain an understanding of MBSE being a subset of Model Based Design (MBD). Prerequisite: ENSY 4050, or permission of instructor.

**ENSY 4090 Project Management in Relation to Systems Engineering (3 Credits)**

An overview of the skills and strategies for managing people, risks, schedules, and information to meet goals and objectives in large, complicated engineering projects. Includes managing project constraints, and best practices for working with project managers. Emphasis is on People, Process and the Business Environment.

**ENSY 4112 Practical Validation and Verification Test Planning (3 Credits)**

In this course, students gain a practical understanding of V-diagrams, and the path that must be traveled to fully validate and verify any system. Topics include: traceability between requirements and validation and verification test plans, including practical development of detailed test procedures at any level of integration. Prerequisite ENSY 4012, or permission by the instructor.

**ENSY 4170 Practical Approaches to Continuous Improvement (3 Credits)**

In this course, students learn practical differences between Continuous Improvement (CI) methods, such as Kaizen, Lean, Six Sigma, and Total Quality Management (TQM). Current events will be used as case studies to apply practical understanding of these CI methods. Practical application of the methods will leverage principles taught in ENSY 4010, ENSY 4071 and ENSY 4072. Case studies and assignments are based on illustrations of value added CI engineering in the Systems Engineering discipline. Prerequisites: ENSY 4010, ENSY 4071 and ENSY 4072; or instructor approval.

**ENSY 4180 Applied Mathematics for Systems Engineering (3 Credits)**

The course reviews topics in continuous and discrete mathematics (integral and differential calculus, matrices, vector calculus, discrete math: matrices, graphs, sets) and introductory probability, as they apply to engineering, and introduces students to more advanced concepts aiding the understanding and design of complex engineering systems. Examples are drawn from engineering systems applications. Students apply the techniques using engineering computing platform.

**ENSY 4181 Introductory Probability and Statistics for Systems Engineering (3 Credits)**

This course introduces fundamentals of probability for Systems Engineers. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. Techniques include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will apply methods to real-world engineering data, primarily using R.

**ENSY 4182 Data Analytics for Systems Engineering (3 Credits)**

This course is designed for students to develop skills in data analytics specifically tailored for systems engineering applications. It combines theoretical understanding with practical applications, covering various models for data inference, statistical methodologies, and the use of data analytics tools and software.

**ENSY 4200 Applied Machine Learning for Advanced Systems Modeling (3 Credits)**

This course covers topics in Machine Learning including Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, linear classification techniques such as Support Vector Machines, as well as Artificial Neural Networks and Deep Learning methods.

**ENSY 4950 Graduate Assessment for Master of Science degree in Systems Engineering (0 Credits)**

This class does not meet. All MS in Systems Engineering (MSSY) graduate students will enroll in this class during their last quarter. The purpose is to collect data for the assessment and continuous improvement of the graduate programs. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded.

## Engineering

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## Master's and Doctoral Degrees

### Why study engineering at the University of Denver?

The University of Denver's Daniel Felix Ritchie School of Engineering and Computer Science is creating the future of technology by providing a graduate education emphasizing cross-disciplinary knowledge. Engineering graduate students join the faculty in conducting cutting-edge research in emerging disciplines to develop unique solutions to old and new problems and opportunities.

The well-equipped laboratories contain state-of-the-art equipment and software to support research in biomedical engineering, advanced materials, robotics, mechanical design, and AI/machine learning, among others. Small classes support our multidisciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students' individual career goals.

The general engineering graduate student can choose courses from mechanical engineering, electrical engineering, computer engineering, computer science, materials science, and bioengineering.

Denver is a first-rate location for business, governmental and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and the University of Denver is located just minutes from the Denver Tech Center, site of many top technology companies. The Department of Mechanical and Materials Engineering is committed to active collaboration with these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector.

### Time Commitment

Our department recognizes that a student may be employed full-time while studying for a degree. Therefore, many courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. Many employers will permit additional flexibility by releasing employees early to attend classes. We also can provide hybrid and Zoom-based course options.

The master's program offers thesis and non-thesis options and can be completed in one (non-thesis track only) to four years depending on the number of courses taken per quarter. The choice of thesis or non-thesis can be made at any time, although a delay in declaration may impact the completion date.

The doctoral program is generally completed in three to seven years, depending on the number of courses taken per quarter and whether the student enters with a BS or MS.

A student not interested in pursuing a degree, but interested in taking an occasional course, may register as a special status student (<http://www.du.edu/learn/graduates/degreeprograms/>) by following an abbreviated admissions process. If at a later time the student chooses to enter a graduate degree program at DU, you may apply up to 15 special status credits to your degree, with departmental approval. Just follow the regular graduate application requirements, including submitting the application fee, to get started.

## Degree Programs

The following are our general engineering degrees. Please see the Mechanical and Materials Engineering Programs for our other graduate engineering degrees.

- Master of Science in Engineering (MS ENGE)
- Master of Science in Engineering with a Concentration in Engineering Management (MS ENGE (CM))
- Doctor of Philosophy in Engineering (PhD ENME)
- Doctor of Philosophy in Biomedical Engineering

### Doctor of Philosophy in Engineering

The Doctor of Philosophy in Engineering (PhD ENGE) program prepares students to contribute to the advancement of science, engineering, and technology through independent research. The PhD students of the 21st century may pursue academic, research, or industry careers. Individualized plans of study are based on students' previous experience and desired research areas. The plan of study allows students to work on interdisciplinary research, while also satisfying the PhD in engineering degree requirements.

The interdisciplinary Engineering PhD program offers opportunities for a student to develop a plan of study combining engineering and a complementary discipline (e.g. natural sciences). In the plan of study, coursework in the complementary discipline can be included up to the maximum number of technical elective credits. The student's plan of study must be approved by the PhD committee and the department chair. When the student is completing research and coursework in a complementary discipline, the student's PhD committee must include a faculty member from the related department or division/school.

For a part-time student who is working in an industry position, a topic related to the job function may be acceptable as the dissertation research topic. Furthermore, a student may request for a qualified staff member at the place of employment to serve as a special committee member on the dissertation committee.

### **Doctor of Philosophy in Biomedical Engineering**

The Doctor of Philosophy in Biomedical Engineering (PhD BME) program combines cross-disciplinary course work in engineering and life sciences. It trains students to carry out independent research in fields related to human health and well-being. The training combines engineering principles with sciences to further our understanding of health-related problems and to design and create novel methods, devices, and software to bring innovative solutions to these problems.

### **Master of Science in Engineering**

The Master of Science in Engineering (MS ENGE) is designed to advance the knowledge of students in areas differing from those in which they received their bachelor's degree. The program is particularly intended for students with bachelor's degrees in the natural sciences, mathematics, computer science or engineering who are making a change of discipline or wanting to develop expertise in an engineering area, often one that is of emerging importance or interdisciplinary in nature. The program combines a solid background in an area of engineering with a distinctly personal specialization. It enables the student to focus on a particular area of engineering, while providing breadth through its technical elective requirement addressing the student's specific interests.

A Master of Science in Engineering with a concentration in Management (CM) is also offered (see below). These engineering and management courses are focused on developing core knowledge and competencies in innovation and entrepreneurship, and providing concrete tools to successfully translate ideas and initiative into marketplace success.

### **Master of Science in Engineering with a Concentration in Engineering Management**

The degree of Master of Science in Engineering allows students to pursue a concentration in engineering management (MS ENGE(CM)). This is an engineering degree with both engineering and management focuses. The concentration in engineering management is designed to meet the increasing needs of students to enhance their career opportunities as managers or as entrepreneurs by supplementing advanced engineering knowledge with a fundamental understanding of business principles within the context of technology enterprises. Drawing upon the strengths of both RSECS and the Daniels College of Business, the program provides the relevant content for graduates to lead technology enterprises. Candidates for the degree of master of science with a concentration in management will be on the non-thesis track only.

## **Doctor of Philosophy in Biomedical Engineering**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Prerequisites**

- A bachelor's degree in engineering or related field from a regionally accredited college or university is required for admission to the program.

### **Standardized Test Scores**

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### **Other Required Materials**

PhD applicants should contact faculty to find a research advisor BEFORE submitting the application. Applications without a research advisor commitment may be considered for a master's program only.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Philosophy in Engineering

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Students with a master's degree in Engineering or closely related areas may apply for the PhD program in Engineering (ENGR). Admission with only a Bachelor of Science degree in this field is also possible, but such students are encouraged to enroll first in the MS ENGR program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

### Other Required Materials

- We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master's program only.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Engineering

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Students with a bachelor's degree in Engineering, Mathematics, Chemistry, Biology or Physics is normally required for admission to the MS Engineering with or without the concentration in Management (ENGR/ENGR CM) programs. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Biomedical Engineering

#### Degree requirements

Minimum number of credits required for the degree: 90 (45 for those who enter with a Master of Science degree)

#### PhD Students with a Bachelor of Science Degree Program Structure

**For students entering with a bachelor's degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.**

1. A minimum of 48 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor.
2. No courses at the 1000- or 2000-level are acceptable.
3. An overall GPA of 3.0 is required for the degree.
4. Any individual grade lower than C- renders the credit unacceptable.
5. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University.
6. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

#### Ph.D. Residence Requirement:

Enrollment in at least six quarters, including two consecutive quarters of full-time attendance is required for graduation.

#### Program Requirement Exam Structure

1. Each student must pass the **qualifying exam** to continue in the PhD program. A "mock research proposal" in an area related to the student's research. The student is expected to schedule this exam after 4 quarters. The qualifying exam can be retaken only once.
2. After completion of the qualifying exam and coursework, the student should schedule and take the **dissertation proposal exam**. The student will develop a research proposal (NSF or NIH format) for their proposed doctoral research project and orally defend their proposal. The dissertation proposal needs to be completed at least one year before the dissertation defense. The dissertation proposal exam can be retaken only once.
3. After successful completion of the qualifying exam and the dissertation proposal exam, the student is required to complete and **defend a dissertation** of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's guidelines and must be defended by the student in the final oral defense. The defense committee members will consist of the student's entire PhD committee. The dissertation defense can be retaken only once.

#### Course requirements

Code	Title	Credits
<b>Required Courses:</b>		
ENBI 4600	Biomedical Engineering: Technology, Research, and Design	4
ENBI 4610	Experimental Design in Biomedical Sciences	4
ENGR 4300	Advanced Numerical Methods	4
ENME 4900	Grad Professional Development	1
<b>Elective Core:</b>		<b>8</b>
<ul style="list-style-type: none"> <li>• Candidates with an engineering undergraduate degree and/or a master's degree in engineering must take graduate-level coursework in biological sciences or chemistry and biochemistry with the approval of their advisor. Biological sciences, chemistry, and biochemistry courses listed under technical electives below are acceptable but they can count only once, either as elective core course or technical core course but not both simultaneously.</li> <li>• Candidates without an engineering degree must take courses in engineering with the following prefixes ENCE, ENEE, ENME numbered 3000 or higher and must be approved by the advisor.</li> </ul>		
<b>Technical Electives</b>		<b>4</b>
Technical Electives for those with an engineering degree:		
BIOL 3241	Anatomy and Physiology of the Skeletal, Nervous and Muscular systems	
BIOL 3242	Human Anatomy and Physiology - Systems of homeostasis	
BIOL 3640	Introductory Neurobiology	
BIOL 3647	Neuroscience of Movement	
CHEM 3811	Biochemistry-Proteins	
ENBI 4500	Biofluids	
ENBI 4510	Biomechanics	
ENBI 4520	Introduction to Cardiovascular Engineering	
ENBI 4530	Biomechanics of Human Movement	



ENBI 4630	Biomaterials
ENBI 4800	Adv Topics (Bioengineering)
ENGR 3630	Finite Element Methods
ENGR 3450	Biosensing Technology
ENGR 3455/4455	Fluorescence and Its Applications in Biomedical Sensors
ENGR 4350	Reliability
ENGR 4620	Optimization

Technical Electives for those with a non-engineering degree:

ENBI 4500	Biofluids
ENBI 4510	Biomechanics
ENBI 4520	Introduction to Cardiovascular Engineering
ENBI 4530	Biomechanics of Human Movement
ENBI 4620	Bioelectronics
ENBI 4630	Biomaterials
ENBI 4800	Adv Topics (Bioengineering)
ENGR 3450	Biosensing Technology
ENGR 3455/4455	Fluorescence and Its Applications in Biomedical Sensors
ENGR 3620	Advanced Engineering Mathematics - Corporate
ENGR 3630	Finite Element Methods
ENGR 4100	Instrumentation and Data Acquisition
ENGR 4350	Reliability
ENGR 4620	Optimization

#### Research Coursework

ENGR 5995	Independent Research	20
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**Total Credits**

**45**

## Doctor of Philosophy in Engineering

### Program Requirements

#### Exam Structure:

1. Each student must pass the **qualifying exam** to continue in the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The Design exam is required for all participants, and is an open-book exam, where the student will have one week to prepare a written and oral response to an open-ended design problem. The other two exams are closed-book, written exams and should be related to the student's research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after prior to the first qualifying comprehensive exam was attempted.
2. After completion of the qualifying exam and coursework, the student should schedule and take the **comprehensive exam** attended by the student's PhD committee. The student will be expected to make a concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.
3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and **defend a dissertation** of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student's entire PhD committee. The dissertation defense can be retaken only once.

#### PhD Residence Requirement

Enrollment in at least six quarters, including two consecutive quarters of full-time attendance is required for graduation.

### PhD Students with a Bachelor of Science Degree

#### Program Structure

1. For students entering with a bachelor's degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.
2. A minimum of 48 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor.
3. No courses at the 1000- or 2000-level are acceptable.

4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University.
7. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

#### Course Requirements:

1. Candidates who hold only a bachelor's degree on entering the doctoral program are expected to **meet all degree requirements of the corresponding master's degree** program (as part of the doctoral requirements).
2. Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. NOTE: Students are required to complete a written self-reflection on their dissertation and provide their dissertation, defense presentation slides, and the completed and signed degree program plan before graduation.
3. PhD students who enter the program with a bachelor's are required to take ENME 4900 **Graduate Professional Development** in the first year (this is offered once a year; usually in winter quarter).

Code	Title	Credits
<b>Required Core Courses</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	0
<b>Mechanical Engineering Core Courses</b>		
ENGR 3630	Finite Element Methods	4
ENGR 4730	Introduction to Robotics	4
ENME 3545	Mechanisms	4
ENME 3651	Computational Fluid Dynamics	4
ENME 4020	Adv Finite Element Analysis	4
ENME 4360	Elasticity	4
ENME 4520	Intermediate Dynamics (Intermediate Dynamics)	4
ENME 4541	Advanced Mechanics of Materials	4
ENME 4630	Viscous Flow	4
ENME 4670	Advanced Computational Fluid Dynamics	4
ENME 4671	Convective Heat Transfer	4
ENME 4800	Advanced Topics (ME)	4
<b>Bioengineering Core Courses</b>		
ENBI 4500	Biofluids	4
ENBI 4510	Biomechanics	4
ENBI 4520	Introduction to Cardiovascular Engineering	4
ENBI 4800	Adv Topics (Bioengineering)	4
<b>Materials Science Core Courses</b>		
ENGR 4200	Introduction to Nanotechnology	4
ENME 4310	Computational Methods for Mechanics and Materials	4
ENME 4400	Fatigue	4
MTSC 4020	Composite Materials I	4
MTSC 4215	Composite Materials II	4
MTSC 4450	Fracture Mechanics	4
<b>Electrical &amp; Computer Engineering - Any 4XXX level ENEE or ENCE course</b>		
<b>Advanced Math Courses</b>		
ENGR 3621	Advanced Engineering Mathematics	4
ENGR 4300	Advanced Numerical Methods	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## PhD Students with a Master of Science

1. A minimum of 36 credits must be completed at the 4000- or 5000-level, which may include as many research credits as considered appropriate by the advisor.
2. For students entering with a master's degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. A student who holds a master's degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program.

### Course Requirements:

1. Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their dissertation and provide their dissertation, defense presentation slides, and the completed and signed degree program plan before graduation.
2. If a PhD student fails the qualifying exam on the first try, they will be required to take ENME 4900 **Graduate Professional Development** as well. ENME 4900 will be offered once a year, usually in winter quarter.

## Master's Degree Program

### Master of Science in Engineering

#### Program Structure (non-management option)

1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs. These programs are designed to be completed in about six quarters if two courses (eight credits) are taken each quarter.

### Course Requirements

1. **Core Courses:** a minimum of nine credits (two courses from ENME, MTSC, ENBI or ECE Core Course List; no more than one course from a single discipline) plus the required courses.
2. **Required Courses:** All master's students are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students on the **thesis track** are required to complete a written self-reflection on their thesis and provide their thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the **non-thesis track** are required to provide an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4950 along with the completed and signed degree program plan.
3. **Technical Electives:** a minimum of 16 credits for thesis track and 28 credits for non-thesis track. These do not include independent research credits.
  - a. Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor's discretion. 50% or more of the technical elective credits must be in engineering.
  - b. A student may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor **PRIOR TO REGISTRATION** if more than one business/management course is taken.
4. **Advanced Math Requirement:** a minimum of three credits for thesis track and six credits for non-thesis track from the Core Course List or advisor approval.
5. **Thesis Hours:** not allowed for non-thesis track.
6. **Tool Requirement:** As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

MS ENGE Thesis/Non-thesis **Minimum** Credit Requirements

Requirement	Thesis	Non-Thesis	CM
Core	9	9	NA
Technical Electives	16	28	NA
Advanced Math	3	6	NA
Thesis	0	NA	NA
Total Credits Required	45	45	NA

Code	Title	Credits
<b>Required Core Courses</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	1
<b>Mechanical Engineering Core Courses</b>		
ENGR 3630	Finite Element Methods	4
ENGR 4730	Introduction to Robotics	4
ENME 3545	Mechanisms	4
ENME 3651	Computational Fluid Dynamics	4
ENME 4020	Adv Finite Element Analysis	4
ENME 4360	Elasticity	4
ENME 4520	Intermediate Dynamics	4
ENME 4541	Advanced Mechanics of Materials	4
ENME 4630	Viscous Flow	4
ENME 4670	Advanced Computational Fluid Dynamics	4
ENME 4671	Convective Heat Transfer	4
ENME 4800	Advanced Topics (ME)	4
<b>Bioengineering Core Courses</b>		
ENBI 4500	Biofluids	4
ENBI 4510	Biomechanics	4
ENBI 4520	Introduction to Cardiovascular Engineering	4
ENBI 4800	Adv Topics (Bioengineering)	4
<b>Materials Science Core Courses</b>		
ENGR 4200	Introduction to Nanotechnology	4
ENME 4310	Computational Methods for Mechanics and Materials	4
ENME 4400	Fatigue	4
MTSC 4020	Composite Materials I	4
MTSC 4215	Composite Materials II	4
MTSC 4450	Fracture Mechanics	4
<b>Electrical &amp; Computer Engineering - Any 4XXX level ENEE or ENCE course</b>		
<b>Advanced Math Courses</b>		
ENGR 3621	Advanced Engineering Mathematics	4
ENGR 4300	Advanced Numerical Methods (Advanced Numerical Methods)	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## Engineering, Bio (ENBI)

### ENBI 4200 Medical Device Development (4 Credits)

Working in a fast-paced competitive biomedical R&D firm is a dramatic change of pace from most college classes. This course will create a realistic industry environment where students take on the role of development engineers to design and manufacture real-world medical devices. This course is intended to provide a working knowledge of the design and development process specifically for medical device applications.

**ENBI 4500 Biofluids (4 Credits)**

The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

**ENBI 4510 Biomechanics (4 Credits)**

An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

**ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)**

An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

**ENBI 4530 Biomechanics of Human Movement (4 Credits)**

An introduction to engineering-based analysis of human movement. Topics include: musculoskeletal anatomy, neuromuscular physiology, muscle mechanics, electromyography, sensorimotor integration, anthropometry, kinematics and kinetics. Recommended pre-requisite material: knowledge of MATLAB, ENGR 1572.

**ENBI 4600 Biomedical Engineering: Technology, Research, and Design (4 Credits)**

Introduction to Biomedical Engineering is an interdisciplinary course that combines engineering principles with biological and medical sciences to advance healthcare in areas such as diagnosis, monitoring, and therapy. The course provides a foundational understanding of biomedical engineering and prepares students for further study or careers in the field.

**ENBI 4610 Experimental Design in Biomedical Sciences (4 Credits)**

This course offers an in-depth exploration of experimental design principles within the biomedical sciences, emphasizing statistical analysis, measurement techniques, and ethical considerations. It aims to provide students with practical skills necessary for designing, conducting, and analyzing biomedical research.

**ENBI 4620 Bioelectronics (4 Credits)**

This course introduces the principles and applications of bioelectronics, focusing on the interface between biological systems and electronic devices. It covers the fundamentals of electronic circuits, signal processing, and sensor technology, and their applications in areas like biometric monitoring, neuroprosthetics, and biosensing.

**ENBI 4630 Biomaterials (4 Credits)**

This course provides an introduction to the field of biomaterials science, focusing on the fundamental principles, properties, and applications of materials used in biomedical engineering and healthcare. Topics covered include the classification of biomaterials, biocompatibility, interactions with biological systems, surface modifications, fabrication techniques, characterization techniques and current applications in tissue engineering, regenerative medicine, drug delivery, and medical devices.

**ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)**

Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)****ENBI 4995 Independent Research (1-18 Credits)**

## Engineering, Mechanical (ENME)

**ENME 2410 Materials Science I (3 Credits)**

Atomic structure, bonding and crystal structures in solids. Diffusion and crystal defects. Thermodynamics and phase equilibria in one-, two- and three-component systems, binary phase diagrams. Kinetics and phase transformations. Specific microstructure and mechanical properties of metals, glasses, ceramics, polymers and composites. Electrical conduction: energy levels and bands, charge carriers and insulators. Semiconductors of intrinsic and extrinsic types. Prerequisites: PHYS 1212, CHEM 1010, MATH 1952, and ENME 2710.

**ENME 2421 Materials Science II (3 Credits)**

Atomic structure, bonding and crystal structures in solids. Diffusion and crystal defects. Thermodynamics and phase equilibria in one-, two- and three-component systems, binary phase diagrams. Kinetics and phase transformations. Specific microstructure and mechanical properties of metals, glasses, ceramics, polymers and composites. Electrical conduction: energy levels and bands, charge carriers and insulators. Semiconductors of intrinsic and extrinsic types. Laboratory projects/demonstrations. Prerequisites: ENME 2410.

**ENME 2510 Statics (4 Credits)**

Study of static force systems. Topics include resolution and composition of forces and moments, equilibrium of two-dimensional and three-dimensional force systems, shear and moments in beams, friction, and moments of inertia. Includes a laboratory component where students will engage in hands-on projects that apply loading equilibrium, design of structures, and stress/strain. Prerequisites: MATH 1951 AND PHYS 1211.

**ENME 2520 Dynamics I with Lab (4 Credits)**

Particles Kinematics, Reference Frames, Coordinate Systems, Newton's Laws, Energy and Momentum, Multiparticle Systems, Collisions, Variable Mass Systems. These topics are addressed through analytical analysis, numerical simulation using Matlab, and experimental data collection. Cross listed with PHYS 2520. Corequisite: MATH 2080; Prerequisite: ENME 2510 AND MATH 2070.

**ENME 2530 Dynamics II (3 Credits)**

Rotating reference frames, rigid body kinematics, rigid body kinetics, Euler's Laws, inertia, energy and momentum, and three-dimensional motion. Cross listed with PHYS 2530. Prerequisites: ENME 2520.

**ENME 2540 System Dynamics (3 Credits)**

This course covers modeling, analysis, and control of single and multiple degree-of freedom dynamical systems, including mechanical, electrical, thermal, fluid systems and their combinations (mixed systems). Basic concepts in system theory, such as state variables and stability concepts, will be introduced as well as bond graph notation and approach. Prerequisites: ENME 2530, ENME 2661, ENGR 1572, and ENEE 2012.

**ENME 2541 Mechanics of Materials (3 Credits)**

Normal and shear stress and strain; elasticity, mechanical properties of materials, principal stresses; torsion, beams, deflection of beams under loads, methods of superposition, failure theory, columns. Prerequisite: ENME 2510.

**ENME 2651 Fluid Dynamics I (3 Credits)**

Course series provides students with the basic skill levels required to solve fluid-mechanics and heat transfer problems. Topics include hydrostatics, dimensional analysis, incompressible and compressible flows, conduction, convection and radiation. Students explore a variety of solution techniques such as control volume, differential analysis, boundary layer analysis, finite differencing and resistance network analogies. Prerequisite: ENME 2510 and MATH 2070.

**ENME 2661 Fluid Dynamics II/Heat Transfer I (3 Credits)**

Course series provides students with the basic skills levels required to solve fluid-mechanics and heat transfer problems. Topics include hydrostatics, dimensional analysis, incompressible and compressible flows, conduction, convection and radiation. Students explore a variety of solution techniques such as control volume, differential analysis, boundary layer analysis, finite differencing and resistance network analogies. Prerequisite: ENME 2651.

**ENME 2671 Heat Transfer II with Lab (4 Credits)**

Course series provides students with the basic skill levels required to solve fluid-mechanics and heat transfer problems. Topics include hydrostatics, dimensional analysis, incompressible and compressible flows, conduction, convection and radiation. Students explore a variety of solution techniques such as control volume, differential analysis, boundary layer analysis, finite differencing and resistance network analogies. Prerequisite: ENME 2661.

**ENME 2710 Engineering Thermodynamics I (3 Credits)**

Properties of a pure substance. Use of tables of properties. First and second laws of thermodynamics for closed and open systems. Work, heat, power and entropy. Engine, power plant and refrigeration cycles. Gas mixtures, thermodynamic relations and chemical reactions. Prerequisite: PHYS 1212.

**ENME 2720 Engineering Thermodynamics II (3 Credits)**

Properties of a pure substance. Use of tables of properties. First and second laws of thermodynamics for closed and open systems. Work, heat, power and entropy. Engine, power plant and refrigeration cycles. Gas mixtures, thermodynamic relations and chemical reactions. Prerequisite: ENME 2710.

**ENME 2810 Mechanical Engineering Lab I (3 Credits)**

Engineering experiments illustrating selected topics in heat transfer, fluid mechanics, solid mechanics, thermodynamics, measurement and control. Use of microcomputers in experimentation and control. This course encourages the development of laboratory experimentation skills, design skills and technical writing skills. Prerequisites: ENME 2540 AND ENME 2671.

**ENME 3320 Computer Aided Design and Analysis (4 Credits)**

Introduction to the use of computer aided design and analysis with applications to solid and fluid mechanics, heat transfer and vibrations; projects in one or more of the above areas. Emphasis on how to use the software to analyze engineering systems. Prerequisites ENME 2541 and ENME 2651.

**ENME 3400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue, and reliability. Cross listed with ENME 4400.

**ENME 3511 Machine Design (3 Credits)**

Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

**ENME 3545 Mechanisms (4 Credits)**

Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

**ENME 3651 Computational Fluid Dynamics (4 Credits)**

This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

**ENME 3661 Mechanical Energy Systems Engineering (4 Credits)**

This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

**ENME 3720 Aerospace Engineering: Atmospheric Flight Dynamics (4 Credits)**

This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3730 Aerospace Engineering: Space Flight Dynamics (4 Credits)**

This course is focused on the aerospace discipline of space environment and orbital mechanics. The topics in this discipline are discussed in detail and provide aid in designing spacecraft/space missions. Some of the topics covered in this course include space environment, satellite orbits, spacecraft configurations, transfer orbits, and elementary space propulsion. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)**

This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

**ENME 3820 Topics Mechanical Engineering (0-5 Credits)**

Mechanical engineering topics as announced. May be taken more than once. Prerequisite: vary with offering.

**ENME 3991 Independent Study (1-5 Credits)**

Topics in mechanical engineering investigated under faculty supervision. May be taken more than once. Students must obtain and complete an Independent Study form from the Office of the Registrar. Prerequisite: permission of instructor.

**ENME 3995 Independent Research (1-10 Credits)****ENME 4020 Adv Finite Element Analysis (4 Credits)****ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)**

An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

**ENME 4360 Elasticity (4 Credits)**

Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

**ENME 4400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

**ENME 4520 Intermediate Dynamics (4 Credits)**

Development and analysis of dynamic systems through classical approaches. Topics will include: Vector algebraic/differential geometry for 3D translational and rotational kinematic analyses with motion constraints. Formulation of equations of motion for 3D multibody systems using: Newton/Euler equations; Angular momentum principle; and D'Alembert principle (aka road-maps). Some exposure to Euler-Lagrange and Kane's Methods calculations. Symbolic and numerical computational solutions to linear/nonlinear algebraic and differential equations governing the configuration, forces, and motion of systems with multiple degrees of freedom. Recommended prerequisites: MATH 2070.

**ENME 4530 Advanced Dynamics (4 Credits)**

Formulation of equations of motion for constrained 3D multibody systems with: D'Alembert principle (MG road-maps); power, work, and energy; Lagrange's equations; and Kane's method. Euler parameters/quaternions, specified motion, constraint force/torque calculations, feed-forward control, inequality constraints and/or intermittent contact. Tensors and mass property calculations. Symbolic and numerical computer skills for geometry/kinematic analysis, mass/inertia calculations, forces and motion, and simulation of multi-body dynamic systems. Training for advanced research and professional work. Recommended pre-requisite: ENME 4520.

**ENME 4541 Advanced Mechanics of Materials (4 Credits)**

This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

**ENME 4630 Viscous Flow (4 Credits)**

Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

**ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)**

Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

**ENME 4671 Convective Heat Transfer (4 Credits)**

The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

**ENME 4800 Advanced Topics (ME) (0-5 Credits)**

Determined by interest and demand. May be taken more than once for credit.

**ENME 4900 Grad Professional Development (1 Credit)**

This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

**ENME 4950 Graduate Assessment (0 Credits)**

This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

**ENME 4991 Independent Study (1-10 Credits)****ENME 4995 Independent Research (1-16 Credits)****ENME 5991 Independent Study (1-10 Credits)****ENME 5995 Independent Research (1-16 Credits)**

## Engineering (ENGR)

**ENGR 3340 Product Development and Market Feasibility (4 Credits)**

In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

**ENGR 3450 Biosensing Technology (4 Credits)**

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. This course provides instruction in the basic science and engineering concepts required to understand the design and application of biosensors. This module serves as an introduction to some of the biosensors and measurement techniques.

**ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**

This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2012.

**ENGR 3520 Introduction to Power Electronics (4 Credits)**

This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

**ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**

In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.



**ENGR 3540 Electric Power Systems (4 Credits)**

This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

**ENGR 3620 Advanced Engineering Mathematics - Corporate (4 Credits)**

Applied mathematics for engineers. Systems and series solutions of ordinary differential equations, Fourier analysis, partial differential equations, linear algebra, vector calculus, special functions, unconstrained and combinatorial optimization, and applied probability and statistics. Prerequisites: MATH 2070 and MATH 2080 or instructor permission.

**ENGR 3621 Advanced Engineering Mathematics (4 Credits)**

Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

**ENGR 3630 Finite Element Methods (4 Credits)**

Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

**ENGR 3650 Probability and Statistics for Engineers (4 Credits)**

This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

**ENGR 3721 Controls (3,4 Credits)**

Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2022, ENGR 3611 or permission of instructor.

**ENGR 3722 Control Systems Laboratory (1 Credit)**

This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

**ENGR 3730 Robotics (3 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

**ENGR 3731 Robotics Lab (1 Credit)**

Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

**ENGR 3800 Topics (ENGR) (1-4 Credits)**

Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENGR 3900 Engineering Internship (0-4 Credits)**

Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

**ENGR 4100 Instrumentation and Data Acquisition (4 Credits)**

This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

**ENGR 4200 Introduction to Nanotechnology (4 Credits)**

The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3200.

**ENGR 4300 Advanced Numerical Methods (4 Credits)**

Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

**ENGR 4350 Reliability (4 Credits)**

An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design.

**ENGR 4455 Fluorescence and Its Applications in Biomedical Sensors (4 Credits)**

The course introduces the principles of fluorescence and its applications in the real world. It covers various topics including fluorophores (dye, fluorescent proteins, quantum dots, etc.), nanomaterials and nanostructures, design of biomedical sensors, point-of-care systems, and wearable devices. Cross listed with ENGR 3455.

**ENGR 4501 Graduate Capstone Design I (3 Credits)**

This is a project-centered course. This is the first third of a practical class that plans the engineering design project prior to addressing the design in earnest. This requires teamwork to develop the plan that details the schedule, cost, and who is responsible for which portions of the design effort. In this segment, the engineering teams establish the starting point for the design. This class puts theory into practice with the "shredding" of the RFP, defining a strategy for the team, balancing what has to be done with existing constraints, understanding the "true" problem of the customer, capturing the associated risks, and capturing margins required for the start of any design activity.

**ENGR 4502 Graduate Capstone Design II (3 Credits)**

This is a project-centered course. This is the second third of a practical class that implements the engineering design process (left side of the vee). This requires teamwork to develop the detailed design, which is a continuation of the accepted proposal. In this segment, the engineering teams add the details to a conceptual design. This class puts theory into practice with requirements development, balancing requirements against the constraints, completing a functional decomposition, developing a CONOPs document, developing a physical architecture, developing a functional architecture, and defining the interfaces through an ICD.

**ENGR 4503 Graduate Capstone Design III (3 Credits)**

This is a project-centered course. This is the third of a practical class that implements the engineering design process (right side of the vee). This requires teamwork to build, checkout, and test the final product. In this segment, the engineering teams build or procure hardware as a step towards the integration of the system. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. Test data is collected through instrumentation of the final product with a buy-out and certification by the team. Testing may include performance testing and environmental testing as envisioned in the context diagram.

**ENGR 4504 Graduate Capstone Design IV (3 Credits)**

This is a project-centered course. This is the fourth of a practical class that implements the entire engineering "vee" design process. This requires teamwork to build, checkout, and test the final design product, e.g. hypothetical missile. In this segment, the engineering teams fine-tune the design process which may address advanced topics such as fault management and resilience. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. It may also include addressing the beginning of the program through early management and pre-phase A activities. Test data is collected through instrumentation of the final product with a buy-in and certification by the team. Testing may include performance testing, functional testing, and environmental testing as envisioned in the system process.

**ENGR 4530 Intro to Power and Energy (4 Credits)**

Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

**ENGR 4545 Electric Power Economy (4 Credits)**

This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3545.

**ENGR 4560 Power Generation Operation and Control (4 Credits)**

This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 3530 or ENGR 4530 or permission of instructor.

**ENGR 4590 Power System Protection (4 Credits)**

This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 3530 or ENGR 4530.

**ENGR 4620 Optimization (4 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Optimization methods will be developed and evaluated in code and used in a real-world application project.

**ENGR 4622 Advanced Optimization (4 Credits)**

Optimization is an indispensable tool for many fields of science and engineering and is one of the pillars of data science and machine learning. This course introduces optimization methods that are suitable for large-scale problems arising in data science, machine learning, and other engineering applications. We will discuss the development, computation, and convergence aspects for algorithms including gradient methods, accelerated methods, quasi-Newton methods, stochastic optimization, variance reduction, online optimization, as well as distributed optimization. We will also exploit the efficacy of these methods in concrete data science problems, including learning low-dimensional models, deep learning, and (possible) reinforcement learning. This course together with ENGR 4620 Optimization will provide in-depth introductions to optimization.

**ENGR 4680 Fault Diagnosis & Prognostics for System Design (4 Credits)**

Reliability engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability, describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time. Normally, quality focuses on the prevention of defects during the warranty phase whereas reliability looks at preventing failures during the useful lifetime of the product or system from commissioning to decommissioning. Diagnosis is used, with variations in the use of logic, analytics, and experience, to determine "cause and effect". In systems engineering, it is typically used to determine the causes of symptoms, mitigations, and solutions. Prognostics is an engineering discipline focused on predicting the time at which a system or a component will no longer perform its intended function. This lack of performance is most often a failure beyond which the system can no longer be used to meet desired performance. The predicted time then becomes the remaining useful life (RUL), which is an important concept in decision making for contingency mitigation. Success in this course requires knowledge of probability theory and statistics, and familiarity with MATLAB/Simulink.

**ENGR 4723 Digital Control (4 Credits)**

The course focuses on modeling, analysis, and design of digital control systems. Topics include: z-Transform and difference equations; sampling and aliasing; Zero-Order Hold (ZOH); A/D and D/A conversions; pulse transfer function representation; time and frequency domain representations; input/output analysis; analysis of sample data systems; stability; design of discrete-time controllers; introduction to state-space representation. Cross listed with ENGR 3723. Prerequisites: ENGR 3721 and ENGR 3722.

**ENGR 4730 Introduction to Robotics (4 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.

**ENGR 4735 Linear Systems (4 Credits)**

This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3611, ENGR 3721, ENGR 3722, or permission of the instructor.

**ENGR 4740 Adaptive Control Systems (4 Credits)**

Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisite: ENGR 3721 or permission of instructor. Familiarity with MATLAB/Simulink.

**ENGR 4745 Adv Non-Linear Control System (4 Credits)**

Nonlinear system analysis methods: Existence of solutions of ODEs, uniqueness, continuity, compactness, fixed point, linearization, metric spaces, Contraction Mapping Theorem, Gronwall-Bellman lemma. Phase plane analysis; Limit Cycles. Lyapunov stability of autonomous and non-autonomous systems. Circle criterion, absolute stability, Popov criterion. Passivity and Lyapunov stability. Input-to-State stability. Small Gain Theorem. Describing functions. Nonlinear control system synthesis methods: Passivity-based control. Stability via Feedback Linearization. Lie derivatives.

**ENGR 4750 Networked Control Systems (4 Credits)**

Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

**ENGR 4755 Optimal Control (4 Credits)**

Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Lagrange multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

**ENGR 4760 Multivariable Control (4 Credits)**

Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and 'mu' synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

**ENGR 4765 Robot Control (4 Credits)**

The course focuses on different techniques, methods, and theories for control of robots. The topics covered include: introduction to nonlinear control theory, review of independent joint control, nonlinear and multivariable robot control, feedback linearization control of robots, control of underactuated robots, control of nonholonomic and mobile robots. force and impedance control, and vision-based control. Pre-requisite or co-requisite: ENGR 3730 or ENGR 4730, or equivalent is recommended.

**ENGR 4790 Systems Engineering Requirements (4 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. It spans the whole requirements engineering phase that includes requirements analysis, decomposition, derivation, allocation, verification and validation planning. Students acquire expertise in creating UML and SYML case diagrams and in defining and implementing verification and validation plans. Requirement management methods and tools, associated vernacular, and requirements configuration control are also covered. Prerequisites: ENMT 4100, or permission by the Instructor.

**ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)****ENGR 4865 Design, Innovation, and Entrepreneurship (4 Credits)**

The course focuses on design and innovation of engineering systems and products. It deals with entrepreneurship, critical and innovative thinking, creativity and lateral thinking, research and technology challenges that lead to innovation, entrepreneurship and new product development, problem solving and decision making. It discusses factors that affect innovation (e.g. tech insertion), as well as a wide range of case studies in diverse application domains. Course Requirements: Projects.

**ENGR 4910 Conceptual Design (4 Credits)**

Conceptual design is the part of the design process where—by identifying the essential problems through abstraction, establishing function structures, searching for appropriate working principles and combining these into a working structure—the basic solution path is laid down through the elaboration of a solution principle. Conceptual design specifies the principle solution. Concept design rarely starts at the same point; you might have an existing design that needs iterating or the requirement to create a conceptualized form. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. George Polya (mathematician) presented two important decision-making principles, understanding the problem and devising a plan. To understand what is new, students are asked to look at intellectual property, a category of property that includes intangible creations of the human intellect. There are many types of intellectual property such as patents, and some countries recognize more than others. Designers assess the many different directions a design could take at this stage will allow you to identify what you like and don't like from each one. The preferred concept will then be further developed using engineering drawings, schematics and possibly 3D models which will show how the design will look and operate.

**ENGR 4920 Aerospace Missions (4 Credits)**

The Design "Problem" in Advanced Aerospace Systems describes the problems in the conceptual design of various types of aircraft, spacecraft, and complex vehicles. It covers the following topics: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic). Problem statements are concise descriptions of design problems. Design teams use them to define the current and ideal states, to freely find user-centered solutions. This class stands as a reference of interest to engineers and scientists working in aerospace engineering and related topics.

**ENGR 4940 Mission Operation Controls (4 Credits)**

Space operations is based at a centralized control center, a facility used for command & control (C2), and related communication equipment (antennas, etc.). The human operators conduct the day-to-day operations for controlling the spacecraft. They control the spacecraft and its payloads, and carries out all activities related to mission planning and scheduling. For example, normal orbital operations are interrupted every six months to conduct orbital maneuvers. Launch operations begin with spacecraft integration and checked-out for launch. Once safely placed in orbit, command and control goes back and forth between the ground control station and the spacecraft or satellite. A key aspect of spacecraft operations is the transferring of data from the onboard instruments collected by its payload to the ground, eventually disseminating the data to concerned users and analysts through a ground data network. This requires an on-orbit communication architecture.

**ENGR 4991 Independent Study (1-5 Credits)****ENGR 4995 Independent Research (1-16 Credits)****ENGR 5991 Independent Study (0-10 Credits)****ENGR 5995 Independent Research (1-16 Credits)**

## Materials Science (MTSC)

**MTSC 3010 Mechanical Behavior of Materials (4 Credits)**

Effects of microstructure on mechanical behavior of materials (metals, polymers, ceramics and composites); emphasis on recent developments in materials science, modulus, fracture (fracture toughness and brittle strength), fatigue, creep, wear, friction, stress rupture and deformation. Cross listed with MTSC 4010. Prerequisites: ENME 2421.

**MTSC 3020 Composite Materials I (4 Credits)**

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 4020. Prerequisites: ENME 2410 and ENME 2541.

**MTSC 3450 Fracture Mechanics (4 Credits)**

Topics include stress field at a crack tip, linear fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 4450. Prerequisites: ENME 2421 and ENME 2541.

**MTSC 3800 Topics in Materials Science (1-5 Credits)**

Various topics in materials science as announced. May be taken more than once. Prerequisite: varies with each topic.

**MTSC 4010 Mechanical Behavior of Materials (4 Credits)**

Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

**MTSC 4020 Composite Materials I (4 Credits)**

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 3020.

**MTSC 4215 Composite Materials II (4 Credits)**

A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

**MTSC 4450 Fracture Mechanics (4 Credits)**

Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

**MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)**

Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

**MTSC 4991 Independent Study (1-10 Credits)****MTSC 4995 Independent Research (1-16 Credits)****MTSC 5995 Independent Research (1-16 Credits)**

## Engineering Courses

**ENGR 3340 Product Development and Market Feasibility (4 Credits)**

In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

**ENGR 3450 Biosensing Technology (4 Credits)**

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. This course provides instruction in the basic science and engineering concepts required to understand the design and application of biosensors. This module serves as an introduction to some of the biosensors and measurement techniques.

**ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**

This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2012.

**ENGR 3520 Introduction to Power Electronics (4 Credits)**

This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

**ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**

In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

**ENGR 3540 Electric Power Systems (4 Credits)**

This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

**ENGR 3620 Advanced Engineering Mathematics - Corporate (4 Credits)**

Applied mathematics for engineers. Systems and series solutions of ordinary differential equations, Fourier analysis, partial differential equations, linear algebra, vector calculus, special functions, unconstrained and combinatorial optimization, and applied probability and statistics. Prerequisites: MATH 2070 and MATH 2080 or instructor permission.

**ENGR 3621 Advanced Engineering Mathematics (4 Credits)**

Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

**ENGR 3630 Finite Element Methods (4 Credits)**

Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

**ENGR 3650 Probability and Statistics for Engineers (4 Credits)**

This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

**ENGR 3721 Controls (3,4 Credits)**

Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2022, ENGR 3611 or permission of instructor.

**ENGR 3722 Control Systems Laboratory (1 Credit)**

This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

**ENGR 3730 Robotics (3 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

**ENGR 3731 Robotics Lab (1 Credit)**

Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

**ENGR 3800 Topics (ENGR) (1-4 Credits)**

Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENGR 3900 Engineering Internship (0-4 Credits)**

Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

**ENGR 4100 Instrumentation and Data Acquisition (4 Credits)**

This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

**ENGR 4200 Introduction to Nanotechnology (4 Credits)**

The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3200.

**ENGR 4300 Advanced Numerical Methods (4 Credits)**

Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

**ENGR 4350 Reliability (4 Credits)**

An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design.

**ENGR 4455 Fluorescence and Its Applications in Biomedical Sensors (4 Credits)**

The course introduces the principles of fluorescence and its applications in the real world. It covers various topics including fluorophores (dye, fluorescent proteins, quantum dots, etc.), nanomaterials and nanostructures, design of biomedical sensors, point-of-care systems, and wearable devices. Cross listed with ENGR 3455.

**ENGR 4501 Graduate Capstone Design I (3 Credits)**

This is a project-centered course. This is the first third of a practical class that plans the engineering design project prior to addressing the design in earnest. This requires teamwork to develop the plan that details the schedule, cost, and who is responsible for which portions of the design effort. In this segment, the engineering teams establish the starting point for the design. This class puts theory into practice with the "shredding" of the RFP, defining a strategy for the team, balancing what has to be done with existing constraints, understanding the "true" problem of the customer, capturing the associated risks, and capturing margins required for the start of any design activity.

**ENGR 4502 Graduate Capstone Design II (3 Credits)**

This is a project-centered course. This is the second third of a practical class that implements the engineering design process (left side of the vee). This requires teamwork to develop the detailed design, which is a continuation of the accepted proposal. In this segment, the engineering teams add the details to a conceptual design. This class puts theory into practice with requirements development, balancing requirements against the constraints, completing a functional decomposition, developing a CONOPs document, developing a physical architecture, developing a functional architecture, and defining the interfaces through an ICD.

**ENGR 4503 Graduate Capstone Design III (3 Credits)**

This is a project-centered course. This is the third of a practical class that implements the engineering design process (right side of the vee). This requires teamwork to build, checkout, and test the final product. In this segment, the engineering teams build or procure hardware as a step towards the integration of the system. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. Test data is collected through instrumentation of the final product with a buy-out and certification by the team. Testing may include performance testing and environmental testing as envisioned in the context diagram.

**ENGR 4504 Graduate Capstone Design IV (3 Credits)**

This is a project-centered course. This is the fourth of a practical class that implements the entire engineering "vee" design process. This requires teamwork to build, checkout, and test the final design product, e.g. hypothetical missile. In this segment, the engineering teams fine-tune the design process which may address advanced topics such as fault management and resilience. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. It may also include addressing the beginning of the program through early management and pre-phase A activities. Test data is collected through instrumentation of the final product with a buy-in and certification by the team. Testing may include performance testing, functional testing, and environmental testing as envisioned in the system process.

**ENGR 4530 Intro to Power and Energy (4 Credits)**

Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

**ENGR 4545 Electric Power Economy (4 Credits)**

This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3545.

**ENGR 4560 Power Generation Operation and Control (4 Credits)**

This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 3530 or ENGR 4530 or permission of instructor.

**ENGR 4590 Power System Protection (4 Credits)**

This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 3530 or ENGR 4530.

**ENGR 4620 Optimization (4 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Optimization methods will be developed and evaluated in code and used in a real-world application project.

**ENGR 4622 Advanced Optimization (4 Credits)**

Optimization is an indispensable tool for many fields of science and engineering and is one of the pillars of data science and machine learning. This course introduces optimization methods that are suitable for large-scale problems arising in data science, machine learning, and other engineering applications. We will discuss the development, computation, and convergence aspects for algorithms including gradient methods, accelerated methods, quasi-Newton methods, stochastic optimization, variance reduction, online optimization, as well as distributed optimization. We will also exploit the efficacy of these methods in concrete data science problems, including learning low-dimensional models, deep learning, and (possible) reinforcement learning. This course together with ENGR 4620 Optimization will provide in-depth introductions to optimization.

**ENGR 4680 Fault Diagnosis & Prognostics for System Design (4 Credits)**

Reliability engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability, describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time. Normally, quality focuses on the prevention of defects during the warranty phase whereas reliability looks at preventing failures during the useful lifetime of the product or system from commissioning to decommissioning. Diagnosis is used, with variations in the use of logic, analytics, and experience, to determine "cause and effect". In systems engineering, it is typically used to determine the causes of symptoms, mitigations, and solutions. Prognostics is an engineering discipline focused on predicting the time at which a system or a component will no longer perform its intended function. This lack of performance is most often a failure beyond which the system can no longer be used to meet desired performance. The predicted time then becomes the remaining useful life (RUL), which is an important concept in decision making for contingency mitigation. Success in this course requires knowledge of probability theory and statistics, and familiarity with MATLAB/Simulink.

**ENGR 4723 Digital Control (4 Credits)**

The course focuses on modeling, analysis, and design of digital control systems. Topics include: z-Transform and difference equations; sampling and aliasing; Zero-Order Hold (ZOH); A/D and D/A conversions; pulse transfer function representation; time and frequency domain representations; input/output analysis; analysis of sample data systems; stability; design of discrete-time controllers; introduction to state-space representation. Cross listed with ENGR 3723. Prerequisites: ENGR 3721 and ENGR 3722.

**ENGR 4730 Introduction to Robotics (4 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.

**ENGR 4735 Linear Systems (4 Credits)**

This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3611, ENGR 3721, ENGR 3722, or permission of the instructor.

**ENGR 4740 Adaptive Control Systems (4 Credits)**

Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisite: ENGR 3721 or permission of instructor. Familiarity with MATLAB/Simulink.

**ENGR 4745 Adv Non-Linear Control System (4 Credits)**

Nonlinear system analysis methods: Existence of solutions of ODEs, uniqueness, continuity, compactness, fixed point, linearization, metric spaces, Contraction Mapping Theorem, Gronwall-Bellman lemma. Phase plane analysis; Limit Cycles. Lyapunov stability of autonomous and non-autonomous systems. Circle criterion, absolute stability, Popov criterion. Passivity and Lyapunov stability. Input-to-State stability. Small Gain Theorem. Describing functions. Nonlinear control system synthesis methods: Passivity-based control. Stability via Feedback Linearization. Lie derivatives.



**ENGR 4750 Networked Control Systems (4 Credits)**

Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

**ENGR 4755 Optimal Control (4 Credits)**

Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Lagrange multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

**ENGR 4760 Multivariable Control (4 Credits)**

Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and  $\mu$  synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

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The course focuses on different techniques, methods, and theories for control of robots. The topics covered include: introduction to nonlinear control theory, review of independent joint control, nonlinear and multivariable robot control, feedback linearization control of robots, control of underactuated robots, control of nonholonomic and mobile robots. force and impedance control, and vision-based control. Pre-requisite or co-requisite: ENGR 3730 or ENGR 4730, or equivalent is recommended.

**ENGR 4790 Systems Engineering Requirements (4 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. It spans the whole requirements engineering phase that includes requirements analysis, decomposition, derivation, allocation, verification and validation planning. Students acquire expertise in creating UML and SYML case diagrams and in defining and implementing verification and validation plans. Requirement management methods and tools, associated vernacular, and requirements configuration control are also covered. Prerequisites: ENMT 4100, or permission by the Instructor.

**ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)****ENGR 4865 Design, Innovation, and Entrepreneurship (4 Credits)**

The course focuses on design and innovation of engineering systems and products. It deals with entrepreneurship, critical and innovative thinking, creativity and lateral thinking, research and technology challenges that lead to innovation, entrepreneurship and new product development, problem solving and decision making. It discusses factors that affect innovation (e.g. tech insertion), as well as a wide range of case studies in diverse application domains. Course Requirements: Projects.

**ENGR 4910 Conceptual Design (4 Credits)**

Conceptual design is the part of the design process where—by identifying the essential problems through abstraction, establishing function structures, searching for appropriate working principles and combining these into a working structure— the basic solution path is laid down through the elaboration of a solution principle. Conceptual design specifies the principle solution. Concept design rarely starts at the same point; you might have an existing design that needs iterating or the requirement to create a conceptualized form. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. George Polya (mathematician) presented two important decision-making principles, understanding the problem and devising a plan. To understand what is new, students are asked to look at intellectual property, a category of property that includes intangible creations of the human intellect. There are many types of intellectual property such as patents, and some countries recognize more than others. Designers assess the many different directions a design could take at this stage will allow you to identify what you like and don't like from each one. The preferred concept will then be further developed using engineering drawings, schematics and possibly 3D models which will show how the design will look and operate.

**ENGR 4920 Aerospace Missions (4 Credits)**

The Design "Problem" in Advanced Aerospace Systems describes the problems in the conceptual design of various types of aircraft, spacecraft, and complex vehicles. It covers the following topics: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic). Problem statements are concise descriptions of design problems. Design teams use them to define the current and ideal states, to freely find user-centered solutions. This class stands as a reference of interest to engineers and scientists working in aerospace engineering and related topics.

**ENGR 4940 Mission Operation Controls (4 Credits)**

Space operations is based at a centralized control center, a facility used for command & control (C2), and related communication equipment (antennas, etc.). The human operators conduct the day-to-day operations for controlling the spacecraft. They control the spacecraft and its payloads, and carries out all activities related to mission planning and scheduling. For example, normal orbital operations are interrupted every six months to conduct orbital maneuvers. Launch operations begin with spacecraft integration and checked-out for launch. Once safely placed in orbit, command and control goes back and forth between the ground control station and the spacecraft or satellite. A key aspect of spacecraft operations is the transferring of data from the onboard instruments collected by its payload to the ground, eventually disseminating the data to concerned users and analysts through a ground data network. This requires an on-orbit communication architecture.

**ENGR 4991 Independent Study (1-5 Credits)****ENGR 4995 Independent Research (1-16 Credits)****ENGR 5991 Independent Study (0-10 Credits)****ENGR 5995 Independent Research (1-16 Credits)****Engineering, Bio Courses****ENBI 4200 Medical Device Development (4 Credits)**

Working in a fast-paced competitive biomedical R&D firm is a dramatic change of pace from most college classes. This course will create a realistic industry environment where students take on the role of development engineers to design and manufacture real-world medical devices. This course is intended to provide a working knowledge of the design and development process specifically for medical device applications.

**ENBI 4500 Biofluids (4 Credits)**

The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

**ENBI 4510 Biomechanics (4 Credits)**

An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

**ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)**

An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

**ENBI 4530 Biomechanics of Human Movement (4 Credits)**

An introduction to engineering-based analysis of human movement. Topics include: musculoskeletal anatomy, neuromuscular physiology, muscle mechanics, electromyography, sensorimotor integration, anthropometry, kinematics and kinetics. Recommended pre-requisite material: knowledge of MATLAB, ENGR 1572.

**ENBI 4600 Biomedical Engineering: Technology, Research, and Design (4 Credits)**

Introduction to Biomedical Engineering is an interdisciplinary course that combines engineering principles with biological and medical sciences to advance healthcare in areas such as diagnosis, monitoring, and therapy. The course provides a foundational understanding of biomedical engineering and prepares students for further study or careers in the field.

**ENBI 4610 Experimental Design in Biomedical Sciences (4 Credits)**

This course offers an in-depth exploration of experimental design principles within the biomedical sciences, emphasizing statistical analysis, measurement techniques, and ethical considerations. It aims to provide students with practical skills necessary for designing, conducting, and analyzing biomedical research.

**ENBI 4620 Bioelectronics (4 Credits)**

This course introduces the principles and applications of bioelectronics, focusing on the interface between biological systems and electronic devices. It covers the fundamentals of electronic circuits, signal processing, and sensor technology, and their applications in areas like biometric monitoring, neuroprosthetics, and biosensing.

**ENBI 4630 Biomaterials (4 Credits)**

This course provides an introduction to the field of biomaterials science, focusing on the fundamental principles, properties, and applications of materials used in biomedical engineering and healthcare. Topics covered include the classification of biomaterials, biocompatibility, interactions with biological systems, surface modifications, fabrication techniques, characterization techniques and current applications in tissue engineering, regenerative medicine, drug delivery, and medical devices.

**ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)**

Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)****ENBI 4995 Independent Research (1-18 Credits)****Engineering, Mechanical Courses****ENME 3320 Computer Aided Design and Analysis (4 Credits)**

Introduction to the use of computer aided design and analysis with applications to solid and fluid mechanics, heat transfer and vibrations; projects in one or more of the above areas. Emphasis on how to use the software to analyze engineering systems. Prerequisites ENME 2541 and ENME 2651.

**ENME 3511 Machine Design (3 Credits)**

Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

**ENME 3545 Mechanisms (4 Credits)**

Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

**ENME 3651 Computational Fluid Dynamics (4 Credits)**

This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretizations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

**ENME 3661 Mechanical Energy Systems Engineering (4 Credits)**

This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

**ENME 3720 Aerospace Engineering: Atmospheric Flight Dynamics (4 Credits)**

This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3730 Aerospace Engineering: Space Flight Dynamics (4 Credits)**

This course is focused on the aerospace discipline of space environment and orbital mechanics. The topics in this discipline are discussed in detail and provide aid in designing spacecraft/space missions. Some of the topics covered in this course include space environment, satellite orbits, spacecraft configurations, transfer orbits, and elementary space propulsion. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)**

This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

**ENME 4020 Adv Finite Element Analysis (4 Credits)****ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)**

An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

**ENME 4360 Elasticity (4 Credits)**

Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

**ENME 4400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

**ENME 4520 Intermediate Dynamics (4 Credits)**

Development and analysis of dynamic systems through classical approaches. Topics will include: Vector algebraic/differential geometry for 3D translational and rotational kinematic analyses with motion constraints. Formulation of equations of motion for 3D multibody systems using: Newton/Euler equations; Angular momentum principle; and D'Alembert principle (aka road-maps). Some exposure to Euler-Lagrange and Kane's Methods calculations. Symbolic and numerical computational solutions to linear/nonlinear algebraic and differential equations governing the configuration, forces, and motion of systems with multiple degrees of freedom. Recommended prerequisites: MATH 2070.

**ENME 4530 Advanced Dynamics (4 Credits)**

Formulation of equations of motion for constrained 3D multibody systems with: D'Alembert principle (MG road-maps); power, work, and energy; Lagrange's equations; and Kane's method. Euler parameters/quaternions, specified motion, constraint force/torque calculations, feed-forward control, inequality constraints and/or intermittent contact. Tensors and mass property calculations. Symbolic and numerical computer skills for geometry/kinematic analysis, mass/inertia calculations, forces and motion, and simulation of multi-body dynamic systems. Training for advanced research and professional work. Recommended pre-requisite: ENME 4520.

**ENME 4541 Advanced Mechanics of Materials (4 Credits)**

This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability.

Recommended prerequisite: ENME 2541.

**ENME 4630 Viscous Flow (4 Credits)**

Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

**ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)**

Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

**ENME 4671 Convective Heat Transfer (4 Credits)**

The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

**ENME 4800 Advanced Topics (ME) (0-5 Credits)**

Determined by interest and demand. May be taken more than once for credit.

**ENME 4900 Grad Professional Development (1 Credit)**

This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

**ENME 4950 Graduate Assessment (0 Credits)**

This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

**ENME 4991 Independent Study (1-10 Credits)****ENME 4995 Independent Research (1-16 Credits)****ENME 5991 Independent Study (1-10 Credits)****ENME 5995 Independent Research (1-16 Credits)****Materials Science Courses****MTSC 4010 Mechanical Behavior of Materials (4 Credits)**

Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

**MTSC 4020 Composite Materials I (4 Credits)**

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 3020.

**MTSC 4215 Composite Materials II (4 Credits)**

A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

**MTSC 4450 Fracture Mechanics (4 Credits)**

Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

**MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)**

Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

**MTSC 4991 Independent Study (1-10 Credits)**

**MTSC 4995 Independent Research (1-16 Credits)**

**MTSC 5995 Independent Research (1-16 Credits)**

## Mechanical and Materials Engineering

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Email: [mmeinfo@du.edu](mailto:mmeinfo@du.edu)

Web Site: <http://ritchieschool.du.edu/departments/mme/>

### Master's and Doctoral Degrees Offered

#### Why study engineering at the University of Denver?

The University of Denver's Department of Mechanical and Materials Engineering is creating the future of technology by providing a graduate education emphasizing cross-disciplinary knowledge. A distinguished faculty is creating multidisciplinary education and research programs that anticipate technological trends in research and industry. Engineering graduate students join the faculty in conducting cutting-edge research in emerging disciplines to develop unique solutions to old and new problems and opportunities.

The well-equipped laboratories in the department contain state-of-the-art equipment and software to support research in biomedical engineering, advanced materials, robotics, mechanical design, and AI/machine learning, among others. Small classes support our multidisciplinary and real-time focus by providing close contact between students and faculty, which allows us to meet students' individual career goals.

Recognizing the different aims and goals of students, we offer several degree programs for students who wish to add to their technical skills in various areas: MS in Bioengineering; MS and PhD in Materials Science; and MS and PhD in Mechanical Engineering.

Denver is a first-rate location for business, governmental and laboratory partnerships, and technology employment. The Colorado Front Range is consistently rated as one of the top high-tech areas in the country, and the University of Denver is located just minutes from the Denver Tech Center, site of many top technology companies. The Department of Mechanical and Materials Engineering is committed to active collaboration with these industry leaders. As a result, our students graduate with relevant research experience and a network of employment contacts in the technology sector.

#### Time Commitment

Our department recognizes that a student may be employed full-time while studying for a degree. Therefore, many courses are offered at times and on days that will permit a student to complete the program by taking courses either late in the day or outside normal business hours. Many employers will permit additional flexibility by releasing employees early to attend classes. We also can provide hybrid and Zoom-based course options.

The master's program offer thesis and non-thesis options and can be completed in one (non-thesis track only) to four years depending on the number of courses taken per quarter. The choice of thesis or non-thesis can be made at any time, although a delay in declaration may impact the completion date.

The doctoral program is generally completed in three to seven years, depending on the number of courses taken per quarter and whether the student enters with a BS or MS.

A student not interested in pursuing a degree, but interested in taking an occasional course, may register as special status students (<http://www.du.edu/learn/graduates/degreeprograms/>) by following an abbreviated admissions process. If at a later time the student chooses to enter a graduate degree program at DU, you may apply up to 15 special status credits to your degree, with departmental approval. Just follow the regular graduate application requirements, including submitting the application fee, to get started.

### Degree Programs

Below are our graduate engineering degrees:

- Master of Science in Bioengineering
- Master of Science in Engineering (p. 295)(See Engineering program listing)
- Master of Science in Engineering with a Concentration in Management (p. 295)(See Engineering program listing)
- Master of Science in Materials Science
- Master of Science in Mechanical Engineering
- Doctor of Philosophy in Engineering (p. 295)(See Engineering program listing)
- Doctor of Philosophy in Materials Science
- Doctor of Philosophy in Mechanical Engineering

## Doctor of Philosophy in Materials Science

The Doctor of Philosophy in Materials Science program is designed to prepare the student for research or faculty position in the materials field. The program is multidisciplinary and involves the Departments of Physics and Astronomy, Chemistry and Biochemistry, Electrical and Computer Engineering, with the Mechanical and Materials Engineering Department administering the degree. The programs reflect the multidisciplinary nature by providing a thorough grounding in each of the basic disciplines of the field. Depth in specialized areas is achieved through the research interests of faculty in each of the participating departments. With an increasing number of technological fields becoming materials-limited in various ways, the program seeks to prepare students to meet the challenges of property improvement and new materials development, with a broad-based curriculum that stresses fundamentals.

## Doctor of Philosophy in Mechanical Engineering

The objective of the Doctor of Philosophy in Mechanical Engineering program is to provide an educational environment that encourages students to develop the ability to contribute to the advancement of mechanical engineering through independent research.

## Master of Science in Bioengineering

The Master of Science in Bioengineering program integrates engineering sciences with biomedical sciences and clinical practice to provide the skill set needed by bioscience companies. The Department of Mechanical and Materials Engineering—in collaboration with the Departments of Electrical and Computer Engineering, Chemistry & Biochemistry, Biological Sciences, and Physics & Astronomy—has designed a cross-disciplinary master of science program to address industrial requirements and the desired qualifications of a 21st century workforce in bioengineering businesses. Students with bachelor's degrees in chemistry, biological sciences or physics, as well as those with accredited engineering degrees, acquire a specialized expertise in bioengineering through programs which leverage the individual students' undergraduate experience and expertise resident at DU.

## Master of Science in Materials Science

The Master of Science in Materials Science program is designed to prepare the student for research and development work in the materials field. The program is multidisciplinary and involves the Departments of Physics, Chemistry and Engineering, with the Mechanical and Materials Engineering Department administering the degree. The programs reflect the multidisciplinary nature by providing a thorough grounding in each of the basic disciplines of the field. Depth in specialized areas is achieved through the research interests of faculty in each of the participating departments. With an increasing number of technological fields becoming materials-limited in various ways, the program seeks to prepare students to meet the challenges of property improvement and new materials development, with a broad-based curriculum that stresses fundamentals.

## Master of Science in Mechanical Engineering

The Master of Science in Mechanical Engineering program is intended for students with undergraduate degrees in mechanical engineering or a closely related field. It is designed to advance a student's knowledge in mechanical engineering topics related to their specific area of interest. The degree provides breadth through its flexible technical elective requirement, while permitting the students to achieve depth in one of several core areas: solid mechanics, fluid mechanics, heat transfer, biomechanics and robotics. These areas are grounded in the fundamentals of the field with connections to emerging technologies and applications with promise for the future. The purpose of the program is to prepare students to tackle a wide range of engineering challenges and to serve the profession of engineering through advanced study in mechanical engineering and related multidisciplinary areas.

## Doctor of Philosophy in Mechanical Engineering or Materials Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Mechanical Engineering: Students with a master's degree in Mechanical Engineering or closely related areas may apply for the PhD program in Mechanical Engineering (ENME). Admission with only a Bachelor of Science degree in this field is also possible, but such students are encouraged to enroll first in the MS ENME program.
- Materials Science: A bachelor's degree or master's degree in materials science or closely related field (physics, metallurgy, engineering or chemistry) is usually required for admission to Materials Science. If the student did not receive adequate preparation for studying materials, they are encouraged to apply for the master's degree.

### Other Required Materials

- We recommend PhD applicants contact faculty to find a research advisor BEFORE submitting the application. If we receive an application and there is no research advisor commitment, we will consider the applicant for the master's program only.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Master of Science in Bioengineering****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Students with a bachelor's degree in Engineering, Chemistry, Biology or Physics is normally required for admission to the MS Bioengineering (ENBI) program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Master of Science in Mechanical Engineering****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Students with a bachelor's degree in Mechanical Engineering or closely related field is normally required for admission to the MS Mechanical Engineering (ENME) program.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Science in Materials Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Students with a bachelor's degree in Materials Science, Engineering, Physics, Metallurgy, or Chemistry is normally required for admission to the MS Materials Science (MTSC) program. Note that although not an admission requirement, students who are not adequately prepared to succeed in our graduate level courses may choose to complete prerequisite undergraduate courses.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Materials Science

#### Program Requirements

##### PhD Residence Requirement

Enrollment in at least six quarters, including at least two consecutive quarters of full-time attendance is required for graduation.

#### Exam Structure

1. Each student must pass the **qualifying exam** to obtain official entrance into the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The design exam is required for all participants, and is an open book exam, where the student will have one week to prepare a written and oral response to an open ended design problem. The other two exams are closed-book written exams and should be related to the student's research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after the first qualifying exam was attempted.
2. After completion of the qualifying exam and coursework, the student should schedule and take the **comprehensive exam** attended by the student's PhD committee. The student will be expected to make concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.
3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and **defend a dissertation** of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's Graduate School guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student's entire PhD committee. The dissertation defense can be retaken only once.

### PhD Students with a Bachelor of Science

#### Program Structure:

1. For students entering with a bachelor's degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.
2. A minimum of 48 credits must be at the 4000 or 5000 level and may include as many dissertation research credits as considered appropriate by the advisor.



- No courses at the 1000 or 2000 level are acceptable.
- An overall GPA of 3.0 is required for the degree.
- Any individual grade lower than C- renders the credit unacceptable.
- Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
- Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

#### Course Requirements:

- Candidates who hold only a bachelor's degree on entering the doctoral program are expected to **meet all degree requirements of the corresponding master's degree program** (as part of the doctoral requirements).
- Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
- PhD students who enter the program with a bachelor's are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter).

Code	Title	Credits
<b>Required Core Courses</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	0
<b>Materials Science Core Courses</b>		
ENGR 4200	Introduction to Nanotechnology	4
ENME 4400	Fatigue	4
MTSC 4020	Composite Materials I	4
ENME 4310	Computational Methods for Mechanics and Materials	4
MTSC 4215	Composite Materials II	4
MTSC 4450	Fracture Mechanics	4
<b>Advanced Math Courses</b>		
ENGR 3620	Advanced Engineering Mathematics - Corporate	4
ENGR 4300	Advanced Numerical Methods (Advanced Numerical Methods)	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

#### PhD Students with a Master of Science

##### Program Structure

- A minimum of 36 credits must be completed at the 4000- or 5000-level, which may include as many research credits as considered appropriate by the advisor.
- For students entering with a master's degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
- No courses at the 1000- or 2000-level are acceptable.
- An overall GPA of 3.0 is required for the degree.
- Any individual grade lower than C- renders the credit unacceptable.
- Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
- A student who holds a master's degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program.

##### Course Requirements

- Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
- If a PhD student fails his/her qualifying exam on the first try, he/she will be required to take ENME 4900 **Graduate Professional Development** as well. ENME 4900 will be offered once a year, usually in winter quarter.

## Doctor of Philosophy in Mechanical Engineering

### Program Requirements

#### PhD Residence Requirement

Enrollment in at least six quarters, including at least two consecutive quarters of full-time attendance is required for graduation.

#### Exam Structure

1. Each student must pass the **qualifying exam** to obtain official entrance into the PhD program. In consultation with the advisor, students should expect to take the qualifying exam about one year (24 credits) into their academic study. Students must take exams in three subject areas. The design exam is required for all participants, and is an open book exam, where the student will have one week to prepare a written and oral response to an open ended design problem. The other two exams are closed-book written exams and should be related to the student's research area. The exam is offered twice a year: once in the summer interterm (usually in June) and once in the winter interterm (usually in December or early January). The qualifying exam can be retaken only once, and must be completed within one year after the first qualifying exam was attempted.
2. After completion of the qualifying exam and coursework, the student should schedule and take the **comprehensive exam** attended by the student's PhD committee. The student will be expected to make concise presentation on his/her dissertation topic. The presentation will highlight previous work in this area, demonstrate a need for the research, and explain how the research will contribute to the advancement of the area. The student will also present completed work and results, anticipated work and results, and a detailed plan for project completion. The comprehensive exam can be retaken only once.
3. After successful completion of the qualifying exam and the comprehensive exam, the student is required to complete and **defend a dissertation** of publishable quality based on the student's original research. The dissertation must be completed in written form in accordance with the University's Graduate School guidelines, and must be defended by the student in the final oral defense. The defense committee members will consist of the student's entire PhD committee. The dissertation defense can be retaken only once.

### PhD Students with a Bachelor of Science

#### Program Structure

1. For students entering with a bachelor's degree, 90 credits are required, at least 75 of which must be completed at the University of Denver.
2. A minimum of 48 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Students must complete all requirements for the doctoral degree no later than eight years after doctoral studies begin.

#### Course Requirements

1. Candidates who hold only a bachelor's degree on entering the doctoral program are expected to **meet all degree requirements of the corresponding master's degree program** (as part of the doctoral requirements).
2. Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and provide their thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
3. PhD students who enter the program with a bachelor's are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter).

Code	Title	Credits
<b>Required Core Courses</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	0
<b>Mechanical Engineering Core Mechanical Courses</b>		
ENGR 3630	Finite Element Methods	4
ENGR 4730	Introduction to Robotics	4
ENME 3545	Mechanisms	4
ENME 3651	Computational Fluid Dynamics	4
ENME 4020	Adv Finite Element Analysis	4
ENME 4360	Elasticity	4
ENME 4520	Intermediate Dynamics	4
ENME 4541	Advanced Mechanics of Materials	4
ENME 4630	Viscous Flow	4
ENME 4670	Advanced Computational Fluid Dynamics	4

ENME 4671	Convective Heat Transfer	4
ENME 4800	Advanced Topics (ME)	4
<b>Advanced Math Courses</b>		
ENGR 3620	Advanced Engineering Mathematics - Corporate	4
ENGR 4300	Advanced Numerical Methods	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## PhD Students with a Master of Science

### Program Structure:

1. A minimum of 36 credits must be at the 4000- or 5000-level and may include as many dissertation research credits as considered appropriate by the advisor. The total number of credits required for the degree is 90.
2. For students entering with a master's degree, up to 45 credits may be transferred and applied to the doctorate degree. In addition, a minimum of 45 credits must be completed at DU. The total number of credits required for the degree is 90.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 90 credits and are still working on the dissertation are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Students must complete all requirements for the doctoral degree no later than seven years after doctoral studies begin.

### Course Requirements:

1. Students are required to take ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation.
2. If a PhD student fails the qualifying exam on the first try, they will be required to take ENME 4900 **Graduate Professional Development** as well. ENME 4900 will be offered once a year, usually in winter quarter.

## Master's Degree Programs

### Master of Science in Bioengineering

#### Program Structure

1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.

#### Course Requirements

1. **Core Courses:** a minimum of nine credits (two courses from the Bioengineering Core Course List plus required courses) for both thesis and non-thesis tracks.
2. **Required Courses:** All master's students are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students on the **thesis track** are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the **non-thesis track** are required to upload to Assess-It an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900, along with the completed and signed degree program plan.
3. **Minor Elective Courses:** minimum of eight credits for thesis track; eight credits for non-thesis track. A minor is required by each student and is intended to provide bioengineering students with additional knowledge in an area unassociated with their undergraduate degree. Candidates with non-engineering undergraduate degrees must take courses in engineering chosen from regular engineering course offerings numbered 3000 or higher and must be approved by the advisor. Candidates with engineering undergraduate degrees must take graduate-level coursework in biological sciences, chemistry and biochemistry, or physics and biophysics.

4. **Technical Electives:** a minimum of eight credits for thesis track and 20 credits for non-thesis track. These do not include independent research credits.
  - a. Technical elective courses are intended to provide bioengineering students an opportunity to take additional course work that will expand their knowledge of advanced engineering topics. 50% or more of the technical elective credits must be chosen from engineering course offerings numbered 3000 or higher and approved by the student's advisor.
  - b. Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor **PRIOR TO REGISTRATION** if more than one business/management course is taken.
5. **Advanced Math Requirement:** a minimum of three credits for both thesis track and non-thesis track from Core Course List or advisor approval.
6. **Thesis Hours:** not allowed for non-thesis track.
7. **Tool Requirement:** As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

MS ENBI Minimum	Thesis (QH)	Non-Thesis (QH)
Core	9	9
Minor Electives	8	8
Technical Electives	8	20
Advanced Math	3	3
Thesis	0	N/A
Total Credits Required	45	45

Code	Title	Credits
<b>Required Core Courses for MS</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	0
<b>Bioengineering Core Courses</b>		
ENBI 4500	Biofluids	4
ENBI 4510	Biomechanics	4
ENBI 4520	Introduction to Cardiovascular Engineering	4
ENBI 4530	Biomechanics of Human Movement	4
ENBI 4200	Medical Device Development	4
ENBI 4800	Adv Topics (Bioengineering)	4
<b>Advanced Math Courses</b>		
ENGR 3620	Advanced Engineering Mathematics - Corporate	4
ENGR 4300	Advanced Numerical Methods	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## Master of Science in Materials Science

### MS Program Structure

1. Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
2. A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
3. No courses at the 1000- or 2000-level are acceptable.
4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.
8. **International students** must enroll in at least eight credits each quarter to maintain full-time status, except during the annual vacation term (usually the summer quarter) or the final quarter of study that requires fewer credits than the minimum full-time enrollment to complete the

program. Failure to maintain full-time enrollment is a violation of student status and may result in the termination from the program. Based on the recommendation of the academic advisor, an international student advisor may authorize the student to drop below full-time status for academic reasons specifically permitted under immigration regulations. However, academic authorizations may only be given once per degree level and are usually issued during the first term of study.

### Course Requirements

- Core Courses:** a minimum of nine credits (two courses from the Materials Science Core Course List plus required courses) for both thesis and non-thesis tracks.
- Required Courses:** All master's students are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students on the **thesis track** are required to complete a written self-reflection on their thesis and upload the report to Assess-It along with thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the **non-thesis track** are required to upload to Assess-It an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900, along with the completed and signed degree program plan.
- Technical Electives:** a minimum of 16 credits for thesis track and 28 credits non-thesis track. These do not include independent research credits.
  - Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor's discretion. 50% or more of the technical elective credits must be in engineering.
  - Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor **PRIOR TO REGISTRATION** if more than one business/management course is taken.
- Advanced Math Requirement:** a minimum of three credits for thesis track and six credits for non-thesis track from Core Course List or advisor approval.
- Thesis Hours:** not allowed for non-thesis track.

MS MTSC Minimum	Thesis (QH)	Non-Thesis (QH)
Core	9	9
Technical Electives	16	28
Advanced Math	3	6
Thesis	0	N/A
Total Credits Required	45	45

Code	Title	Credits
<b>Required Core Courses for MS</b>		
ENME 4900	Grad Professional Development	1
ENME 4950	Graduate Assessment	0
<b>Materials Science Core Courses</b>		
ENGR 4200	Introduction to Nanotechnology	4
ENME 4400	Fatigue	4
ENME 4310	Computational Methods for Mechanics and Materials	4
MTSC 4020	Composite Materials I	4
MTSC 4215	Composite Materials II	4
MTSC 4450	Fracture Mechanics	4
<b>Advanced Math Courses</b>		
ENGR 3620	Advanced Engineering Mathematics - Corporate	4
ENGR 4300	Advanced Numerical Methods (Advanced Numerical Methods)	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## Master of Science in Mechanical Engineering

### Program Structure

- Every candidate for this degree must complete 45 credits, at least 36 of which must be completed at the University of Denver.
- A minimum of six 4000-level courses of at least three credits each are required for non-thesis track; four 4000-level courses of at least three credits each are required for thesis track.
- No courses at the 1000- or 2000-level are acceptable.

4. An overall GPA of 3.0 is required for the degree.
5. Any individual grade lower than C- renders the credit unacceptable.
6. Students who have completed the required 45 credits and are still working on a thesis or project are eligible for Continuous Enrollment to maintain active student status at the University. Students working on internships are not eligible for Continuous Enrollment.
7. Master's degree candidates are expected to complete degree requirements no later than five years after beginning their programs.
8. **International students** must enroll in at least eight credits each quarter to maintain full-time status, except during the annual vacation term (usually the summer quarter) or the final quarter of study that requires fewer credits than the minimum full-time enrollment to complete the program. Failure to maintain full-time enrollment is a violation of student status and may result in the termination from the program. Based on the recommendation of the academic advisor, an international student advisor may authorize the student to drop below full-time status for academic reasons specifically permitted under immigration regulations. However, academic authorizations may only be given once per degree level and are usually issued during the first term of study.

### Course Requirements

1. **Core Courses:** a minimum of nine credits (two courses from the Mechanical Engineering Core Course List plus required courses) for both thesis and non-thesis tracks.
2. **Required Courses:** All master's students are required to take ENME 4900 **Graduate Professional Development** in the first year (this will be offered once a year; usually in winter quarter) and ENME 4950 **Graduate Assessment** in the last quarter of study. **NOTE:** Students on the **thesis track** are required to complete a written self-reflection on their thesis and provide their thesis, defense presentation slides, and the completed and signed degree program plan before graduation. Students on the **non-thesis track** are required to provide an assembled portfolio that includes reports from at least two course projects or homework from the core courses, a mini-proposal and presentation slides from ENME 4900 along with the completed and signed degree program plan.
3. **Technical Electives:** a minimum of 16 credits for thesis track and 28 credits non-thesis track. These do not include independent research credits.
  - a. Technical electives must be in engineering (bioengineering, mechanical engineering, materials science, etc.) or related areas (mathematics, computer science, physics, chemistry, etc.) and are at the advisor's discretion. 50% or more of the technical elective credits must be in engineering.
  - b. Students may take one business/management course as a technical elective. Special permission should be obtained in writing from the advisor **PRIOR TO REGISTRATION** if more than one business/management course is taken.
4. **Advanced Math Requirement:** a minimum of three credits for thesis track and six credits for non-thesis track from Core Course List or advisor approval.
5. **Thesis Hours:** not allowed for non-thesis track.
6. **Tool Requirement:** As employers of graduates of this degree will inherently expect a basic competency in foundational engineering skills, students must demonstrate these before advancing to candidacy. Candidates with BS degrees from accredited engineering schools, or students completing a thesis, will be exempt from the tool requirement. Candidates with undergraduate degrees from non-engineering majors and completing a non-thesis MS will be required to pass a tool requirement. This will consist of an exam based on the topics in the Fundamentals of Engineering General Exam.

MS ENME Minimum	Thesis (QH)	Non-Thesis (QH)
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Code	Title	Credits
<b>Required Core Courses</b>		
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ENME 4950	Graduate Assessment	0
<b>Mechanical Engineering Core Courses</b>		
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ENGR 4730	Introduction to Robotics	4
ENME 3545	Mechanisms	4
ENME 3651	Computational Fluid Dynamics	4
ENME 4020	Adv Finite Element Analysis	4
ENME 4360	Elasticity	4
ENME 4520	Intermediate Dynamics (Intermediate Dynamics)	4
ENME 4541	Advanced Mechanics of Materials	4
ENME 4630	Viscous Flow (Viscous Flow)	4

ENME 4670	Advanced Computational Fluid Dynamics	4
ENME 4671	Convective Heat Transfer	4
ENME 4800	Advanced Topics (ME) (Convective Heat Transfer)	4
<b>Advanced Math Courses</b>		<b>4</b>
ENGR 3620	Advanced Engineering Mathematics - Corporate	4
ENGR 4300	Advanced Numerical Methods (Advanced Numerical Methods)	4
ENGR 4350	Reliability	4
ENGR 4620	Optimization	4
ENGR 4765	Robot Control	4

## Engineering, Bio (ENBI)

### ENBI 4200 Medical Device Development (4 Credits)

Working in a fast-paced competitive biomedical R&D firm is a dramatic change of pace from most college classes. This course will create a realistic industry environment where students take on the role of development engineers to design and manufacture real-world medical devices. This course is intended to provide a working knowledge of the design and development process specifically for medical device applications.

### ENBI 4500 Biofluids (4 Credits)

The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

### ENBI 4510 Biomechanics (4 Credits)

An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

### ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)

An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

### ENBI 4530 Biomechanics of Human Movement (4 Credits)

An introduction to engineering-based analysis of human movement. Topics include: musculoskeletal anatomy, neuromuscular physiology, muscle mechanics, electromyography, sensorimotor integration, anthropometry, kinematics and kinetics. Recommended pre-requisite material: knowledge of MATLAB, ENGR 1572.

### ENBI 4600 Biomedical Engineering: Technology, Research, and Design (4 Credits)

Introduction to Biomedical Engineering is an interdisciplinary course that combines engineering principles with biological and medical sciences to advance healthcare in areas such as diagnosis, monitoring, and therapy. The course provides a foundational understanding of biomedical engineering and prepares students for further study or careers in the field.

### ENBI 4610 Experimental Design in Biomedical Sciences (4 Credits)

This course offers an in-depth exploration of experimental design principles within the biomedical sciences, emphasizing statistical analysis, measurement techniques, and ethical considerations. It aims to provide students with practical skills necessary for designing, conducting, and analyzing biomedical research.

### ENBI 4620 Bioelectronics (4 Credits)

This course introduces the principles and applications of bioelectronics, focusing on the interface between biological systems and electronic devices. It covers the fundamentals of electronic circuits, signal processing, and sensor technology, and their applications in areas like biometric monitoring, neuroprosthetics, and biosensing.

### ENBI 4630 Biomaterials (4 Credits)

This course provides an introduction to the field of biomaterials science, focusing on the fundamental principles, properties, and applications of materials used in biomedical engineering and healthcare. Topics covered include the classification of biomaterials, biocompatibility, interactions with biological systems, surface modifications, fabrication techniques, characterization techniques and current applications in tissue engineering, regenerative medicine, drug delivery, and medical devices.

### ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)

Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)****ENBI 4995 Independent Research (1-18 Credits)**

## Engineering, Mechanical (ENME)

**ENME 3320 Computer Aided Design and Analysis (4 Credits)**

Introduction to the use of computer aided design and analysis with applications to solid and fluid mechanics, heat transfer and vibrations; projects in one or more of the above areas. Emphasis on how to use the software to analyze engineering systems. Prerequisites ENME 2541 and ENME 2651.

**ENME 3511 Machine Design (3 Credits)**

Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

**ENME 3545 Mechanisms (4 Credits)**

Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

**ENME 3651 Computational Fluid Dynamics (4 Credits)**

This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

**ENME 3661 Mechanical Energy Systems Engineering (4 Credits)**

This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

**ENME 3720 Aerospace Engineering: Atmospheric Flight Dynamics (4 Credits)**

This course provides and introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3730 Aerospace Engineering: Space Flight Dynamics (4 Credits)**

This course is focused on the aerospace discipline of space environment and orbital mechanics. The topics in this discipline are discussed in detail and provide aid in designing spacecraft/space missions. Some of the topics covered in this course include space environment, satellite orbits, spacecraft configurations, transfer orbits, and elementary space propulsion. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)**

This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

**ENME 4020 Adv Finite Element Analysis (4 Credits)****ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)**

An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

**ENME 4360 Elasticity (4 Credits)**

Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

**ENME 4400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

**ENME 4520 Intermediate Dynamics (4 Credits)**

Development and analysis of dynamic systems through classical approaches. Topics will include: Vector algebraic/differential geometry for 3D translational and rotational kinematic analyses with motion constraints. Formulation of equations of motion for 3D multibody systems using: Newton/Euler equations; Angular momentum principle; and D'Alembert principle (aka road-maps). Some exposure to Euler-Lagrange and Kane's Methods calculations. Symbolic and numerical computational solutions to linear/nonlinear algebraic and differential equations governing the configuration, forces, and motion of systems with multiple degrees of freedom. Recommended prerequisites: MATH 2070.



**ENME 4530 Advanced Dynamics (4 Credits)**

Formulation of equations of motion for constrained 3D multibody systems with: D'Alembert principle (MG road-maps); power, work, and energy; Lagrange's equations; and Kane's method. Euler parameters/quaternions, specified motion, constraint force/torque calculations, feed-forward control, inequality constraints and/or intermittent contact. Tensors and mass property calculations. Symbolic and numerical computer skills for geometry/kinematic analysis, mass/inertia calculations, forces and motion, and simulation of multi-body dynamic systems. Training for advanced research and professional work. Recommended pre-requisite: ENME 4520.

**ENME 4541 Advanced Mechanics of Materials (4 Credits)**

This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

**ENME 4630 Viscous Flow (4 Credits)**

Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

**ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)**

Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

**ENME 4671 Convective Heat Transfer (4 Credits)**

The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

**ENME 4800 Advanced Topics (ME) (0-5 Credits)**

Determined by interest and demand. May be taken more than once for credit.

**ENME 4900 Grad Professional Development (1 Credit)**

This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

**ENME 4950 Graduate Assessment (0 Credits)**

This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

**ENME 4991 Independent Study (1-10 Credits)****ENME 4995 Independent Research (1-16 Credits)****ENME 5991 Independent Study (1-10 Credits)****ENME 5995 Independent Research (1-16 Credits)**

## Engineering (ENGR)

**ENGR 3340 Product Development and Market Feasibility (4 Credits)**

In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

**ENGR 3450 Biosensing Technology (4 Credits)**

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. This course provides instruction in the basic science and engineering concepts required to understand the design and application of biosensors. This module serves as an introduction to some of the biosensors and measurement techniques.

**ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**

This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2012.

**ENGR 3520 Introduction to Power Electronics (4 Credits)**

This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

**ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**

In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

**ENGR 3540 Electric Power Systems (4 Credits)**

This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

**ENGR 3620 Advanced Engineering Mathematics - Corporate (4 Credits)**

Applied mathematics for engineers. Systems and series solutions of ordinary differential equations, Fourier analysis, partial differential equations, linear algebra, vector calculus, special functions, unconstrained and combinatorial optimization, and applied probability and statistics. Prerequisites: MATH 2070 and MATH 2080 or instructor permission.

**ENGR 3621 Advanced Engineering Mathematics (4 Credits)**

Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

**ENGR 3630 Finite Element Methods (4 Credits)**

Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

**ENGR 3650 Probability and Statistics for Engineers (4 Credits)**

This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

**ENGR 3721 Controls (3,4 Credits)**

Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2022, ENGR 3611 or permission of instructor.

**ENGR 3722 Control Systems Laboratory (1 Credit)**

This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

**ENGR 3730 Robotics (3 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

**ENGR 3731 Robotics Lab (1 Credit)**

Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

**ENGR 3800 Topics (ENGR) (1-4 Credits)**

Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENGR 3900 Engineering Internship (0-4 Credits)**

Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

**ENGR 4100 Instrumentation and Data Acquisition (4 Credits)**

This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

**ENGR 4200 Introduction to Nanotechnology (4 Credits)**

The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3200.

**ENGR 4300 Advanced Numerical Methods (4 Credits)**

Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

**ENGR 4350 Reliability (4 Credits)**

An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design.

**ENGR 4455 Fluorescence and Its Applications in Biomedical Sensors (4 Credits)**

The course introduces the principles of fluorescence and its applications in the real world. It covers various topics including fluorophores (dye, fluorescent proteins, quantum dots, etc.), nanomaterials and nanostructures, design of biomedical sensors, point-of-care systems, and wearable devices. Cross listed with ENGR 3455.

**ENGR 4501 Graduate Capstone Design I (3 Credits)**

This is a project-centered course. This is the first third of a practical class that plans the engineering design project prior to addressing the design in earnest. This requires teamwork to develop the plan that details the schedule, cost, and who is responsible for which portions of the design effort. In this segment, the engineering teams establish the starting point for the design. This class puts theory into practice with the "shredding" of the RFP, defining a strategy for the team, balancing what has to be done with existing constraints, understanding the "true" problem of the customer, capturing the associated risks, and capturing margins required for the start of any design activity.

**ENGR 4502 Graduate Capstone Design II (3 Credits)**

This is a project-centered course. This is the second third of a practical class that implements the engineering design process (left side of the vee). This requires teamwork to develop the detailed design, which is a continuation of the accepted proposal. In this segment, the engineering teams add the details to a conceptual design. This class puts theory into practice with requirements development, balancing requirements against the constraints, completing a functional decomposition, developing a CONOPs document, developing a physical architecture, developing a functional architecture, and defining the interfaces through an ICD.

**ENGR 4503 Graduate Capstone Design III (3 Credits)**

This is a project-centered course. This is the third of a practical class that implements the engineering design process (right side of the vee). This requires teamwork to build, checkout, and test the final product. In this segment, the engineering teams build or procure hardware as a step towards the integration of the system. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. Test data is collected through instrumentation of the final product with a buy-out and certification by the team. Testing may include performance testing and environmental testing as envisioned in the context diagram.

**ENGR 4504 Graduate Capstone Design IV (3 Credits)**

This is a project-centered course. This is the fourth of a practical class that implements the entire engineering "vee" design process. This requires teamwork to build, checkout, and test the final design product, e.g. hypothetical missile. In this segment, the engineering teams fine-tune the design process which may address advanced topics such as fault management and resilience. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. It may also include addressing the beginning of the program through early management and pre-phase A activities. Test data is collected through instrumentation of the final product with a buy-in and certification by the team. Testing may include performance testing, functional testing, and environmental testing as envisioned in the system process.

**ENGR 4530 Intro to Power and Energy (4 Credits)**

Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

**ENGR 4545 Electric Power Economy (4 Credits)**

This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3545.

**ENGR 4560 Power Generation Operation and Control (4 Credits)**

This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 3530 or ENGR 4530 or permission of instructor.

**ENGR 4590 Power System Protection (4 Credits)**

This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 3530 or ENGR 4530.

**ENGR 4620 Optimization (4 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Optimization methods will be developed and evaluated in code and used in a real-world application project.

**ENGR 4622 Advanced Optimization (4 Credits)**

Optimization is an indispensable tool for many fields of science and engineering and is one of the pillars of data science and machine learning. This course introduces optimization methods that are suitable for large-scale problems arising in data science, machine learning, and other engineering applications. We will discuss the development, computation, and convergence aspects for algorithms including gradient methods, accelerated methods, quasi-Newton methods, stochastic optimization, variance reduction, online optimization, as well as distributed optimization. We will also exploit the efficacy of these methods in concrete data science problems, including learning low-dimensional models, deep learning, and (possible) reinforcement learning. This course together with ENGR 4620 Optimization will provide in-depth introductions to optimization.

**ENGR 4680 Fault Diagnosis & Prognostics for System Design (4 Credits)**

Reliability engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability, describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time. Normally, quality focuses on the prevention of defects during the warranty phase whereas reliability looks at preventing failures during the useful lifetime of the product or system from commissioning to decommissioning. Diagnosis is used, with variations in the use of logic, analytics, and experience, to determine "cause and effect". In systems engineering, it is typically used to determine the causes of symptoms, mitigations, and solutions. Prognostics is an engineering discipline focused on predicting the time at which a system or a component will no longer perform its intended function. This lack of performance is most often a failure beyond which the system can no longer be used to meet desired performance. The predicted time then becomes the remaining useful life (RUL), which is an important concept in decision making for contingency mitigation. Success in this course requires knowledge of probability theory and statistics, and familiarity with MATLAB/Simulink.

**ENGR 4723 Digital Control (4 Credits)**

The course focuses on modeling, analysis, and design of digital control systems. Topics include: z-Transform and difference equations; sampling and aliasing; Zero-Order Hold (ZOH); A/D and D/A conversions; pulse transfer function representation; time and frequency domain representations; input/output analysis; analysis of sample data systems; stability; design of discrete-time controllers; introduction to state-space representation. Cross listed with ENGR 3723. Prerequisites: ENGR 3721 and ENGR 3722.

**ENGR 4730 Introduction to Robotics (4 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.

**ENGR 4735 Linear Systems (4 Credits)**

This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3611, ENGR 3721, ENGR 3722, or permission of the instructor.

**ENGR 4740 Adaptive Control Systems (4 Credits)**

Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisite: ENGR 3721 or permission of instructor. Familiarity with MATLAB/Simulink.

**ENGR 4745 Adv Non-Linear Control System (4 Credits)**

Nonlinear system analysis methods: Existence of solutions of ODEs, uniqueness, continuity, compactness, fixed point, linearization, metric spaces, Contraction Mapping Theorem, Gronwall-Bellman lemma. Phase plane analysis; Limit Cycles. Lyapunov stability of autonomous and non-autonomous systems. Circle criterion, absolute stability, Popov criterion. Passivity and Lyapunov stability. Input-to-State stability. Small Gain Theorem. Describing functions. Nonlinear control system synthesis methods: Passivity-based control. Stability via Feedback Linearization. Lie derivatives.

**ENGR 4750 Networked Control Systems (4 Credits)**

Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

**ENGR 4755 Optimal Control (4 Credits)**

Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Lagrange multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

**ENGR 4760 Multivariable Control (4 Credits)**

Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and 'mu' synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

**ENGR 4765 Robot Control (4 Credits)**

The course focuses on different techniques, methods, and theories for control of robots. The topics covered include: introduction to nonlinear control theory, review of independent joint control, nonlinear and multivariable robot control, feedback linearization control of robots, control of underactuated robots, control of nonholonomic and mobile robots. force and impedance control, and vision-based control. Pre-requisite or co-requisite: ENGR 3730 or ENGR 4730, or equivalent is recommended.

**ENGR 4790 Systems Engineering Requirements (4 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. It spans the whole requirements engineering phase that includes requirements analysis, decomposition, derivation, allocation, verification and validation planning. Students acquire expertise in creating UML and SYML case diagrams and in defining and implementing verification and validation plans. Requirement management methods and tools, associated vernacular, and requirements configuration control are also covered. Prerequisites: ENMT 4100, or permission by the Instructor.

**ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)****ENGR 4865 Design, Innovation, and Entrepreneurship (4 Credits)**

The course focuses on design and innovation of engineering systems and products. It deals with entrepreneurship, critical and innovative thinking, creativity and lateral thinking, research and technology challenges that lead to innovation, entrepreneurship and new product development, problem solving and decision making. It discusses factors that affect innovation (e.g. tech insertion), as well as a wide range of case studies in diverse application domains. Course Requirements: Projects.

**ENGR 4910 Conceptual Design (4 Credits)**

Conceptual design is the part of the design process where—by identifying the essential problems through abstraction, establishing function structures, searching for appropriate working principles and combining these into a working structure— the basic solution path is laid down through the elaboration of a solution principle. Conceptual design specifies the principle solution. Concept design rarely starts at the same point; you might have an existing design that needs iterating or the requirement to create a conceptualized form. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. George Polya (mathematician) presented two important decision-making principles, understanding the problem and devising a plan. To understand what is new, students are asked to look at intellectual property, a category of property that includes intangible creations of the human intellect. There are many types of intellectual property such as patents, and some countries recognize more than others. Designers assess the many different directions a design could take at this stage will allow you to identify what you like and don't like from each one. The preferred concept will then be further developed using engineering drawings, schematics and possibly 3D models which will show how the design will look and operate.

**ENGR 4920 Aerospace Missions (4 Credits)**

The Design "Problem" in Advanced Aerospace Systems describes the problems in the conceptual design of various types of aircraft, spacecraft, and complex vehicles. It covers the following topics: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic). Problem statements are concise descriptions of design problems. Design teams use them to define the current and ideal states, to freely find user-centered solutions. This class stands as a reference of interest to engineers and scientists working in aerospace engineering and related topics.

**ENGR 4940 Mission Operation Controls (4 Credits)**

Space operations is based at a centralized control center, a facility used for command & control (C2), and related communication equipment (antennas, etc.). The human operators conduct the day-to-day operations for controlling the spacecraft. They control the spacecraft and its payloads, and carries out all activities related to mission planning and scheduling. For example, normal orbital operations are interrupted every six months to conduct orbital maneuvers. Launch operations begin with spacecraft integration and checked-out for launch. Once safely placed in orbit, command and control goes back and forth between the ground control station and the spacecraft or satellite. A key aspect of spacecraft operations is the transferring of data from the onboard instruments collected by its payload to the ground, eventually disseminating the data to concerned users and analysts through a ground data network. This requires an on-orbit communication architecture.

**ENGR 4991 Independent Study (1-5 Credits)****ENGR 4995 Independent Research (1-16 Credits)****ENGR 5991 Independent Study (0-10 Credits)****ENGR 5995 Independent Research (1-16 Credits)**

## Materials Science (MTSC)

**MTSC 4010 Mechanical Behavior of Materials (4 Credits)**

Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

**MTSC 4020 Composite Materials I (4 Credits)**

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 3020.

**MTSC 4215 Composite Materials II (4 Credits)**

A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

**MTSC 4450 Fracture Mechanics (4 Credits)**

Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

**MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)**

Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

**MTSC 4991 Independent Study (1-10 Credits)****MTSC 4995 Independent Research (1-16 Credits)****MTSC 5995 Independent Research (1-16 Credits)**

## Engineering Courses

**ENGR 3340 Product Development and Market Feasibility (4 Credits)**

In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

**ENGR 3450 Biosensing Technology (4 Credits)**

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. This course provides instruction in the basic science and engineering concepts required to understand the design and application of biosensors. This module serves as an introduction to some of the biosensors and measurement techniques.

**ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**

This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2012.

**ENGR 3520 Introduction to Power Electronics (4 Credits)**

This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

**ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**

In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

**ENGR 3540 Electric Power Systems (4 Credits)**

This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

**ENGR 3620 Advanced Engineering Mathematics - Corporate (4 Credits)**

Applied mathematics for engineers. Systems and series solutions of ordinary differential equations, Fourier analysis, partial differential equations, linear algebra, vector calculus, special functions, unconstrained and combinatorial optimization, and applied probability and statistics. Prerequisites: MATH 2070 and MATH 2080 or instructor permission.

**ENGR 3621 Advanced Engineering Mathematics (4 Credits)**

Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

**ENGR 3630 Finite Element Methods (4 Credits)**

Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

**ENGR 3650 Probability and Statistics for Engineers (4 Credits)**

This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

**ENGR 3721 Controls (3,4 Credits)**

Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2022, ENGR 3611 or permission of instructor.

**ENGR 3722 Control Systems Laboratory (1 Credit)**

This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

**ENGR 3730 Robotics (3 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

**ENGR 3731 Robotics Lab (1 Credit)**

Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

**ENGR 3800 Topics (ENGR) (1-4 Credits)**

Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENGR 3900 Engineering Internship (0-4 Credits)**

Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

**ENGR 4100 Instrumentation and Data Acquisition (4 Credits)**

This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

**ENGR 4200 Introduction to Nanotechnology (4 Credits)**

The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3200.

**ENGR 4300 Advanced Numerical Methods (4 Credits)**

Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

**ENGR 4350 Reliability (4 Credits)**

An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design.

**ENGR 4455 Fluorescence and Its Applications in Biomedical Sensors (4 Credits)**

The course introduces the principles of fluorescence and its applications in the real world. It covers various topics including fluorophores (dye, fluorescent proteins, quantum dots, etc.), nanomaterials and nanostructures, design of biomedical sensors, point-of-care systems, and wearable devices. Cross listed with ENGR 3455.

**ENGR 4501 Graduate Capstone Design I (3 Credits)**

This is a project-centered course. This is the first third of a practical class that plans the engineering design project prior to addressing the design in earnest. This requires teamwork to develop the plan that details the schedule, cost, and who is responsible for which portions of the design effort. In this segment, the engineering teams establish the starting point for the design. This class puts theory into practice with the "shredding" of the RFP, defining a strategy for the team, balancing what has to be done with existing constraints, understanding the "true" problem of the customer, capturing the associated risks, and capturing margins required for the start of any design activity.

**ENGR 4502 Graduate Capstone Design II (3 Credits)**

This is a project-centered course. This is the second third of a practical class that implements the engineering design process (left side of the vee). This requires teamwork to develop the detailed design, which is a continuation of the accepted proposal. In this segment, the engineering teams add the details to a conceptual design. This class puts theory into practice with requirements development, balancing requirements against the constraints, completing a functional decomposition, developing a CONOPs document, developing a physical architecture, developing a functional architecture, and defining the interfaces through an ICD.

**ENGR 4503 Graduate Capstone Design III (3 Credits)**

This is a project-centered course. This is the third of a practical class that implements the engineering design process (right side of the vee). This requires teamwork to build, checkout, and test the final product. In this segment, the engineering teams build or procure hardware as a step towards the integration of the system. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. Test data is collected through instrumentation of the final product with a buy-out and certification by the team. Testing may include performance testing and environmental testing as envisioned in the context diagram.

**ENGR 4504 Graduate Capstone Design IV (3 Credits)**

This is a project-centered course. This is the fourth of a practical class that implements the entire engineering "vee" design process. This requires teamwork to build, checkout, and test the final design product, e.g. hypothetical missile. In this segment, the engineering teams fine-tune the design process which may address advanced topics such as fault management and resilience. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. It may also include addressing the beginning of the program through early management and pre-phase A activities. Test data is collected through instrumentation of the final product with a buy-in and certification by the team. Testing may include performance testing, functional testing, and environmental testing as envisioned in the system process.

**ENGR 4530 Intro to Power and Energy (4 Credits)**

Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

**ENGR 4545 Electric Power Economy (4 Credits)**

This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3545.

**ENGR 4560 Power Generation Operation and Control (4 Credits)**

This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 3530 or ENGR 4530 or permission of instructor.



**ENGR 4590 Power System Protection (4 Credits)**

This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 3530 or ENGR 4530.

**ENGR 4620 Optimization (4 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Optimization methods will be developed and evaluated in code and used in a real-world application project.

**ENGR 4622 Advanced Optimization (4 Credits)**

Optimization is an indispensable tool for many fields of science and engineering and is one of the pillars of data science and machine learning. This course introduces optimization methods that are suitable for large-scale problems arising in data science, machine learning, and other engineering applications. We will discuss the development, computation, and convergence aspects for algorithms including gradient methods, accelerated methods, quasi-Newton methods, stochastic optimization, variance reduction, online optimization, as well as distributed optimization. We will also exploit the efficacy of these methods in concrete data science problems, including learning low-dimensional models, deep learning, and (possible) reinforcement learning. This course together with ENGR 4620 Optimization will provide in-depth introductions to optimization.

**ENGR 4680 Fault Diagnosis & Prognostics for System Design (4 Credits)**

Reliability engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability, describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time. Normally, quality focuses on the prevention of defects during the warranty phase whereas reliability looks at preventing failures during the useful lifetime of the product or system from commissioning to decommissioning. Diagnosis is used, with variations in the use of logic, analytics, and experience, to determine "cause and effect". In systems engineering, it is typically used to determine the causes of symptoms, mitigations, and solutions. Prognostics is an engineering discipline focused on predicting the time at which a system or a component will no longer perform its intended function. This lack of performance is most often a failure beyond which the system can no longer be used to meet desired performance. The predicted time then becomes the remaining useful life (RUL), which is an important concept in decision making for contingency mitigation. Success in this course requires knowledge of probability theory and statistics, and familiarity with MATLAB/Simulink.

**ENGR 4723 Digital Control (4 Credits)**

The course focuses on modeling, analysis, and design of digital control systems. Topics include: z-Transform and difference equations; sampling and aliasing; Zero-Order Hold (ZOH); A/D and D/A conversions; pulse transfer function representation; time and frequency domain representations; input/output analysis; analysis of sample data systems; stability; design of discrete-time controllers; introduction to state-space representation. Cross listed with ENGR 3723. Prerequisites: ENGR 3721 and ENGR 3722.

**ENGR 4730 Introduction to Robotics (4 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.

**ENGR 4735 Linear Systems (4 Credits)**

This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3611, ENGR 3721, ENGR 3722, or permission of the instructor.

**ENGR 4740 Adaptive Control Systems (4 Credits)**

Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisite: ENGR 3721 or permission of instructor. Familiarity with MATLAB/Simulink.

**ENGR 4745 Adv Non-Linear Control System (4 Credits)**

Nonlinear system analysis methods: Existence of solutions of ODEs, uniqueness, continuity, compactness, fixed point, linearization, metric spaces, Contraction Mapping Theorem, Gronwall-Bellman lemma. Phase plane analysis; Limit Cycles. Lyapunov stability of autonomous and non-autonomous systems. Circle criterion, absolute stability, Popov criterion. Passivity and Lyapunov stability. Input-to-State stability. Small Gain Theorem. Describing functions. Nonlinear control system synthesis methods: Passivity-based control. Stability via Feedback Linearization. Lie derivatives.

**ENGR 4750 Networked Control Systems (4 Credits)**

Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

**ENGR 4755 Optimal Control (4 Credits)**

Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Lagrange multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

**ENGR 4760 Multivariable Control (4 Credits)**

Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and 'mu' synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

**ENGR 4765 Robot Control (4 Credits)**

The course focuses on different techniques, methods, and theories for control of robots. The topics covered include: introduction to nonlinear control theory, review of independent joint control, nonlinear and multivariable robot control, feedback linearization control of robots, control of underactuated robots, control of nonholonomic and mobile robots. force and impedance control, and vision-based control. Pre-requisite or co-requisite: ENGR 3730 or ENGR 4730, or equivalent is recommended.

**ENGR 4790 Systems Engineering Requirements (4 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. It spans the whole requirements engineering phase that includes requirements analysis, decomposition, derivation, allocation, verification and validation planning. Students acquire expertise in creating UML and SYML case diagrams and in defining and implementing verification and validation plans. Requirement management methods and tools, associated vernacular, and requirements configuration control are also covered. Prerequisites: ENMT 4100, or permission by the Instructor.

**ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)****ENGR 4865 Design, Innovation, and Entrepreneurship (4 Credits)**

The course focuses on design and innovation of engineering systems and products. It deals with entrepreneurship, critical and innovative thinking, creativity and lateral thinking, research and technology challenges that lead to innovation, entrepreneurship and new product development, problem solving and decision making. It discusses factors that affect innovation (e.g. tech insertion), as well as a wide range of case studies in diverse application domains. Course Requirements: Projects.

**ENGR 4910 Conceptual Design (4 Credits)**

Conceptual design is the part of the design process where—by identifying the essential problems through abstraction, establishing function structures, searching for appropriate working principles and combining these into a working structure— the basic solution path is laid down through the elaboration of a solution principle. Conceptual design specifies the principle solution. Concept design rarely starts at the same point; you might have an existing design that needs iterating or the requirement to create a conceptualized form. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. George Polya (mathematician) presented two important decision-making principles, understanding the problem and devising a plan. To understand what is new, students are asked to look at intellectual property, a category of property that includes intangible creations of the human intellect. There are many types of intellectual property such as patents, and some countries recognize more than others. Designers assess the many different directions a design could take at this stage will allow you to identify what you like and don't like from each one. The preferred concept will then be further developed using engineering drawings, schematics and possibly 3D models which will show how the design will look and operate.

**ENGR 4920 Aerospace Missions (4 Credits)**

The Design "Problem" in Advanced Aerospace Systems describes the problems in the conceptual design of various types of aircraft, spacecraft, and complex vehicles. It covers the following topics: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic). Problem statements are concise descriptions of design problems. Design teams use them to define the current and ideal states, to freely find user-centered solutions. This class stands as a reference of interest to engineers and scientists working in aerospace engineering and related topics.

**ENGR 4940 Mission Operation Controls (4 Credits)**

Space operations is based at a centralized control center, a facility used for command & control (C2), and related communication equipment (antennas, etc.). The human operators conduct the day-to-day operations for controlling the spacecraft. They control the spacecraft and its payloads, and carries out all activities related to mission planning and scheduling. For example, normal orbital operations are interrupted every six months to conduct orbital maneuvers. Launch operations begin with spacecraft integration and checked-out for launch. Once safely placed in orbit, command and control goes back and forth between the ground control station and the spacecraft or satellite. A key aspect of spacecraft operations is the transferring of data from the onboard instruments collected by its payload to the ground, eventually disseminating the data to concerned users and analysts through a ground data network. This requires an on-orbit communication architecture.

**ENGR 4991 Independent Study (1-5 Credits)****ENGR 4995 Independent Research (1-16 Credits)****ENGR 5991 Independent Study (0-10 Credits)****ENGR 5995 Independent Research (1-16 Credits)****Engineering, Bio Courses****ENBI 4200 Medical Device Development (4 Credits)**

Working in a fast-paced competitive biomedical R&D firm is a dramatic change of pace from most college classes. This course will create a realistic industry environment where students take on the role of development engineers to design and manufacture real-world medical devices. This course is intended to provide a working knowledge of the design and development process specifically for medical device applications.

**ENBI 4500 Biofluids (4 Credits)**

The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

**ENBI 4510 Biomechanics (4 Credits)**

An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

**ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)**

An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

**ENBI 4530 Biomechanics of Human Movement (4 Credits)**

An introduction to engineering-based analysis of human movement. Topics include: musculoskeletal anatomy, neuromuscular physiology, muscle mechanics, electromyography, sensorimotor integration, anthropometry, kinematics and kinetics. Recommended pre-requisite material: knowledge of MATLAB, ENGR 1572.

**ENBI 4600 Biomedical Engineering: Technology, Research, and Design (4 Credits)**

Introduction to Biomedical Engineering is an interdisciplinary course that combines engineering principles with biological and medical sciences to advance healthcare in areas such as diagnosis, monitoring, and therapy. The course provides a foundational understanding of biomedical engineering and prepares students for further study or careers in the field.

**ENBI 4610 Experimental Design in Biomedical Sciences (4 Credits)**

This course offers an in-depth exploration of experimental design principles within the biomedical sciences, emphasizing statistical analysis, measurement techniques, and ethical considerations. It aims to provide students with practical skills necessary for designing, conducting, and analyzing biomedical research.

**ENBI 4620 Bioelectronics (4 Credits)**

This course introduces the principles and applications of bioelectronics, focusing on the interface between biological systems and electronic devices. It covers the fundamentals of electronic circuits, signal processing, and sensor technology, and their applications in areas like biometric monitoring, neuroprosthetics, and biosensing.

**ENBI 4630 Biomaterials (4 Credits)**

This course provides an introduction to the field of biomaterials science, focusing on the fundamental principles, properties, and applications of materials used in biomedical engineering and healthcare. Topics covered include the classification of biomaterials, biocompatibility, interactions with biological systems, surface modifications, fabrication techniques, characterization techniques and current applications in tissue engineering, regenerative medicine, drug delivery, and medical devices.

**ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)**

Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)****ENBI 4995 Independent Research (1-18 Credits)****Engineering, Mechanical Courses****ENME 3320 Computer Aided Design and Analysis (4 Credits)**

Introduction to the use of computer aided design and analysis with applications to solid and fluid mechanics, heat transfer and vibrations; projects in one or more of the above areas. Emphasis on how to use the software to analyze engineering systems. Prerequisites ENME 2541 and ENME 2651.

**ENME 3511 Machine Design (3 Credits)**

Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

**ENME 3545 Mechanisms (4 Credits)**

Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

**ENME 3651 Computational Fluid Dynamics (4 Credits)**

This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretizations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

**ENME 3661 Mechanical Energy Systems Engineering (4 Credits)**

This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

**ENME 3720 Aerospace Engineering: Atmospheric Flight Dynamics (4 Credits)**

This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3730 Aerospace Engineering: Space Flight Dynamics (4 Credits)**

This course is focused on the aerospace discipline of space environment and orbital mechanics. The topics in this discipline are discussed in detail and provide aid in designing spacecraft/space missions. Some of the topics covered in this course include space environment, satellite orbits, spacecraft configurations, transfer orbits, and elementary space propulsion. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

**ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)**

This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

**ENME 4020 Adv Finite Element Analysis (4 Credits)****ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)**

An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

**ENME 4360 Elasticity (4 Credits)**

Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

**ENME 4400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

**ENME 4520 Intermediate Dynamics (4 Credits)**

Development and analysis of dynamic systems through classical approaches. Topics will include: Vector algebraic/differential geometry for 3D translational and rotational kinematic analyses with motion constraints. Formulation of equations of motion for 3D multibody systems using: Newton/Euler equations; Angular momentum principle; and D'Alembert principle (aka road-maps). Some exposure to Euler-Lagrange and Kane's Methods calculations. Symbolic and numerical computational solutions to linear/nonlinear algebraic and differential equations governing the configuration, forces, and motion of systems with multiple degrees of freedom. Recommended prerequisites: MATH 2070.

**ENME 4530 Advanced Dynamics (4 Credits)**

Formulation of equations of motion for constrained 3D multibody systems with: D'Alembert principle (MG road-maps); power, work, and energy; Lagrange's equations; and Kane's method. Euler parameters/quaternions, specified motion, constraint force/torque calculations, feed-forward control, inequality constraints and/or intermittent contact. Tensors and mass property calculations. Symbolic and numerical computer skills for geometry/kinematic analysis, mass/inertia calculations, forces and motion, and simulation of multi-body dynamic systems. Training for advanced research and professional work. Recommended pre-requisite: ENME 4520.

**ENME 4541 Advanced Mechanics of Materials (4 Credits)**

This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

**ENME 4630 Viscous Flow (4 Credits)**

Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

**ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)**

Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

**ENME 4671 Convective Heat Transfer (4 Credits)**

The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

**ENME 4800 Advanced Topics (ME) (0-5 Credits)**

Determined by interest and demand. May be taken more than once for credit.

**ENME 4900 Grad Professional Development (1 Credit)**

This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

**ENME 4950 Graduate Assessment (0 Credits)**

This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

**ENME 4991 Independent Study (1-10 Credits)****ENME 4995 Independent Research (1-16 Credits)****ENME 5991 Independent Study (1-10 Credits)****ENME 5995 Independent Research (1-16 Credits)****Materials Science Courses****MTSC 4010 Mechanical Behavior of Materials (4 Credits)**

Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

**MTSC 4020 Composite Materials I (4 Credits)**

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 3020.

**MTSC 4215 Composite Materials II (4 Credits)**

A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

**MTSC 4450 Fracture Mechanics (4 Credits)**

Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

**MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)**

Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

MTSC 4991 Independent Study (1-10 Credits)

MTSC 4995 Independent Research (1-16 Credits)

MTSC 5995 Independent Research (1-16 Credits)

## Daniels College of Business

The Daniels College of Business is dedicated to educating ethical business leaders, advancing the theory and practice of business, and making a positive global impact. As the eighth-oldest business college in the country, we have helped graduates achieve their career aspirations for more than a century. The College is ranked among the best of the world's top business schools. We are proud to be one of the 655 business schools accredited by the Association to Advance Collegiate Schools of Business (AACSB). Daniels is the only business school in Colorado to receive high rankings and recognition from *Businessweek*, the *Financial Times*, *U.S. News & World Report*, and *Forbes*. Daniels is internationally recognized for integrating social, environmental and ethical issues into our traditional curricula. Committed to diversity, we welcome all who want to hone their skills, improve their knowledge, and gain a lasting foundation.

## Business Ethics and Legal Studies

Office: Daniels College of Business, 687

Mail Code: Daniels College of Business, 2101 S. University Blvd., Denver, CO 80208

Phone: 303-871-3213

Web Site: <https://daniels.du.edu/business-ethics-legal-studies/>

### Certificate in Global Business and Corporate Social Responsibility

As a joint offering between the Daniels College of Business and the Korbel School of International Studies, this certificate focuses specifically on the challenges and opportunities businesses confront in a globalized and developing world.

A certificate in Global Business and Corporate Social Responsibility (CSR) will enable students to leverage the unique course offerings at Daniels and Korbel to learn about theory and practice related to economic development, business ethics, CSR strategy, social entrepreneurship, business and human rights, sustainability, impact investing, as well as considerations with regards to hard and soft law mechanisms that govern transnational space. These courses will give students the practical content they need to embrace and navigate the complexity of business and governance issues.

### Certificate in Global Business and Corporate Social Responsibility

This certificate program is reserved for students who are enrolled in a master's level degree within the Daniels College of Business or the Josef Korbel School of International Studies. Those who have been accepted to a master's level degree are eligible to pursue this certificate program. Interested students should contact the Student Services department in the Daniels College of Business at [GradBus.Advising@du.edu](mailto:GradBus.Advising@du.edu). Students should complete a certificate form no later than six months prior to their graduation so the certificate may be formally declared and added to the student's record.

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## Graduate Certificate Programs

### Certificate of Specialization in Global Business and Corporate Social Responsibility

#### Program Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		<b>12</b>
BUS 4445	International Business: Strategy and Practice	4
or INTS 4029	International Business: Strategy and Practice	
BUS 4444	Global Bus, Governance & CSR	4
or INTS 4459	Global Business, Governance & Corporate Social Responsibility	
INTS 4324	International Political Economy	4
<b>Elective Courses</b>		<b>12</b>
Choose a minimum of 12 credits from the following list. Students must complete one elective outside of their primary college:		
ACTG 4610	Financial Accounting and Reporting <sup>1</sup>	4
CMGT 4155	Sustainable Development	4
FIN 4110	Ethics in Finance	4
FIN 4180	Global Finance	2
FIN 4630	Managerial Finance <sup>1</sup>	4
LGST 4701	Topics in Ethics & Legal Study	1-5

MBA 4610	Business Law and Public Policy	4
MBA 4446	Advanced Sustainability	4
INTS 4210	Global Value Chains, Multinational Corporations, and Investment Sustainability	4
INTS 4220	Political Economy of Energy & Sustainable Development	4
INTS 4394	The Organizational Psychology of Non-Profits	4
INTS 4370	The Global Economy: Conflict, Crisis and Cooperation	4
INTS 4226	Social Entrepreneurship & Sustainable Development	4
INTS 4330	International Business Transactions	4
INTS 4339	Microfinance Lessons: Inclusive Markets and Development	4
INTS 4549	Managing Microfinance: Balancing Business with Development	4
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability	4
INTS 4622	Global Governance	4
INTS 4972	Global Environmental Governance	4
MFJS 4050	Foundations of Strategic Communication	4
MFJS 4080	Global/Multicultural Campaigns	4
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4180	Sustainability and Supply Chain Management	4
<b>Total credits required:</b>		<b>24</b>

Minimum number of credits required: 24

## Certificate in Governance, Risk, and Compliance

Code	Title	Credits
<b>Required Courses</b>		
MBA 4610	Business Law and Public Policy	4
LGST 4701	Topics in Ethics & Legal Study	4
ACTG 4620	Accounting Ethics	4
LGST 4760	CEOs and Corporate Governance	4
or ACTG 4760	CEOs and Corporate Governance	
<b>Select two of the following courses</b>		<b>8</b>
MBA 4250	Business and Global Values	
LGST 4700	International Law	
BUS 4444	Global Bus, Governance & CSR	
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Program

### Specialized Certificate in Governance, Risk, and Compliance

Code	Title	Credits
<b>Required Courses</b>		
MBA 4610	Business Law and Public Policy	4
LGST 4701	Topics in Ethics & Legal Study (White Collar and Corporate Crime)	4
ACTG 4620	Accounting Ethics	4
LGST/ACTG 4760	CEOs and Corporate Governance	4
<b>Total Credits</b>		<b>16</b>

**LGST 3030 The Supreme Court & Your Life (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3330 Advanced Constitutional Law (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution applies to each case and how the case makes its way to the Court, (2) each case is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion resonate in the business world. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3400 White Collar & Corporate Crime (4 Credits)**

This course offers an essential overview of corporate and "white collar" crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.

**LGST 3440 The Supreme Court & Your Life: Constitutional Law, Ethics & Policy for the 21st Century (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3450 Impact of Driverless Mobility: Business, Legal & Ethical Implications (4 Credits)**

Smartphones and personal computers have changed the world and how we live in it. Now, Driverless Vehicles are poised to profoundly reshape our transportation systems, real estate development, access to goods and services, and our collective ecological footprint. In our "Impact of Driverless Mobility" course, we will consider many of the broad implications of this disruptive technology, including, but not limited to, the many legal, ethical and business considerations. Prerequisite: LGST 2000.

**LGST 3540 Impact of Driverless Mobility (4 Credits)**

Smartphones and personal computers have changed the world and how we live in it. Now, Driverless Vehicles are poised to profoundly reshape our transportation systems, real estate development, access to goods and services, and our collective ecological footprint. In our "Impact of Driverless Mobility" course, we will consider many of the broad implications of this disruptive technology, including, but not limited to, the many legal, ethical and business considerations. Prerequisite: LGST 2000.

**LGST 4198 E-Commerce Law and Ethics (4 Credits)**

The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?.

**LGST 4400 White Collar & Corporate Crime (4 Credits)**

This course offers an essential overview of corporate and "white collar" crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.



**LGST 4550 Business Law for Accountants (4 Credits)**

This course provides students with a detailed review of the legal considerations in forming, operating, and dissolving the most common forms of business entities: partnerships, limited liability companies, and corporations. The rights, duties and liabilities of the managers, owners and accountants (internal and external) of these entities are extensively examined. The course also provides an overview of federal securities laws impacting these organizations. Prerequisite: ACTG 4620 or BUS 4620 or LGST 2000 (concurrent registration OK).

**LGST 4700 International Law (4 Credits)**

Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). Majority of course devoted to key international issues of business law and public policy such as alternative dispute resolution (ADR), privatization, intellectual property, international sales, the Foreign Corrupt Practices Act, trade (GATT and WTO), and the international facilities that deal with the adjudication and resolution of legal issues related to business.

**LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)**

This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

**LGST 4730 Values Based Leadership in Practice (4 Credits)**

The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values-Based Leadership in today's world.

**LGST 4740 Science & Mgmt. of Org. Ethics (4 Credits)**

This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

**LGST 4760 CEOs and Corporate Governance (4 Credits)**

In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from strategic, financial and legal perspectives. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and governance reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

**LGST 4780 Leadership, Teams & Values (4 Credits)**

This course is designed for Daniel Scholars (who have completed the first quarter of their MBA program including Value Based Leadership) to provide both challenging intellectual discussion and physical engagement around the fundamental ethical dilemma of competition and/or cooperation. The venue for the course is Harbor Island, San Diego, California, and the adjacent waters of San Diego Bay and the Pacific Ocean. Both traditional classrooms and the untraditional learning environment of the off-shore sail boat provide the context of dynamic learning about values, teams and self. Prerequisite: BUS 4100.

**LGST 4790 Entrepreneur & Family Business-Organization, Governance Ethics & Leadership (4 Credits)**

This course covers the most current legal and ethical issues involving the creation of value, strengthening and growing family businesses through the process of best practices in business governance, coupled with ethical conduct and values based leadership, and legal compliance. Cross listed with LGST 3790. Prerequisite: BUS 4100.

**LGST 4960 Employment Law & Ethics (4 Credits)**

This course will introduce students to the key laws, rules and regulations governing employment in the United States. The course will explore workplace issues that arise because of the intersection of the hierarchical nature of organizations and the diversity of employees. As such, we will discuss workplace policies, practices and operations and their interactions with employment laws. This is an interactive course that will address issues such as: What is work? How do we value it? Who is an employee? What are the rights of employers? What are the rights of individuals in the workplace? What are some of the ethical issues faced by employers and employees, and how can both groups successfully navigate them? Graduate students will be assigned an independent study project focused on issues(s) faced by the Chief Human Resources Officer of an organization - a leader and strategic business partner in the organization.

**LGST 4980 Internship (1-5 Credits)****LGST 4991 Independent Study (1-10 Credits)****LGST 4995 Independent Research (1-10 Credits)****Courses****LGST 2960 Employment Law & Ethics (4 Credits)**

This course will introduce students to the key laws, rules and regulations governing employment in the United States. The course will explore workplace issues that arise because of the intersection of the hierarchical nature of organizations and the diversity of employees. As such, we will discuss workplace policies, practices and operations and their interactions with employment laws. This is an interactive course that will address issues such as: What is work? How do we value it? Who is an employee? What are the rights of employers? What are the rights of individuals in the workplace? What are some of the ethical issues faced by employers and employees, and how can both groups successfully navigate them? Graduate students will be assigned an independent study project focused on issues(s) faced by the Chief Human Resources Officer of an organization - a leader and strategic business partner in the organization. Prerequisites: LGST 2000 for undergraduate students; no prerequisite for graduate students.

**LGST 3030 The Supreme Court & Your Life (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3330 Advanced Constitutional Law (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution applies to each case and how the case makes its way to the Court, (2) each case is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion resonate in the business world. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3400 White Collar & Corporate Crime (4 Credits)**

This course offers an essential overview of corporate and "white collar" crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.

**LGST 3440 The Supreme Court & Your Life: Constitutional Law, Ethics & Policy for the 21st Century (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3450 Impact of Driverless Mobility: Business, Legal & Ethical Implications (4 Credits)**

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**LGST 3540 Impact of Driverless Mobility (4 Credits)**

Smartphones and personal computers have changed the world and how we live in it. Now, Driverless Vehicles are poised to profoundly reshape our transportation systems, real estate development, access to goods and services, and our collective ecological footprint. In our "Impact of Driverless Mobility" course, we will consider many of the broad implications of this disruptive technology, including, but not limited to, the many legal, ethical and business considerations. Prerequisite: LGST 2000.

**LGST 4198 E-Commerce Law and Ethics (4 Credits)**

The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?

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This course offers an essential overview of corporate and "white collar" crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.

**LGST 4550 Business Law for Accountants (4 Credits)**

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**LGST 4700 International Law (4 Credits)**

Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). Majority of course devoted to key international issues of business law and public policy such as alternative dispute resolution (ADR), privatization, intellectual property, international sales, the Foreign Corrupt Practices Act, trade (GATT and WTO), and the international facilities that deal with the adjudication and resolution of legal issues related to business.

**LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)**

This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

**LGST 4730 Values Based Leadership in Practice (4 Credits)**

The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values-Based Leadership in today's world.

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This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

**LGST 4760 CEOs and Corporate Governance (4 Credits)**

In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from strategic, financial and legal perspectives. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and governance reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

**LGST 4780 Leadership, Teams & Values (4 Credits)**

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**LGST 4790 Entrepreneur & Family Business-Organization, Governance Ethics & Leadership (4 Credits)**

This course covers the most current legal and ethical issues involving the creation of value, strengthening and growing family businesses through the process of best practices in business governance, coupled with ethical conduct and values based leadership, and legal compliance. Cross listed with LGST 3790. Prerequisite: BUS 4100.

**LGST 4960 Employment Law & Ethics (4 Credits)**

This course will introduce students to the key laws, rules and regulations governing employment in the United States. The course will explore workplace issues that arise because of the intersection of the hierarchical nature of organizations and the diversity of employees. As such, we will discuss workplace policies, practices and operations and their interactions with employment laws. This is an interactive course that will address issues such as: What is work? How do we value it? Who is an employee? What are the rights of employers? What are the rights of individuals in the workplace? What are some of the ethical issues faced by employers and employees, and how can both groups successfully navigate them? Graduate students will be assigned an independent study project focused on issues(s) faced by the Chief Human Resources Officer of an organization - a leader and strategic business partner in the organization.

**LGST 4980 Internship (1-5 Credits)****LGST 4991 Independent Study (1-10 Credits)****LGST 4995 Independent Research (1-10 Credits)**

## Business Information and Analytics

Office: Daniels College of Business, Room 580

Mail Code: Daniels College of Business, Room 580, 2101 S. University Blvd., Denver, CO 80210

Phone: 303-871-3695

Web Site: <https://daniels.du.edu/business-information-analytics/>

### Master of Science in Business Analytics

The University of Denver's Daniels College of Business Master of Science in Business Analytics program focuses on the three pillars of business analytics: data management, analytic modeling, and business decision-making. Graduates will be able to bring value to their organizations by informing data-driven decisions. As part of the program, students consult for our partner organizations (corporate, government, and non-profit) to help them with their data-driven challenges. Through partnerships with IBM/SPSS, Tableau, Microsoft, and other leading technology vendors, Daniels is able to provide the most relevant analytic tools in our classrooms. This gives students an edge in solving complex problems and keeps them on the leading edge of business analytics. This is a STEM designated degree and is a 12–36-month, full or part-time. This degree is 54-58 credits. Students with an undergraduate business degree can waive INFO 4000 and complete the degree in 54 credits.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Master of Science in Business Analytics

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The GMAT code for the Business Analytics program is MZR-GT-47. The GRE code for the University of Denver is 4842.

**Other Requirements**

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Certificate or Specialized Certificate in Business Analytics****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

**Other Requirements**

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

**Master's Degree Program****Master of Science in Business Analytics****Degree Requirements**

Code	Title	Credits
<b>Core coursework requirements</b>		
INFO 4100	Survey of Business Analytics	4
INFO 4120	Python Programming	4
INFO 4140	Business Databases	4
STAT 4610	Business Statistics	4
INFO 4200	Business Analytics Capstone Planning	2
INFO 4281	Project Management	2
INFO 4590	Optimization	4
INFO 4240	Data Warehousing	4
INFO 4000	Foundations of Business <sup>1</sup>	4
INFO 4300	Predictive Analytics	4
INFO 4340	Data Mining and Visualization	4
INFO 4360	Complex Data Analytics	4
INFO 4260	Data Management Platforms	4

INFO 4390	Advanced Predictive Modeling with R	4
INFO 4381	Decision Processes	2
INFO 4400	Business Analytics Capstone	4

Minimum Number of Credits Required: 54-58

<sup>1</sup> INFO 4000 may be waived for students with a business undergraduate degree or extensive business experience if approved by department chair.

## Graduate Certificate Program

The business analytics certificate will provide skills for analysis and decision-making in today's data-driven environment. The skills include a blend of statistical modeling, predictive analytics, programming, and data management foundations. There are no program prerequisites.

### Certificate in Business Analytics

Code	Title	Credits
STAT 4610	Business Statistics	4
INFO 4120	Python Programming	4
INFO 4140	Business Databases	4
INFO 4300	Predictive Analytics	4
Two Electives Chosen From:		
INFO 4240	Data Warehousing	4
INFO 4340	Data Mining and Visualization	4
INFO 4390	Advanced Predictive Modeling with R	4
INFO 4590	Optimization	4
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Program

The business analytics certificate will provide skills for analysis and decision-making in today's data-driven environment. The skills include a blend of statistical modeling, predictive analytics, programming, and data management foundations. There are no program prerequisites.

### Specialized Certificate Business Analytics

Code	Title	Credits
STAT 4610	Business Statistics	4
INFO 4120	Python Programming	4
INFO 4140	Business Databases	4
INFO 4300	Predictive Analytics	4
<b>Total Credits</b>		<b>16</b>

#### INFO 4000 Foundations of Business (4 Credits)

The Introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.

#### INFO 4100 Survey of Business Analytics (4 Credits)

This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

#### INFO 4120 Python Programming (4 Credits)

Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

**INFO 4140 Business Databases (4 Credits)**

This is an introductory database course which covers enterprise database design, modeling and implementation.

**INFO 4200 Business Analytics Capstone Planning (2 Credits)**

This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.

**INFO 4240 Data Warehousing (4 Credits)**

This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

**INFO 4250 Business Data and Analytics (4 Credits)**

Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Hands-on experience creating visualizations for data-driven insights. INFO 4250 requires a Windows Operating System. MAC users will have to virtualize their machines, or have access to a PC for async, live session and graded assignments. The software used in this course is Power BI and Visio Pro, which are Windows-only applications. Power BI is free, and the Department of Business Information and Analytics will provide a license for Visio Pro.

**INFO 4260 Data Management Platforms (4 Credits)**

This course introduces students to the variety of data management platforms being used across the business landscape, and develops skills in using those platforms to manage data and perform analytics. These include Hadoop distributed file systems, Amazon Web Services, Microsoft Azure, and/or other locally-hosted and cloud-based services. Other topics, such as Apache Spark and High-Performance Computing may be introduced using University and College resources. Learning Outcomes: 1. Students will create portals to data management systems and will run instances of these systems from their local environments. 2. Students will create file systems and load data onto local and cloud-based systems, and will query and manage data within these systems. 3. Students will leverage existing software packages (system-sourced and user-installed) in order to perform analytic modeling on the data in these environments. 4. Students will articulate the advantages and disadvantages of the various data management systems, and assess their utility for a variety of business applications.

**INFO 4281 Project Management (2 Credits)**

“Cheaper, better, faster” is the mantra of modern business. Innovation, providing new products and services or using improved business processes, has become a prerequisite for businesses to thrive and flourish. Project Management is a discipline which supports innovation by examining how to facilitate one time events such as constructing a building, installing a software system, taking a product to market, reengineering a marketing process, or merging an acquired company. In this course, we examine the science, practice the art, and discuss the folklore of project management to enable students to contribute to and manage projects as well as to judge when to apply this discipline. Prerequisite: INFO 4100. Co-requisite: INFO 4200.

**INFO 4300 Predictive Analytics (4 Credits)**

This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

**INFO 4340 Data Mining and Visualization (4 Credits)**

In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

**INFO 4360 Complex Data Analytics (4 Credits)**

This course addresses the rapidly-growing demands on businesses created by the prevalence of big and unstructured data. These include management of big data, big-data analytics, analysis of unstructured data (to include text mining), and management and analysis of real-time (streaming) data. The focus will be on enhancing business decision-making in the presence of big data, and on how to create the greatest ROI with large data sets.

**INFO 4381 Decision Processes (2 Credits)**

The competency we want to begin to develop in this course is the ability to make sound business decisions. A quick Google search can reassure you that there is no lack of information about how to make good decisions. And much of that information is confusing, if not downright contradictory. Since you will be making the decisions which impact your business and your career, you will need to decide what constitutes a good decision as well as a good decision process. In this course, we will explore some of the voluminous material available, use it to make decisions, practice with useful tools, identify traps and pitfalls, assess results, and extract guidelines for a decision process. Then we will iterate to update and refine the process.

**INFO 4390 Advanced Predictive Modeling with R (4 Credits)**

This course serves as an introduction to advanced predictive modeling and statistical learning using the R statistical software. Specific topics include linear, non-linear, and logistic regression, classification, resampling methods, and non-linear regression, tree-based methods, and support vector machines. The students will learn how to communicate their results (business reports, dashboards, etc.) of the various modeling exercises and projects using RStudio and the RMarkdown suite of tools. Enforced Prerequisites and Restrictions: INFO 4100 and INFO 4300.

**INFO 4400 Business Analytics Capstone (4 Credits)**

This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

**INFO 4401 Business Analytics Fundamentals (4 Credits)**

Business Analytics is a broad term that describes the process of using data to make business decisions. Data driven business decisions are both critical in modern business and hard to produce with reliable outcomes. This course introduces students to decision-making using probability and other statistical techniques to support and validate the chosen decision. Students will practice hands on business analytics skills for making data driven business decisions.

**INFO 4590 Optimization (4 Credits)**

This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

**INFO 4610 Business Statistics and Analytics (4 Credits)**

Making high quality business decisions is hard. Using data to make business decisions makes the process better. This course introduces students to a variety of techniques in analytics and statistics that facilitate data driven business decisions. Time will be spent identifying appropriate techniques to apply in various scenarios, applying in detail some of the quantitative techniques, and using analytic outputs to inform business decisions. Both technical skills and clear communication of results and decisions will be covered. Choosing proper techniques, technical work using Microsoft Excel, proper interpretation of results, and decision making are skills practiced in this course.

**INFO 4700 Topics in Business Analytics (0-10 Credits)**

Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

**INFO 4830 Executive Education – Data Analytics for Decision Making (2 Credits)**

In this Executive Education workshop, students will explore how companies organize around data and analytics and how leaders use data to make decisions. Every organization has data, but not every organization knows how to leverage it. This course focuses on the process of analyzing data so that you can discover what problems data can solve and what successes data can make possible. The course will also provide a focus on analytic modeling, using regression analysis and optimization to develop familiarity and skills in the analytic process, and will culminate with an opportunity to explore the challenges that participants' organizations are facing around their data-driven decision processes. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4855 Executive Education – Data Visualization Using Power BI (2 Credits)**

A picture is worth a thousand words—or a thousand spreadsheets. In today's complex business world, where the amount of data is overwhelming, being able to create and communicate through compelling data visualizations is a must-have skill for all business professionals. For too long data has been trapped behind scripts, wizards and code. That can change! This Executive Education workshop is a deep dive into the world of data and data visualization. You will learn how to create, analyze and evaluate large data sets that will enable you to turn mountains of raw data into meaningful stories that inform decisions and drive change. This is a software-heavy class where you will have the opportunity to practice technical skills in Microsoft Power BI, a free software application that lets users visualize data. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4875 Executive Education – Strategic Advantage Using Data Analytics (2 Credits)**

In today's business world, labor, capital, raw materials, and data are all essential to an organization's strategy. Many leaders have well-developed strategies for the first three, but they lack the understanding and direction to tackle the fourth: data. This Executive Education workshop focuses on how to build and implement a data strategy to improve organizational performance. Data and analytics programs offer great potential value, and to be effective they must align strategically across the business to deliver a positive return on investment. By understanding and integrating the five main components of a data strategy – Program, People, Process, Platform and Data – you will be able to grow your business and accelerate progress toward your organization's goals. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4991 Independent Study (1-10 Credits)**

## Courses

**INFO 4000 Foundations of Business (4 Credits)**

The Introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.



**INFO 4100 Survey of Business Analytics (4 Credits)**

This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

**INFO 4120 Python Programming (4 Credits)**

Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

**INFO 4140 Business Databases (4 Credits)**

This is an introductory database course which covers enterprise database design, modeling and implementation.

**INFO 4200 Business Analytics Capstone Planning (2 Credits)**

This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.

**INFO 4240 Data Warehousing (4 Credits)**

This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

**INFO 4250 Business Data and Analytics (4 Credits)**

Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Hands-on experience creating visualizations for data-driven insights. INFO 4250 requires a Windows Operating System. MAC users will have to virtualize their machines, or have access to a PC for async, live session and graded assignments. The software used in this course is Power BI and Visio Pro, which are Windows-only applications. Power BI is free, and the Department of Business Information and Analytics will provide a license for Visio Pro.

**INFO 4260 Data Management Platforms (4 Credits)**

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**INFO 4281 Project Management (2 Credits)**

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**INFO 4340 Data Mining and Visualization (4 Credits)**

In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

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**INFO 4400 Business Analytics Capstone (4 Credits)**

This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

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**INFO 4590 Optimization (4 Credits)**

This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

**INFO 4610 Business Statistics and Analytics (4 Credits)**

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**INFO 4700 Topics in Business Analytics (0-10 Credits)**

Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

**INFO 4830 Executive Education – Data Analytics for Decision Making (2 Credits)**

In this Executive Education workshop, students will explore how companies organize around data and analytics and how leaders use data to make decisions. Every organization has data, but not every organization knows how to leverage it. This course focuses on the process of analyzing data so that you can discover what problems data can solve and what successes data can make possible. The course will also provide a focus on analytic modeling, using regression analysis and optimization to develop familiarity and skills in the analytic process, and will culminate with an opportunity to explore the challenges that participants' organizations are facing around their data-driven decision processes. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4855 Executive Education – Data Visualization Using Power BI (2 Credits)**

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**INFO 4875 Executive Education – Strategic Advantage Using Data Analytics (2 Credits)**

In today's business world, labor, capital, raw materials, and data are all essential to an organization's strategy. Many leaders have well-developed strategies for the first three, but they lack the understanding and direction to tackle the fourth: data. This Executive Education workshop focuses on how to build and implement a data strategy to improve organizational performance. Data and analytics programs offer great potential value, and to be effective they must align strategically across the business to deliver a positive return on investment. By understanding and integrating the five main components of a data strategy – Program, People, Process, Platform and Data – you will be able to grow your business and accelerate progress toward your organization's goals. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4991 Independent Study (1-10 Credits)**

## Digital Leadership

The Daniels College of Business Master's in Digital Leadership is a 45-credit hour program for working professionals who understand that developing a digital mindset and gaining fluency in emerging technologies will prepare them to lead their businesses in the era of digital disruption. Students will gain critical leadership skills such as how to manage change, lead digital teams, and create new business models that will be needed by businesses to stay competitive in today's dynamic business environment. You will also learn to leverage 4<sup>th</sup> industrial technologies like artificial intelligence, blockchain, and cloud technology to digitally transform your organization and position it for future success. Graduates will be future-focused leaders who are technology ready to drive the digital transformation of their businesses and industries. This is a STEM-designated degree and is a 12–36-month, full or part-time program.

**Class Structure/Schedules**

Most of the courses are one to two-credit "sprint" courses that run for a total of five weeks each within the quarter system. The four, four-credit courses, run the entire ten-week quarter. Courses contain both online (asynchronous) and live online instruction (synchronous).

*Live 90-Minute Online Classes*

- Hosted via Zoom at 6:30 p.m. or 8:30 p.m. one night a week
- Lively peer-to-peer discussions
- Class recordings you can review later

**Electives**

A total of five electives are offered for the Master's in Digital Leadership Program.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

## Master of Science in Digital Leadership

**Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Standardized Test Scores**

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## Certificate or Specialized Certificate in Digital Transformation

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

The Master of Science in Digital Leadership develops leaders who want to drive digital transformation in their organizations, using data and fourth industrial revolution technologies to create new value(s) in business. Program goals include: (1) equipping innovators with foundational knowledge to lead digitally driven transformation that creates new business value; (2) integrating theory and practice; (3) building bridges between the University of Denver and transformational organizations and practitioners; and (4) implementing an incremental and accessible degree program to help working professionals take their careers to the next level.

## Master of Science in Digital Leadership

Minimum number of credits required for degree: 45

Code	Title	Credits
<b>Leadership Block</b>		
BUS 4134	Customer Experience	2
BUS 4137	Intrapreneurship and Leading Change	4
BUS 4142	Business Model Innovation	2
BUS 4435	Digital Transformation: Design and Execution	4
BUS 4675	Talent Management	2
BUS 4690	Leading Digital Teams	2

<b>Enabling Technology Block</b>		
BUS 4136	Robotic Process Automation	1
BUS 4138	Artificial Intelligence	2
BUS 4139	Augmented/Virtual Reality	1
BUS 4146	Internet of Things	1
<b>Infrastructure Block</b>		
BUS 4132	Mobile Technology	1
BUS 4141	Cybersecurity	1
BUS 4144	Blockchain	2
BUS 4145	Cloud/Edge Computing	2
<b>Data Management Block</b>		
BUS 4133	Analytics	4
BUS 4143	Digital Ethics & Privacy	2
BUS 4135	Agile Development	2
BUS 4147	The Foundations of Digital Transformation	1
<b>Applications Block</b>		
Students choose five courses:		5
BUS 4700	Special Topics in Business	
or BUS 4701	Special Topics in Business	
or BUS 4704	Topics in Business	
or BUS 4705	Topics in Business	
<b>Capstone Project</b>		
BUS 4105	Masters in Digital Leadership Capstone Course	4
<b>Total Credits</b>		<b>45</b>

## Graduate Certificate in Digital Transformation

Code	Title	Credits
<b>Required Courses</b>		
BUS 4137	Intrapreneurship and Leading Change	4
BUS 4138	Artificial Intelligence	2
BUS 4143	Digital Ethics & Privacy	2
BUS 4147	The Foundations of Digital Transformation	1
BUS 4435	Digital Transformation: Design and Execution	4
<b>Leadership</b>		
Select two from the following		4
BUS 4134	Customer Experience	
BUS 4142	Business Model Innovation	
BUS 4675	Talent Management	
BUS 4690	Leading Digital Teams	
<b>Emerging Technology</b>		
Complete at least seven credits from the following:		7
BUS 4132	Mobile Technology	
BUS 4136	Robotic Process Automation	
BUS 4141	Cybersecurity	
BUS 4144	Blockchain	
BUS 4145	Cloud/Edge Computing	
BUS 4139	Augmented/Virtual Reality	
BUS 4146	Internet of Things	

Approved BUS topics courses

**Total Credits****24**

## Specialized Graduate Certificate in Digital Transformation

Code	Title	Credits
<b>Required Courses</b>		
BUS 4147	The Foundations of Digital Transformation	1
BUS 4138	Artificial Intelligence	2
BUS 4137	Intrapreneurship and Leading Change	4
or BUS 4435	Digital Transformation: Design and Execution	
<b>Leadership</b>		
Choose one from the following:		2
BUS 4134	Customer Experience	
BUS 4142	Business Model Innovation	
BUS 4675	Talent Management	
BUS 4690	Leading Digital Teams	
<b>Emerging Technology</b>		
Complete seven credits		7
BUS 4132	Mobile Technology	
BUS 4144	Blockchain	
BUS 4145	Cloud/Edge Computing	
BUS 4146	Internet of Things	
BUS 4136	Robotic Process Automation	
BUS 4139	Augmented/Virtual Reality	
BUS 4141	Cybersecurity	
Approved BUS topics courses		
<b>Total Credits</b>		<b>16</b>

### BUS 4105 Masters in Digital Leadership Capstone Course (4 Credits)

What makes a good Digital Leader. It's the ability to lead organizations using emerging technologies and possessing a data-driven mindset in efforts to digitally transform organizations and industries. This course gives the student an opportunity to apply the knowledge and skills learned in this program to a real-world problem that affect them and their organizations. Students take a business problem from problem definition to digital transformation. This isn't a course where students write about a problem, but rather work with mentor to create value for themselves and their organization. Prerequisites: All other Digital Leadership courses.

### BUS 4132 Mobile Technology (1 Credit)

You've probably heard about the 5th Generation of mobile technology (5G), but have you heard about the 6th (6G)? Consumers are increasingly becoming more mobile and are demanding more data be delivered to them more quickly. It seems now that the value of mobile technology is centered around increasing demand. This puts an enormous strain on organizations as they begin to digitally transform their organizations. Conversely, for the informed digital leader, this pattern of rapid mobile technology is an opportunity to provide newer and better value for their stakeholders. This class will explore these challenges and opportunities and will provide learners with an insight into the emerging ethical challenges that are related to the use of mobile technology.

### BUS 4133 Analytics (4 Credits)

Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision-making and performance improvement. 2. Data management in organizations. 3. Organizational transformation based on data-driven insights.

### BUS 4134 Customer Experience (2 Credits)

As the rate of technology increases and more products and services transition to the virtual realm, organizations need to ensure that both their internal and external customers are included. This course helps digital leaders understand, use, and apply the customer experience construct. It will help them create an experience for customers that goes beyond customer service for external customers and actively involves internal customers in the co-creation of value that supports their business's digital transformation.

**BUS 4135 Agile Development (2 Credits)**

It is estimated that 70% of all projects fail. This course will help project owners and team members increase their chances of success by introducing and reinforcing the agile development process method. Students will learn what it means to lead these types of projects and how they might be used for the benefit of their organizations.

**BUS 4136 Robotic Process Automation (1 Credit)**

Robotic Process Automation (RPA) is an emerging technology that is changing the way businesses process data. RPA allows many business processes to be automated and remove the human from performing repetitive tasks. This course will teach the basics of the technology using one of the most popular RPA software programs.

**BUS 4137 Intrapreneurship and Leading Change (4 Credits)**

As businesses begin to transition from the physical to the digital realm, their ability to strategically manage this change is directly tied to their future success. The challenges facing leaders of these organizations include how to empower employees to be innovative how to gain stakeholder buy-in, and ultimately how to manage the process of change. This course will help leaders become better change agents within their organizations by helping them understand the sources of change, designing a plan for it, and ultimately, leading the change process. Change is constant in a business and the better-prepared organizations are to deal with it, the more likely they will be able to continuously create value for their company's stakeholders.

**BUS 4138 Artificial Intelligence (2 Credits)**

Hollywood has taught us that artificial intelligence (AI) involves robots that want to take over the world in some fashion. While this notion is both terrifying and fascinating to watch, it fails to portray how AI is being used successfully by businesses to create value for stakeholders. This course will help inform your perspective on how AI is helping businesses by giving you insight into how its currently being used by businesses. Included in this is developing your understanding of how organizations develop their AI capabilities, a look at various AI techniques including machine learning, and a discussion on the ethical challenges raised by using AI in business. The ability to understand and use AI in business could transform the way business is done by equipping organizations with the ability to reimagine what is possible and simultaneously deliver it.

**BUS 4139 Augmented/Virtual Reality (1 Credit)**

What is reality? Is it what we experience through our five senses and then process through our understanding, or is it putting on a virtual reality headset and interacting with others in another world? With the growing popularity and applications around augmented and virtual reality, the line between real and virtual reality is becoming blurred. This course operates from the blurred space and starts by helping students understand what extended reality is how its application can be used in business. Students will explore the emerging capabilities of organizations that are using virtual reality and will be empowered to make recommendations of their own as to how this technology may further transform other organizations. As this course operates in the space between realities, numerous ethical issues have arisen surrounding extended reality and students will be given insights into what they are and how to navigate them.

**BUS 4141 Cybersecurity (1 Credit)**

You are under attack! Cyberattacks are on the rise and they can be catastrophic to a business resulting in downtime, lost profits, and growing distrust from stakeholders. While there isn't a perfect solution to stopping cyberattacks, this course is designed to help leaders become better equipped to mitigate these threats by improving their understanding of the current state of cybersecurity, how it's being used by businesses, and what they can do to better protect themselves from cyberattacks. In addition to learning the application and outcomes of cybersecurity, learners will be exposed to the growing ethical debates surrounding cybersecurity in efforts to be better prepared to make security recommendations for their organizations.

**BUS 4142 Business Model Innovation (2 Credits)**

If companies don't innovate, they evaporate. This is especially true as an organization begins the digital transformation process. In this class, students will be taught how to evaluate an organization's business model to facilitate its transition to the digital realm. The idea is to transition a business model into something that creates value by way of leveraging emerging technologies, analytics, and digital leadership for all stakeholders.

**BUS 4143 Digital Ethics & Privacy (2 Credits)**

Do individuals have a right to digital privacy and what are the ethical ramifications that support our virtual existence? In this class, you will explore the idea of digital privacy and how businesses are balancing the need to make a profit while simultaneously safeguarding their stakeholder's data. In addition to digital privacy, students will develop the ability to evaluate emerging technologies through varying ethical lenses and begin to explore the future directions of digital ethics.

**BUS 4144 Blockchain (2 Credits)**

In this course, students will understand how blockchains operate as decentralized ledgers and how businesses can begin to leverage the opportunities these types of technologies afford to them. With an understanding of blockchain, the course will transition to cryptocurrency and discuss the emerging values proposition these new types of currencies provide to businesses. From digital currencies, the course will instruct students on the emerging concept of non-fungible tokens (think digital art) and will conclude with an investigation into the ethical challenges related to blockchain technology.

**BUS 4145 Cloud/Edge Computing (2 Credits)**

Is it more accurate to say the digital cloud is above us, or all around us? In this class, students will learn to distinguish between cloud and edge computing and will be able to articulate the value of each to their organization. Students will also become familiar with the major cloud providers (e.g., Google, AWS, and Azure). Equipped with knowledge students will be able to create a cloud transformation plan that highlights their organization's cloud journey and transformational process to the cloud.

**BUS 4146 Internet of Things (1 Credit)**

Can you see the value of a drone being connected via the internet to a warehouse, or your car connected to your refrigerator? The Internet of Things (or IoT) is the emerging technology of connection. It's the ability to connect virtually everything via the internet. In this course, students will be given the opportunity to explore the value this type of technology provides to their organization. It will also enable them to create strategic recommendations using IoT for their business and ways it can ethically be used to satisfy its stakeholder's needs and wants.

**BUS 4147 The Foundations of Digital Transformation (1 Credit)**

What does it mean for a business to digitally transform? Even as more businesses say they are "digitally transforming", it is still largely unclear what this process means, and perhaps more importantly, how it can be successfully achieved. This course is designed to provide students with clarity around these topics by first examining the foundations of digital transformation (emerging technology, leadership, and data) and analyzing their impact on the business. After developing this foundation, students will then work to diagnose a firm's ability to transform by evaluating its digital capabilities to produce stakeholder value. Once students have gained insights into the context and capabilities of digital transformation, they will explore the potential ethical challenges and issues raised by moving their organization to the digital realm.

**BUS 4310 Business Communication for Accounting Professionals (4 Credits)**

This course emphasizes critical communications skills for future accounting, tax, auditing and consulting professionals. The course develops written communication skills including but not limited to technical writing, reporting the results of research and explaining complex issues. Oral communication assignments include formal presentations, development of debate skills and boardroom presence. Assignments incorporate business etiquette and teambuilding.

**BUS 4350 Overview of Outdoor Recreation Industry (1 Credit)**

This course is a survey of the outdoor recreation industry, providing an overview of the size, growth, sectors and economic impacts of the industry. This course will lay the foundation for the LORI Program, as the remaining courses will dive deeper into the topics. This course will also begin to examine external drivers for the industry, including the connection between policy and outcomes, the inherent tension between access and conservation, as well as economic trends driving the industry. Students will also set up an exploration of the industry's role and relationship with challenges such as climate change, globalization, and technology as well as the critical role of Environmental, Social and Governance (ESG) issues within the industry. We will also spend time discussing the role of diversity, equity and inclusion in the outdoor recreation industry and examine what our role can be to change.

**BUS 4353 Business Models in the Outdoor Industry (1 Credit)**

This course introduces students to the concept of a business model canvas, what goes into the revenue and cost streams, and the necessary factors that need to be controlled in order to sustain a business. Students will be introduced to emerging models in the retail and hospitality sectors, and will learn how to differentiate between business models in the product based vs. services based industries. They will also get an appreciation of capital structure needed to keep a business going, and the implications of capital intensity for business models.

**BUS 4355 Sustainability and Markets in the Outdoor Recreation Industry (1 Credit)**

This course provides an overview of sustainability issues through a business lens, and shares insights on corporate sustainability risks, strategies, and market-based drivers of change. This sprint will review sustainability business risks and opportunities, ESG reporting frameworks, and how integrating sustainability into strategy can create enterprise value. As part of the Outdoor Industry Leadership program, students will gain an overview of the theory, practice, and challenges of corporate sustainability, learn strategies and tools to lead organizational change. The course will deepen student understanding of sustainability trends, perceived ESG risks, approaches to carbon management, and how ESG reporting frameworks can improve sustainability management, collaboration, and communication. Corporations will increasingly focus on creating sustainable and inclusive growth that adapts to climate-related risks, competes effectively for limited resources, and addresses community and social challenges in a sustainable way.

**BUS 4360 Leading Self: Leadership in Outdoor Recreation Industry (1 Credit)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual/social interaction. This course will provide students the critical skills to "lead the self" towards personal/professional goals in the outdoor industry. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. As part of this process, students will learn necessary skills for leading others and working effectively in teams.

**BUS 4365 Leading Teams in the Outdoor Industry (1 Credit)**

"Leading teams" is a graduate course to prepare you for formal and informal leadership of a team. You will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams face. You will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. In addition, we will cover current topics, including virtual teams, team creativity and team-based innovation.

**BUS 4367 Leading Organizations in the Outdoor Industry (1 Credit)**

How do companies develop a sustained competitive advantage? In highly competitive industries like the Outdoor Industry, creating an "edge" is not a due to luck or single solutions. In this course, we will examine the components of developing a successful strategy. We will examine: 1. Do we have a strategy? 2. What business are we in? 3. What are we as a company good at? 4. How do we "win"?

**BUS 4370 Principles of Management in the Outdoor Industry (1 Credit)**

This course will help students understand the major functions of management (planning, organizing, leading, and controlling) and the significance of each function in relationship to the existence of the company. This course describes how companies use management to set and accomplish goals through individuals, groups, and other types of resources. It also analyzes communication and ethics in the organization. Major topics include decision making, change, employee development, organizational structures, management control, and leadership.



**BUS 4375 Taking a DEI centric approach to Talent Management in the Outdoor Industry (1 Credit)**

This course will guide students through the foundations of Talent Management with a DEI lens. Talent Management is top of mind for many Outdoor companies. In order to ensure there is the right talent at the right time in the place with the right skills, leaders prioritize talent management frameworks to unlock the potential of their teams. DEI is fundamental to strengthening the talent pool and ensuring business growth, relevance and longevity. Over the course of a few weeks, we will first establish an understanding of what Talent Management is and how to build programs that resonate with the businesses and the culture. During that time, we will also examine how DEI perspectives can become effective strategies in creating an environment where everyone can thrive.

**BUS 4380 Regulatory Environment in the Outdoor Industry (1 Credit)**

This course provides an overview of the regulatory environment surrounding liability in the outdoor recreation industry, with a particular focus on ski resorts. The course introduces students to state-level "ski safety acts," to the interplay between legislatures and courts, and to emerging developments in the law.

**BUS 4383 Public Policy Challenges in the Outdoor Industry (1 Credit)**

This course explores the myriad public policies that affect the outdoor industry, one of the nation's largest industry sectors. The class will evaluate federal, state and local legislative and regulatory actions that affect the ability of the economic considerations of the outdoor industry, and how the industry has engaged in the public policy process to ensure its ability to grow.

**BUS 4385 Environmental and Social Governance in Outdoor Industry (1 Credit)**

Industry today is responding to calls for more accountability to its numerous stakeholders. ESG is becoming an important measurement tool for assessing the performance of companies in addressing stakeholder concerns of Environmental, Social (internal and external), and Governance issues. This course will be an overview of the current practice of ESG reporting and ratings by numerous third-party organizations, the ways ESG factors are measured, the steps companies are taking to meet ESG standards, and the success of companies that have adopted ESG programs. Further, some companies have elected to become B-Corps to demonstrate their commitment to being a sustainable business and devoting part of their profits to social causes.

**BUS 4387 Supply Chains in the Outdoor Industry (1 Credit)**

In this course, students will learn about the supply chain system through the University of Denver's Six Pillars of Supply Chain model. It is essential for business leaders to first understand the supply chain system as a holistic end-to-end model that will be introduced at the beginning of the course. By understanding a comprehensive supply chain from product design to retail to post-use, the student can better understand a product lifecycle from a tactical to a strategic perspective. The student can gain a more in-depth understanding of important topics within the supply chain and how they are emerging in the 21st century. Students will leave this course with a starting point understanding of the role of the supply chain in the outdoor industry, its role in sustainability initiatives, economic policy, and business strategy. The course also pays special attention to globalization, which is not only a critical factor in supply chain management but will have far-ranging impacts on the future of the outdoor industry in the US.

**BUS 4389 Enterprise Risk in the Outdoor Industry (1 Credit)**

As in any business, risks unfortunately exist and must be identified, managed, and mitigated to the extent possible. Businesses in the Outdoor Industry are not immune to these risks – and have additional industry-specific risks that are unique to them. A sound risk management program is paramount to success in the Outdoor Industry. This course introduces students to the concepts of risk identification, risk management and risk mitigation measures. It will cover what goes into the enterprise risk management process, and the key legal and business factors that need to be identified, managed and controlled in order to sustain a business. Specific topics to be covered include liability waivers/releases, signage, preventative measures (avalanche mitigation and patrolling, e.g.), insurance, compliance, workers compensation and internal auditing. Students should leave this course with a greater appreciation for the outdoor industry and the many methods involved in the management of risk to ultimately help drive the success of a business.

**BUS 4390 Land Use in Outdoor Industry (1 Credit)**

By its nature, the outdoor recreation industry depends on reliable access to land and water. Using a selection of case studies, this course examines access to national forest lands, private landholdings, and bodies of water.

**BUS 4395 Service Excellence & Guest Experience in Outdoor Industry (1 Credit)**

In this course you will gain the exclusive Forbes Five Star Certification that will provide the tools to luxury service excellence and the delivery execution of outstanding guest experiences. This course will explore service experience in the context of the service delivery systems and will provide students with the tools to troubleshoot, produce continuous improvement, and create outstanding guest experiences.

**BUS 4397 Access in the Outdoor Industry (1 Credit)**

"Access in the Outdoor Industry" is a transformative course designed for leaders and aspiring change-makers within the dynamic realm of outdoor recreation. This course is meticulously crafted to equip industry professionals with the knowledge, skills, and strategic acumen necessary to dismantle barriers and champion inclusivity, ensuring equitable access for all individuals, irrespective of their backgrounds, abilities, or socio-economic status.

**BUS 4400 MBA@Denver Capstone (4 Credits)**

The MBA@Denver Capstone Course enables the practical application of key management and leadership competencies, skills and knowledge and is designed to integrate core course learning outcomes. You will integrate what you have learned in the MBA@Denver program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. You are strongly encouraged to work with a small business or not-for-profit organization, completing a social capital project with that enterprise. You will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within an organization. You will work in teams and will select an organization of your choice to work with as the client. The project will end with an oral presentation and written proposal that is delivered to the client organization and the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. You are required to identify linkages between an organization's external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization's ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate. Enforced Prerequisites and Restrictions: MBA@Denver student must be within one quarter of graduation or have the Director's permission to take the class. This course is open only to MBA@Denver students (MBA-DEN).

**BUS 4435 Digital Transformation: Design and Execution (4 Credits)**

As a business, it is better to be the disruptor than to do be disrupted. Since 2020, this fact is easy to see as businesses have rapidly accelerated their plans to digitally transform. The success of these transitions has been largely underwhelming as organizations have failed to leverage the right technologies to create better processes that support customer's current and future needs. This course is designed to help students increase their ability to drive digital transformation by focusing on both the design and execution of digital transformation. After taking this course, students will be able to assess current digital transformation design practices that will strategically fit their business and create a plan to increase success in executing it.

**BUS 4444 Global Bus, Governance & CSR (4 Credits)**

In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. Instead, these issues require collaboration and coordination across a variety of actors spread around the globe. Within this framework, businesses are aware of increased pressure to behave responsibly and adopt a corporate social responsibility (CSR) approach to their conduct. Yet, businesses are unsure how to integrate these goals into their business strategy and engage meaningfully with stakeholders. Likewise, governments recognize the importance of having business at the table, but do not have a clear understanding of how to best engage with the private sector. The response to this conundrum is a focus on global governance, which refers broadly to the way in which global affairs are managed. After a brief overview of economic trends and trajectories around the globe, the course will focus on global governance as a mechanism for change. The class will first explore the opportunities and shortcomings of global governance efforts. The class will build on this scholarship by discussing the role business plays in global governance mechanisms. As society has become aware of, and is acutely concerned with, business conduct, the role of the manager and business strategy in these realms has also changed. Students will analyze these trends and study their implications for government, business, or civil society strategy and practice. The final portion of the course will focus on specific issue areas, including: human rights, labor standards, the natural environment, corruption, and microfinance.

**BUS 4445 International Business: Strategy and Practice (4 Credits)**

This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc. This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

**BUS 4450 Developing an Entrepreneurial Mindset (4 Credits)**

Have you ever heard the quote, "Find a job you enjoy doing, and you will never have to work a day in your life?" This course is designed to help you align your purpose in life with your organization's purpose (your own organization or an organization for which you work). There are multiple parts to bringing this alignment about, which will comprise the foundation for this course: (1) (re)evaluating your purpose in life, building on what you have learned about your leadership style, ethical orientation, values and beliefs, and so forth from your earlier courses; (2) developing an entrepreneurial mindset, useful for starting your own organization or a new venture within the organization in which you already work; (3) exploring the Triple Bottom Line perspective of business in society; and (4) applying the core concepts of systems thinking to identify potential business ideas that align with your purpose. The course will culminate with the creation of a business idea and business model canvas that aligns your purpose in life with a compelling business purpose. The business idea may involve creating your own business/organization or proposing the idea within your current organization.

**BUS 4530 Data Visualization in the Outdoor Recreation Industry (1 Credit)**

Data visualization can bring data to life, making the user the master storyteller of the insights hidden within the numbers. Through live data dashboards, interactive reports, charts, graphs, and other visual representations, data visualization helps users develop powerful business insight quickly and effectively. This course introduces students to the disciplines related to data visualization as it relates to the Outdoor Industry.

**BUS 4535 Data Analytics in the Outdoor Recreation Industry (1 Credit)**

Data can help businesses better understand their customers, improve their advertising campaigns, personalize their content, and improve their bottom lines. The advantages of data are many, but you can't access these benefits without understanding the value of data analytics. Data's value as a strategic asset is often lost as companies are unsure how to analyze the data, use insights for decision making and measure the impact of data-driven outcomes. This course is not a "stats" class. Rather it introduces students to the foundations of data analytics, the scientific process of transforming data into insights for making better decisions as it relates to the Outdoor Industry.

**BUS 4540 Data Management in the Outdoor Recreation Industry (1 Credit)**

Data management has been a critical and common practice employed across industries for many years. At its core, data management encompasses all disciplines related to managing data as a strategic and valuable resource, including collecting, processing, governing, sharing, and analyzing data — and doing it all in a cost-efficient, effective, and reliable manner. Given the changing work environment, with more remote workers and new channels, we are seeing greater importance placed on data management. This course introduces students to the disciplines related to managing data as a strategic and valuable resource as it relates to the Outdoor Industry.

**BUS 4575 Accounting I in Outdoor Industry (1 Credit)**

Accounting is a core skill that helps ensure success in all business environments, including the outdoor industry. During this course, students will be introduced to accounting and its relevance to the business world. Students will learn how to analyze transactions, determine how they would appear on financial statements, and understand related management disclosures.

**BUS 4580 Accounting II in Outdoor Industry (1 Credit)**

During this course, students will learn how to analyze financial statements for competitive analysis and predict a business' cash flow. The focus of this course will be on key performance indicators and sources/uses of cash.

**BUS 4600 Professional MBA Capstone Project (4 Credits)**

The Capstone Project enables the practical application of key management and leadership competencies, skills and knowledge designed to integrate core course learning outcomes. You will integrate what you have learned in the PMBA program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. The course integrates Daniels' multi-disciplined learning outcomes and experiences to achieve this goal. The course is a combination of site-based practicum, field project and classroom experiential learning. Through these activities, you will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within a non-profit organization. You will work in teams (4-5 individuals) and will select a non-profit organization of your choice to work with as your client. The project will end with an oral presentation and written proposal delivered to the client and to the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. Students are required to identify linkages between an organization's external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization's ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate.

**BUS 4610 Business Ethics for the Public Good (2 Credits)**

A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional, social and legal responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of "community" and the ethical and social relationships of business leaders and business organizations in their communities. A particular focus will be the role of the business manager and executive as a professional with unique and special responsibilities. These roles will be examined by analyzing a variety of issues and situations that students will likely face during their careers. The goal is to provide students with perspectives, intellectual frameworks, and skills that will be useful in their business careers. The Daniels PMBA "core" not only strengthens foundational business and management skills, but also provides a broader orientation, purpose and direction for exercising and executing foundational skills to achieve enterprise and personal success. Personal and organizational success is a function of technical "know-how," leadership intelligence, and competence in execution. The assumption of this course is that all of these competencies must be grounded in a solid ethical and social commitment to community values and principles. This course will explore these values and principles in various business contexts, using the shared personal experiences of business professionals who will present their own stories for us to examine.

**BUS 4611 Leading Self & People (2 Credits)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual/social interaction. This course will orient the student towards gaining the most out of their education by focusing on learning as the cornerstone of development. It will provide students the critical skills to “lead the self” towards personal/professional goals as the context for studying intentional change. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. As part of this process, students will learn necessary skills for leading others and working effectively in teams. Lecture / Off-site will include a required intensive three-day exercise in self-awareness, outdoor leadership, team-building, problem solving, and critical thinking. This outdoor experiential includes an intellectually rigorous component, which is designed to enhance the classwork in which you engage, and is intended to enhance the experience students have in their life outside of the academic environment. The outdoor experiential will be leverage in the on-campus course which provides insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to “lead the self” towards personal/professional goals as the context for studying intentional change. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. Online/Distance and Combined/Hybrid Methodologies will include an optional outdoor immersion that involves an intensive three-day exercise in self-awareness, outdoor leadership, team-building, problem solving, and critical thinking as outlined above.

**BUS 4612 Business Domestic Immersion (0 Credits)**

MBA@Denver students are required to take two immersion experiences. BUS 4620-X includes domestic experiences, held in a U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the immersion course at the same destination more than once.

**BUS 4614 Business International Immersion (0 Credits)**

MBA@Denver online students are required to take two immersion experiences. BUS 4614-X includes international experiences, held in a non-U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the same section number (X) more than once, though they may take the course more than once.

**BUS 4620 Ethics for the 21st Century Professional (4 Credits)**

A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of “community” and the social relationships of managers and business organizations in their communities. Roles and responsibilities of managers and business firms are examined by analyzing a variety of issues that managers will face during their careers. These specific issues will be examined in terms of their legal, public policy, and ethical dimensions. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. Cross-listed with ACTG 4620.

**BUS 4675 Talent Management (2 Credits)**

In 2020, the concept of talent management changed dramatically. Since that time, employees have begun transitioning away from the office, the great resignation has occurred, and managers are now dealing with the emerging phenomenon of quiet quitting. This course will prepare students for this new era of talent management that focuses on the employee and works to empower them in the emerging digital age. Students will learn how to reinforce the company’s culture by working with employees to create change, invest in culture, and work in becoming future leaders of the organization.

**BUS 4690 Leading Digital Teams (2 Credits)**

Nearly 90% of businesses have reported that they are pursuing some sort of digital transformation project that will partially or fully change their business. With this much emphasis being placed on organizational change, leaders of organization will need to be acutely aware of how to manage the process and especially the employees who are at its core. In this course students will understand what effective leadership is and what it means for the strategy of the firm. They will examine the importance of leading digital teams through a top-down and bottom-up approach that applies a global and culturally sensitive paradigm to each. Students will leave with the skills able to lead a diverse digital team as they work to transform and create new value for their organizations.

**BUS 4700 Special Topics in Business (0-8 Credits)****BUS 4701 Special Topics in Business (1-6 Credits)****BUS 4704 Topics in Business (1-6 Credits)****BUS 4705 Topics in Business (1-6 Credits)****BUS 4810 The Head and Heart of Leadership: Neuroscience and Emotion Regulation (4 Credits)**

Neuroscience may be the next great frontier of leadership learning. Admired and respected leaders understand both the “heart” of leadership, the harnessing and leveraging of emotions to inspire others, as well as the “head” of leadership, how the workings of our brains impact our ability to lead. This course incorporates content from the latest research in the fast-moving fields of neuroscience, emotional intelligence and mindfulness. Students will develop highly-relevant leadership skills, strategies and tactics that will make an immediate impact on your ability to successfully lead others.

**BUS 4820 Leading and Developing Others for Success (4 Credits)**

Successful leadership does not occur without successful followers. This exciting course explores the elements of how great leaders enable the success of others. We begin by exploring several well-known theories of leadership, including servant, authentic, and values-based leadership, as a means for students to formulate their own personalized framework of what great leadership looks like to you. We will learn how to hire, understand, inspire, coach, mentor and sponsor a diverse and inclusive team. We will also explore storytelling, one of the hottest topics in leadership. Students will create a personal development plan that ensures the ability to incorporate the elements of this course into successful leadership.

**BUS 4830 Leading Change and Building an Agile Culture (4 Credits)**

The capacity to lead highly change-capable, agile organizations is critical in today's VUCA world – volatile, uncertain, complex and ambiguous. Foundational to leadership success at every level within an organization is the capacity to build a change-ready, agile culture and successfully execute sustainable change. By exploring and evaluating the latest thinking on leadership and change, this course arms leaders with the strategies and tactics necessary to: 1) create teams and organizations with high levels of change-capability and agility; 2) motivate followers and overcome resistance to change; and 3) successfully achieve both incremental and transformative change.

**BUS 4840 The CEO Toolbox (4 Credits)**

Strategy is integral to a successful organization. But without strong execution, even a well-defined strategy can fall apart. Executive teams/leaders that combine actionable strategy with operational depth are the ones most likely to stay the course and deliver long-standing results. They understand the need to align strategy and operations to deliver on their objectives. After taking courses on Strategic Management, Leadership, Leading Change, Culture, etc., you too understand the need for aligning strategy and operations, yet, in practice it's often more difficult to do. Through this course, students will hone their skills by developing and using practical tools to deal with shifts and changes along their strategic journeys. This course will allow you to put theory into action.

**BUS 4980 Internship (0-10 Credits)**

Faculty supervised Internship.

**BUS 4991 Independent Study (1-10 Credits)****BUS 4995 Independent Research (6 Credits)****BUS 6000 Research Methods in Business (4 Credits)**

Business Research Methods introduces students to the nature, scope, and significance of research and research methodologies. Additionally, the course studies primary and secondary research methods with applications to specific problems, using qualitative and quantitative designs for individual investigation on current problems within a student's area of interest. Topics covered include research design, sampling strategy, data types and collections, measurement approach, testing procedures, ethics in data collection and interpreting findings, and the Institutional Review Board (IRB) process.

**BUS 6001 Qualitative Research Methods (4 Credits)**

Qualitative methods are important for exploring complex social phenomena and developing theories for understanding dynamic relationships and change. This course is designed to help students develop an understanding of the methods and process for conducting qualitative research in general, and case study research in particular. Students will learn to use qualitative methods to develop theories and managerial solutions for current and future business problems.

**BUS 6002 Quantitative Methods I- Making Discoveries with Data (4 Credits)**

As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. Specifically, you will become familiar with several of the internationally utilized statistical software packages and with the array of statistical analysis techniques. You will understand which statistical analysis technique to use in which situation, and how to interpret the output from your statistical software packages. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. You will also gain skills in understanding how data collection and analysis will benefit your research.

**BUS 6003 Quantitative Methods II - Making Discoveries with Data (4 Credits)**

As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. In this course you will learn how these data analysis tools are used for research, and you will plan how you will use your data analysis skills to perform your own research for your doctoral degree.

**BUS 6004 Data Analytics (4 Credits)**

The main objective of this course is to provide students with a well-grounded understanding and appreciation of the contemporary methods, tools and techniques used to make evidence-based managerial decisions. As managers and practitioners in business, industry and government, you have made substantial investments in putting in place the means to collect and store data, but may not have the basic technical or analytical understanding necessary to chart a road map to discover the full potential of your data. This course intends to provide you with such an understanding and hence help you become a better manager/decision maker.

**BUS 6005 Behavioral Research Design and Execution (4 Credits)**

The first purpose of this course is to prepare doctoral students with the ability to design, implement, and test the results from an experiment or survey. This includes operationalizing independent and dependent variables, rooted in definitions of terms and theory, in a manner that allows for quality statistical testing. Students will also learn manipulation of independent variables, including manipulation checks, and the basics of survey design. Lastly, analysis of existing data sets will round out the learning. This course builds on the previous research and statistics coursework in the program with a focus on practice and application. Multiple actual studies will be replicated as part of the course with the final project being a replication of a study of the student's choosing.

**BUS 6300 Seminar in Cross Disciplinary Decision Making Research (4 Credits)**

Leaders are often faced with difficult decisions and the result of these decisions determines their future success. It is important for leaders to understand the cognitive processes which underlie the decision-making process. For example, what factors cause a leader to choose the wrong investment, hire the wrong employee, or select the unethical alternative? This course will provide students with a foundation of seminal theories rooted in Economics, Psychology and Sociology and a comprehensive perspective of organizational decision-making.

**BUS 6301 Research Seminar in Innovation and Creativity (4 Credits)**

This course is intended to be a multi-disciplinary doctoral seminar investigating the broad questions of innovation and creativity and its application to entrepreneurship. The course will start with an industry-level view of innovation and how technologies evolve and then move from the micro-individual level of creativity to the organizational level while considering the individual, dyadic and group levels.

**BUS 6302 Seminar in Verbal and Non-Verbal Research (4 Credits)**

This course is designed to provide you with knowledge on how to leverage verbal and nonverbal behavior to identify psychological states and traits, to predict social evaluations and organizational outcomes. Together we will review theory, methods, and findings pertaining to verbal and nonverbal behavior in the psychological literature. We will learn how to develop research questions and hypotheses, design research to test those predictions, develop behavioral coding schemes, and identify appropriate statistical analyses. We will also discuss the strengths and weaknesses of extant research to determine what can and cannot be concluded from the results. Overall, this course will provide you will techniques to quantify human behavior, identify ways to leverage these techniques to answer novel questions of organizational importance, and to appreciate the limits of behavioral analysis.

**BUS 6303 Launch your Doctoral Journey: Be Impactful (4 Credits)**

The seminar aims at providing Executive PhD students in Business a capstone experience, to build on the research knowledge and experience they have gained over the first two years of coursework, and to formulate and sharpen their vision for their chosen careers in academia, business or consulting. Specifically, the course attempts to provide an integrative framework to help them to emerge as an impactful scholar. Students systematically walk through different research designs, theoretical, qualitative, and quantitative frameworks. They learn to critically evaluate the designs, and apply the learning to their own research. The seminar culminates with a presentation of their vision statement for their scholarly journey ahead. Prerequisite: MGMT 6301.

**BUS 6400 Academic Skills for Doctoral Students in Business (2 Credits)**

The first purpose of this course is to prepare doctoral students with skills and knowledge that are not commonly part of the course requirements but are imperative for a successful navigation of the job market and a successful publication career. This includes managing the peer review process, navigating a conference to extract the most value, and managing co-author relationships. The second purpose of the course is to provide students with just-in-time data-analysis skills based on their identified path of research interest. Archival research in business requires a significantly different skill-set than behavioral research. Students will complete one of two tracks, archival or behavioral, in the form of an intensive two-day workshop where they utilize actual data to replicate a published research study.

**BUS 6500 Applied Research Practicum Series: I (4 Credits)**

ARP I will introduce students to their ARP Instructor's research area. As such students will work closely with their ARP instructor to begin to understand his/her research area and focus. This serves as the introduction for the three-part sequence of ARPs resulting in a completed research project. By the end of ARP I, students will complete a systematic review paper of a research area and a set of research questions of interest.

**BUS 6501 Applied Research Practicum Series: II (4 Credits)**

Students will work closely with their instructor to create a theoretically supported and actionable research proposal that uniquely contributes to our understanding of the larger business field. Proposals can be focused on qualitative and quantitative (or mixed) methods. This part of the ARP series will help students develop research questions into carefully crafted predictions grounded in theory while considering execution of the study.

**BUS 6502 Applied Research Practicum Series: III (4 Credits)**

Students will design an appropriate scientific method (e.g., survey, experiment or interview) including a data collection and analysis plan per the final proposal submitted in ARP II. Once appropriately designed, under the direction of their ARP professor, students will collect data appropriate to test the study's hypotheses. Institutional Review Board (IRB) approval must be received prior to data collection which should be of publishable quality (broadly defined).

**BUS 6503 Applied Research Practicum IV (4 Credits)**

Students, along with oversight and assistance from their respective ARP professor, will analyze data consistent with his/her research proposal (ARP II) and analysis strategy (ARP III). The students will then complete an entire research paper that is ready for presentation and/or publication at appropriate outlets.

**BUS 6900 Dissertation Research in Business (2-28 Credits)**

Dissertation Proposal Defense Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question. The dissertation proposal must be successfully defended within four quarters of passing the comprehensive exam. Successful defense of the dissertation results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project. Dissertation Defense After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

## Executive PhD in Business Administration

The Daniels College of Business Executive PhD is a 90-credit hour comprehensive three-year blended program that immerses students in conducting applied business research. Students will gain rigorous research skills to address the complex programs facing business today. The program will integrate your career experience with a thorough education in quantitative analysis, qualitative analysis and mixed methods, teaching you to find powerful, data-driven business insights.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

**Cohort**

The Daniels Executive PhD is a cohort-based program with lock-step curriculum which enables students to maximize cross-learning, collaboration and networking.

**Class Schedules**

This is a hybrid program delivered online and in-person. During the first two years of the program, students will attend nine on-campus immersions which are held from 8am – 5pm Friday and Saturday. In the third year of the program, students are required to come to campus at least one time to meet with their dissertation chair and committee.

**Concentrations/Electives**

There are no concentrations or electives offered for the Executive PhD Program. The dissertation stage of the program will enable students to conduct research in their area of interest.

## Doctor of Philosophy in General Business

**Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Other Requirements**

- Applicants may be contacted by a Daniels representative to schedule an admissions interview, which will be conducted on campus or via webcam. The admissions interview is an opportunity for both you and Daniels staff to evaluate whether or not the program is a good fit. Interviews are by invitation only, sent after all other application requirements have been completed.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 94 (No less than a 20 on any section)
- Minimum IELTS Score: 7.0 (No less than a 6.0 on any section)
- Minimum C1 Advanced Score: 185 (No less than a 170 on any section)
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Executive PhD in Business Administration

### Degree Requirements

Code	Title	Credits
BUS 6000	Research Methods in Business	4
BUS 6001	Qualitative Research Methods	4
BUS 6002	Quantitative Methods I- Making Discoveries with Data	4
BUS 6003	Quantitative Methods II - Making Discoveries with Data	4
BUS 6005	Behavioral Research Design and Execution	4
BUS 6300	Seminar in Cross Disciplinary Decision Making Research	4
MGMT 6300	Seminar in Leadership Strategy Research	4
FIN 6305	Applied Quantitative Methods in Finance	4
MKTG 6300	Seminar in Marketing	4
MGMT 6302	Research Seminar in Leadership: An Organizational Perspective	4
BUS 6400	Academic Skills for Doctoral Students in Business	2
MGMT 6301	Research Seminar in Organizational Ethics	4
BUS 6303	Launch your Doctoral Journey: Be Impactful	4
BUS 6500	Applied Research Practicum Series: I	4
BUS 6501	Applied Research Practicum Series: II	4
BUS 6502	Applied Research Practicum Series: III	4
BUS 6503	Applied Research Practicum IV	4
<b>Dissertation</b>		<b>28</b>
BUS 6900	Dissertation Research in Business	
<b>Total Credits</b>		<b>94</b>

### Non-Coursework Requirements

#### Comprehensive Exam

Every PhD student must pass the comprehensive exam. To qualify for the comprehensive exam, the student must complete the required coursework consisting of research methodology/statistics, research seminars and the Applied Research Practicum (ARP) series with a minimum GPA of a 3.0. A grade lower than "C" renders the credit unacceptable for meeting eligibility to sit for the comprehensive exam and university degree requirements. Coursework taken at another university may not be applied to the coursework requirement.

The program chair will appoint a committee of scholarly qualified faculty to write the comprehensive exam. This exam will cover topics in the research methodology/statistics and research seminar courses. The exam will be take-home, and students will be given several days to complete it. The committee will grade the exam, and make a recommendation to the program chair on whether a student passes or fails. A failed exam may lead to dismissal from the program.

Sufficiently prior to the exam date, the program chair will appoint an examination committee of scholarly qualified faculty. The committee creates the exam and grades it. After the exam, the committee makes a recommendation on whether the student passes or fails. If requested, students may need to revise their answers.

#### Dissertation Proposal Defense

Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question.

Successful defense of the dissertation proposal results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research.

The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project.



**Dissertation Defense**

After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

**University of Denver Doctoral Degree Requirements and Standards**

<http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/doctoral-degree-requirements/>

**Master of Science in Applied Business Research**

This degree can be awarded to students who leave the PhD program before completing the dissertation. The student must have minimum 3.0 GPA with no more than 25% of coursework with a grade of C.

**Degree Requirements****Coursework Requirements**

A minimum of 52 credits as follows:

- 20 credits of Methods and Statistics
- 16 credits in Research Seminars
- 16 credits (the full sequence) of the Applied Research Practicum Series

**Finance**

Office: Daniels College of Business, Room 555

Mail Code: Daniels College of Business, Room 555, 2101 S. University Blvd., Denver, CO 80208

Phone Number: 303-871-3322

Web Site: <https://daniels.du.edu/finance/>

**Master of Science in Applied Quantitative Finance**

In the Master's in Applied Quantitative Finance program, you'll study leading-edge theories, models and applications across the major areas of finance. Take advantage of our quarter system to tailor your coursework as well as your internships. Develop your finance leadership and communication skills by participating in a variety of case studies and competitions, as well as hands-on money management. When you graduate, you'll be both a creator of finance knowledge and a disseminator who can grow to lead a finance enterprise.

The Master of Science in Applied Quantitative Finance is a STEM (Science, Technology, Engineering and Math) degree according to the Department of Homeland Security (DHS). The DHS expanded list includes designated degrees that qualify for up to 17 months Optional Practical Training (OPT) Extension for F-1 Nonimmigrant Students.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

**Master of Science in Applied Quantitative Finance****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Standardized Test Scores**

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-GT-04.

### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate or Specialized Certificate in Corporate Finance

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

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## Certificate or Specialized Certificate in Investment Markets

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## Master's Degree Program Master of Science in Applied Quantitative Finance

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Prerequisite Courses <sup>1</sup></b>		
ACTG 4610	Financial Accounting and Reporting	4
FIN 4630	Managerial Finance	4
STAT 4610	Business Statistics	4
<b>Finance Core Courses</b>		
Total Core requirements: 29		
FIN 4000	Financial Modeling and Databases Bootcamp	1
FIN 4500	Financial Modeling	4
FIN 4200	Financial Investments and Markets	4
FIN 4410	Financial Planning & Analysis	4
FIN 4830	Econometrics for Finance	4
FIN 4180	Global Finance	2
FIN 4110	Ethics in Finance	4
INFO 4140	Business Databases	4
Students can take either FIN 4740 or FIN 4750		2
FIN 4740	Managerial Microeconomics	
FIN 4750	Managerial Macroeconomics	
<b>Elective requirements</b>		
16 credits required in 4000 level FIN courses, including:		16
<b>Investments Track</b>		
FIN 4860	Derivatives	
FIN 4320	Equity Analysis	
FIN 4330	Portfolio Management and Risk Analytics	
FIN 4710	Marsico Investment Fund I	
FIN 4720	Marsico Investment Fund II	
FIN 4730	Marsico Investment Fund III	
FIN 4890	Fixed Income Analysis	
FIN 4700	Topics in Finance (varies)	
Topics - Int'l Monetary Economics & Finance		
Topics - Finance Capitals (Travel Course)		
FIN 4800	An Organized Walk Down Wall Street	
FIN 4980	Finance Internship (varies)	
FIN 4991	Independent Study (varies)	
<b>Corporate Track</b>		
ACTG 4220	Financial Actg & Analysis	
FIN 4160	Treasury Management	
FIN 4420	Capital Expenditure Analysis	
FIN 4870	Strategic Finance	
FIN 4150	Advanced Business Valuation	
FIN 4885	Investment Banking and External Financing	
FIN 4700	Topics in Finance	
FIN 4800	An Organized Walk Down Wall Street	

FIN 4980	Finance Internship
FIN 4991	Independent Study
Investment Banking Track	
ACTG 4220	Financial Actg & Analysis
FIN 4885	Investment Banking and External Financing
FIN 4150	Advanced Business Valuation
FIN 4870	Strategic Finance
FIN 4320	Equity Analysis
FIN 4700	Topics in Finance
FIN 4800	An Organized Walk Down Wall Street
FIN 4980	Finance Internship
FIN 4991	Independent Study

**Total Credits****45-57**

<sup>1</sup> Students may demonstrate competency in the three prerequisite courses in the following manner:

- Accepted to the MSAQF program through the University of Denver's Undergraduate Master's Accelerated Admissions Process (MAAP) and earned a B- or better in the undergrad equivalent course as part of their undergraduate degree program. Undergraduate degree must be in finance.
- Passing an on-campus waiver exam before the start of the MSAQF program.

## Graduate Certificate Programs

### Certificate in Corporate Finance

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		<b>4-12</b>
ACTG 4610	Financial Accounting and Reporting	
FIN 4630	Managerial Finance	
FIN 4410	Financial Planning & Analysis	

Note: If ACTG 4610 and/or FIN 4630 are waived, by passing the waiver exam(s), then choose a substitute course or courses from the list of electives below.

<b>Chose THREE electives from the following classes:</b>		<b>12-20</b>
FIN 4150	Advanced Business Valuation	
FIN 4160	Treasury Management	
FIN 4420	Capital Expenditure Analysis	
FIN 4500	Financial Modeling	
FIN 4870	Strategic Finance	
FIN 4885	Investment Banking and External Financing	
FIN 4800	An Organized Walk Down Wall Street	

**Total Credits:****24**

### Certificate in Investments

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		<b>12</b>
FIN 4630	Managerial Finance	
FIN 4200	Financial Investments and Markets	
FIN 4320	Equity Analysis	

**Chose THREE electives from the following classes:** **12**

FIN 4330	Portfolio Management and Risk Analytics	
FIN 4700	Topics in Finance	

FIN 4710	Marsico Investment Fund I	
FIN 4860	Derivatives	
FIN 4890	Fixed Income Analysis	
<b>Total Credits:</b>		<b>24</b>

## Specialized Certificate Programs

### Specialized Certificate in Corporate Finance

Code	Title	Credits
<b>Required Courses</b>		
ACTG 4610	Financial Accounting and Reporting	4
FIN 4630	Managerial Finance	4
FIN 4410	Financial Planning & Analysis	4
If ACTG 4610 and/or FIN 4630 are waived, by passing the waiver exam(s), then choose a substitute course or courses from these electives:		
<b>Elective Requirements (Choose one course)</b>		<b>4</b>
FIN 4150	Advanced Business Valuation	
FIN 4160	Treasury Management	
FIN 4420	Capital Expenditure Analysis	
FIN 4500	Financial Modeling	
FIN 4870	Strategic Finance	
FIN 4885	Investment Banking and External Financing	
FIN 4800	An Organized Walk Down Wall Street	
<b>Total Credits</b>		<b>16</b>

### Specialized Certificate in Investments

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
FIN 4630	Managerial Finance	
FIN 4200	Financial Investments and Markets	
FIN 4320	Equity Analysis	
<b>Chose ONE elective from the following classes:</b>		<b>4</b>
FIN 4330	Portfolio Management and Risk Analytics	
FIN 4700	Topics in Finance	
FIN 4710	Marsico Investment Fund I	
FIN 4860	Derivatives	
FIN 4890	Fixed Income Analysis	
<b>Total Credits:</b>		<b>16</b>

#### FIN 4000 Financial Modeling and Databases Bootcamp (1 Credit)

This bootcamp is designed to introduce students to financial databases and to familiarize them with basic financial data analysis using Excel. The goal is for students to become comfortable with platforms such as Capital IQ and WRDS, which they will be using throughout their academic and/or professional careers. In addition, students will acquire a basic command of Excel functionality and efficiency in data analysis, together with modeling best practices and practical finance applications.

#### FIN 4030 Personal Finance (4 Credits)

This course provides an overview of topics which are critical to lifetime personal financial planning. The premise of the course is that personal financial planning starts early in life and especially as a new college graduate begins a professional career. The main topics in the course include Principles of Taxation, Basics of Estate Planning, Lifetime Asset Allocation, Principles of Insurance, Proper Debt Management, the Real Estate Housing Decision, and College Financial Planning for Children.

#### FIN 4060 Life Cycle/Financial Planning (4 Credits)

This course is designed for students who are interested in Financial Planning, possibly as a profession. We will cover six of the areas of financial planning: cash flows, protection (insurance), investments, goals (education and retirement), income taxation, and estate planning. This course is part of University of Denver CFP® Certification Financial Planning Education Program.

**FIN 4090 Wealth Management (4 Credits)**

Wealth Management offers students important skills to become a part of the growing wealth management industry. It includes such topics as the Financial Planning Process, Insurance Basics, Investment Basics and Strategies, Retirement Planning, and Estate Planning. We are pleased to work with the College for Financial Planning (CFFP), located in Denver, to provide instruction from their The Foundations in Financial PlanningSM program. This can lead to the Financial Paraplanner Qualified Professional™ or FPQP™ designation upon successful completion of an Examination. The Examination is administered through the CFFP. The FPQP™ will be a valuable addition to your resume.

**FIN 4110 Ethics in Finance (4 Credits)**

The objective of this course is to discuss the ethical issues facing financial institutions and professionals and apply ethical principles to the analysis of these issues.

**FIN 4150 Advanced Business Valuation (4 Credits)**

In this course, students will learn theoretical development, analytical tools and practical approaches to analyze and tackle business valuation issues at the core of the financial professions. The theoretical section of the course provides indepth coverage of the financial theories and models essential to value businesses. The application section provides students with opportunities to apply the valuation principles and techniques to assess business value and develop strategies to create value in a real-world context.

**FIN 4160 Treasury Management (4 Credits)**

The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students' capabilities to assume the role of a proficient treasury manager. This course will cover techniques used by major corporations to manage cash, the capital structure, financial risk and working capital. Prerequisite: FIN 4630.

**FIN 4180 Global Finance (2 Credits)**

This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Prerequisites: FIN 4630.

**FIN 4200 Financial Investments and Markets (4 Credits)**

Students will learn how households, institutions, firms, and governments interact in financial markets to channel funds from savers to productive uses of capital and provide firms with opportunities to hedge certain risks. This comprehensive understanding of how markets function is essential for anyone with a finance or high-level management role. We will begin by identifying the key institutions in financial markets and how securities come into existence and subsequently trade. We will then learn to measure the risk and return of financial assets while identifying techniques to improve and assess the performance of investment portfolios. Finally, we will introduce derivatives and techniques to wisely hedge firm risks. Prerequisite: FIN 4630.

**FIN 4201 MS Management Managerial Finance (2 Credits)**

FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

**FIN 4320 Equity Analysis (4 Credits)**

This course is an advanced finance course that focuses on the analysis of equity securities. The curriculum is primarily derived from the Candidate Body of Knowledge (CBOK) from the Chartered Financial Analyst® (CFA®) Program. The goal is to teach students how to implement objective, unbiased valuations through an understanding of the valuation process in theory and practice. Prerequisite: FIN 4200.

**FIN 4330 Portfolio Management and Risk Analytics (4 Credits)**

Case and project approach to foundation of investment portfolio management. This course emphasizes the application of modern portfolio management concepts and risk management principles. Prerequisite: FIN 4200.

**FIN 4410 Financial Planning & Analysis (4 Credits)**

Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and other corporate events such as mergers and IPOs. Prerequisite: FIN 4630.

**FIN 4420 Capital Expenditure Analysis (4 Credits)**

Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

**FIN 4500 Financial Modeling (4 Credits)**

Use of various financial software applications to construct models from corporate finance, investments, and financial markets. In particular, the course will cover the application of Excel spreadsheet functions and R programming to various topics including the time value of money, investment projects analysis, financial statements analysis, capital budgeting, portfolio analysis, and data & pivot tables. Prerequisites: FIN 4630.

**FIN 4610 Multinational Financial Management (4 Credits)**

Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

**FIN 4620 Financial Forecasting (4 Credits)****FIN 4630 Managerial Finance (4 Credits)**

This course covers analytical skills and tools of finance managers; theoretical concepts and practical applications are included. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management. Corequisite: ACTG 4610.

**FIN 4700 Topics in Finance (0-4 Credits)**

Topics vary each quarter. Course may be taken more than once if topics are different.

**FIN 4701 Topics in Finance (1-10 Credits)**

Topics vary. For new/experimental courses taught within the Reiman School of Finance.

**FIN 4710 Marsico Investment Fund I (4 Credits)**

A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4630 (or MBA 4285).

**FIN 4720 Marsico Investment Fund II (4 Credits)**

A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710.

**FIN 4730 Marsico Investment Fund III (4 Credits)**

This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.

**FIN 4740 Managerial Microeconomics (2 Credits)**

This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. The course uses case studies to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

**FIN 4750 Managerial Macroeconomics (2 Credits)**

This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

**FIN 4760 Managerial Economics (4 Credits)**

This course presents the fundamental concepts of microeconomics and macroeconomics and approaches them from a managerial decision-making perspective. The first half of the course emphasizes applying microeconomic theory to decision-making to help achieve a firm's objective – increasing profit, market share, or growth. In contrast to traditional economics course, this course emphasizes practical implementation AND how economics affects business decision making. The second half of the course discusses macroeconomics and factors that affect the economy. The goal is to develop an understanding of macro-economic concepts such as GDP, inflation, and government policy such as Federal Reserve actions and government spending, to obtain a framework to model a firm's behavior according to an informed understanding of what the economy is doing. Armed with an understanding of the cycle of economic activity, one can formulate a firm understanding of policy alternatives by both the Federal Reserve and Congress.

**FIN 4800 An Organized Walk Down Wall Street (4 Credits)**

After four class sessions in Denver, participants will spend five days in New York visiting exchanges, brokerage firms, investment bankers, commercial banks, asset managers, and other institutions.

**FIN 4830 Econometrics for Finance (4 Credits)**

Econometrics for Finance is designed to teach applied statistical tools relevant to understanding financial and economic data. It is designed to cover essential tools for working with financial data, including return forecasting, volatility and econometrics of asset pricing, such as testing market models. The emphasis is on empirical techniques which are used in the analysis of financial markets and how they are applied to actual data. It teaches how to use and apply techniques using R, a free software that is used by many finance professionals. The course is intended to prepare students to possess the quantitative tools to evaluate and implement in the finance arena. Prerequisite: STAT 4610 and FIN 4500 (If no experience in R).

**FIN 4835 Executive Education - Finance for Non-Financial Managers (2 Credits)**

This Executive Education workshop introduces you to the essential finance skills any business professional needs to know. You will learn the language, tools and techniques to become a more intelligent user of financial reports. Through hands-on learning exercises, you will learn how to simplify, understand and apply data from financial reports and budgets. You will gain the confidence to ask better questions and make more informed financial decisions. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**FIN 4860 Derivatives (4 Credits)**

This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

**FIN 4870 Strategic Finance (4 Credits)**

Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisite: FIN 4410.

**FIN 4875 Executive Education – Strategic Finance (2 Credits)**

Today's leading organizations require executives to use rigorous financial analysis in order to make strategic decisions that affect growth, profitability and competitive market advantage. Strategic Finance is a multidimensional Executive Education workshop that uses real simulations and an acquisition case study to map the connections between business strategy, finance and enterprise value creation. The goal of the course is to make you a more intelligent user of finance and strategy. It will enable you to ask better questions and to make better decisions. You will become a more sophisticated manager, particularly when focusing on the interplay and interdependence of strategy, finance & management. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**FIN 4885 Investment Banking and External Financing (4 Credits)**

This course is an advanced Corporate Finance course, focusing on the decisions by companies related to external sources of financing. There will be a mix of theory and practice, with outside speakers providing insight into the practice component. Topics will include business valuation, mergers and acquisitions, startup financing, angel investing and venture capital, bank loans, private equity, stock issuance and going private. Prerequisite: FIN 4410.

**FIN 4890 Fixed Income Analysis (4 Credits)**

Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.

**FIN 4980 Finance Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

**FIN 4991 Independent Study (1-10 Credits)**

Individual study and report. Hours and times arranged by student.

**FIN 6305 Applied Quantitative Methods in Finance (4 Credits)**

"Applied Quantitative Methods in Finance" is a PhD-level seminar designed to immerse students in the techniques essential for quantitative research in Finance and other disciplines. This course offers a journey through the application of empirical methods and analytical frameworks using the Python programming language and key analytical packages. The examples and assignments cover topics including corporate governance, executive compensation, risk/return analysis, and the exploration of decentralized finance. Students will gain hands-on experience working with real-world data sets and get an introduction to the Finance literature. Structured around hands-on student research assignments, presentations and immersive sessions, the course covers a broad spectrum of quantitative methods including cross-sectional linear regression, two-stage least squares, forecasting and machine learning techniques such as variable selection. Each module is crafted to further the understanding of financial theories through empirical research and data analysis.

## Courses

**FIN 4000 Financial Modeling and Databases Bootcamp (1 Credit)**

This bootcamp is designed to introduce students to financial databases and to familiarize them with basic financial data analysis using Excel. The goal is for students to become comfortable with platforms such as Capital IQ and WRDS, which they will be using throughout their academic and/or professional careers. In addition, students will acquire a basic command of Excel functionality and efficiency in data analysis, together with modeling best practices and practical finance applications.

**FIN 4030 Personal Finance (4 Credits)**

This course provides an overview of topics which are critical to lifetime personal financial planning. The premise of the course is that personal financial planning starts early in life and especially as a new college graduate begins a professional career. The main topics in the course include Principles of Taxation, Basics of Estate Planning, Lifetime Asset Allocation, Principles of Insurance, Proper Debt Management, the Real Estate Housing Decision, and College Financial Planning for Children.



**FIN 4060 Life Cycle/Financial Planning (4 Credits)**

This course is designed for students who are interested in Financial Planning, possibly as a profession. We will cover six of the areas of financial planning: cash flows, protection (insurance), investments, goals (education and retirement), income taxation, and estate planning. This course is part of University of Denver CFP® Certification Financial Planning Education Program.

**FIN 4090 Wealth Management (4 Credits)**

Wealth Management offers students important skills to become a part of the growing wealth management industry. It includes such topics as the Financial Planning Process, Insurance Basics, Investment Basics and Strategies, Retirement Planning, and Estate Planning. We are pleased to work with the College for Financial Planning (CFFP), located in Denver, to provide instruction from their The Foundations in Financial PlanningSM program. This can lead to the Financial Paraplanner Qualified Professional™ or FPQP™ designation upon successful completion of an Examination. The Examination is administered through the CFFP. The FPQP™ will be a valuable addition to your resume.

**FIN 4110 Ethics in Finance (4 Credits)**

The objective of this course is to discuss the ethical issues facing financial institutions and professionals and apply ethical principles to the analysis of these issues.

**FIN 4150 Advanced Business Valuation (4 Credits)**

In this course, students will learn theoretical development, analytical tools and practical approaches to analyze and tackle business valuation issues at the core of the financial professions. The theoretical section of the course provides indepth coverage of the financial theories and models essential to value businesses. The application section provides students with opportunities to apply the valuation principles and techniques to assess business value and develop strategies to create value in a real-world context.

**FIN 4160 Treasury Management (4 Credits)**

The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students' capabilities to assume the role of a proficient treasury manager. This course will cover techniques used by major corporations to manage cash, the capital structure, financial risk and working capital. Prerequisite: FIN 4630.

**FIN 4180 Global Finance (2 Credits)**

This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Prerequisites: FIN 4630.

**FIN 4200 Financial Investments and Markets (4 Credits)**

Students will learn how households, institutions, firms, and governments interact in financial markets to channel funds from savers to productive uses of capital and provide firms with opportunities to hedge certain risks. This comprehensive understanding of how markets function is essential for anyone with a finance or high-level management role. We will begin by identifying the key institutions in financial markets and how securities come into existence and subsequently trade. We will then learn to measure the risk and return of financial assets while identifying techniques to improve and assess the performance of investment portfolios. Finally, we will introduce derivatives and techniques to wisely hedge firm risks. Prerequisite: FIN 4630.

**FIN 4201 MS Management Managerial Finance (2 Credits)**

FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

**FIN 4320 Equity Analysis (4 Credits)**

This course is an advanced finance course that focuses on the analysis of equity securities. The curriculum is primarily derived from the Candidate Body of Knowledge (CBOK) from the Chartered Financial Analyst® (CFA®) Program. The goal is to teach students how to implement objective, unbiased valuations through an understanding of the valuation process in theory and practice. Prerequisite: FIN 4200.

**FIN 4330 Portfolio Management and Risk Analytics (4 Credits)**

Case and project approach to foundation of investment portfolio management. This course emphasizes the application of modern portfolio management concepts and risk management principles. Prerequisite: FIN 4200.

**FIN 4410 Financial Planning & Analysis (4 Credits)**

Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and other corporate events such as mergers and IPOs. Prerequisite: FIN 4630.

**FIN 4420 Capital Expenditure Analysis (4 Credits)**

Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

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**FIN 4610 Multinational Financial Management (4 Credits)**

Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

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This course covers analytical skills and tools of finance managers; theoretical concepts and practical applications are included. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management. Corequisite: ACTG 4610.

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Topics vary each quarter. Course may be taken more than once if topics are different.

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Topics vary. For new/experimental courses taught within the Reiman School of Finance.

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**FIN 4720 Marsico Investment Fund II (4 Credits)**

A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710.

**FIN 4730 Marsico Investment Fund III (4 Credits)**

This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.

**FIN 4740 Managerial Microeconomics (2 Credits)**

This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. The course uses case studies to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

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This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

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**FIN 4800 An Organized Walk Down Wall Street (4 Credits)**

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**FIN 4835 Executive Education - Finance for Non-Financial Managers (2 Credits)**

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**FIN 4860 Derivatives (4 Credits)**

This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

**FIN 4870 Strategic Finance (4 Credits)**

Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisite: FIN 4410.

**FIN 4875 Executive Education – Strategic Finance (2 Credits)**

Today's leading organizations require executives to use rigorous financial analysis in order to make strategic decisions that affect growth, profitability and competitive market advantage. Strategic Finance is a multidimensional Executive Education workshop that uses real simulations and an acquisition case study to map the connections between business strategy, finance and enterprise value creation. The goal of the course is to make you a more intelligent user of finance and strategy. It will enable you to ask better questions and to make better decisions. You will become a more sophisticated manager, particularly when focusing on the interplay and interdependence of strategy, finance & management. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**FIN 4885 Investment Banking and External Financing (4 Credits)**

This course is an advanced Corporate Finance course, focusing on the decisions by companies related to external sources of financing. There will be a mix of theory and practice, with outside speakers providing insight into the practice component. Topics will include business valuation, mergers and acquisitions, startup financing, angel investing and venture capital, bank loans, private equity, stock issuance and going private. Prerequisite: FIN 4410.

**FIN 4890 Fixed Income Analysis (4 Credits)**

Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.

**FIN 4980 Finance Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

**FIN 4991 Independent Study (1-10 Credits)**

Individual study and report. Hours and times arranged by student.

**FIN 6305 Applied Quantitative Methods in Finance (4 Credits)**

Applied Quantitative Methods in Finance" is a PhD-level seminar designed to immerse students in the techniques essential for quantitative research in Finance and other disciplines. This course offers a journey through the application of empirical methods and analytical frameworks using the Python programming language and key analytical packages. The examples and assignments cover topics including corporate governance, executive compensation, risk/return analysis, and the exploration of decentralized finance. Students will gain hands-on experience working with real-world data sets and get an introduction to the Finance literature. Structured around hands-on student research assignments, presentations and immersive sessions, the course covers a broad spectrum of quantitative methods including cross-sectional linear regression, two-stage least squares, forecasting and machine learning techniques such as variable selection. Each module is crafted to further the understanding of financial theories through empirical research and data analysis.

## Management

Office: Daniels College of Business, 455

Mail Code: Daniels College of Business, 2101 S. University Blvd., Denver, CO 80208

Phone: 303-871-2489

Web Site: <https://daniels.du.edu/management/>

## Master of Science in Management

The Master of Science in Management (MSM) is a 45-credit hour, 10-month program designed for people without a business background or degree. You will join a cohort of classmates from various careers, backgrounds and fields of study to learn management skills, ethical leadership, effective communications, and of course, business fundamentals. Wherever your passion lies, the Daniels MSM program can help prepare you for success.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

## Master of Science in Management

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-GT-31.

### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate or Specialized Certificate in Leadership

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

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- Minimum TOEFL Score (Internet-based test): 80
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- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

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## Certificate or Specialized Certificate in Business Foundations

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

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English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## Master's Degree Program

### Master of Science in Management

Minimum of 45 credits for the degree

Code	Title	Credits
<b>Leadership Foundations</b>		
MGMT 4202	Leading Self	4
MGMT 4203	Leading Teams	4
MGMT 4204	Leading Organizations	4
<b>Business Foundations <sup>1</sup></b>		
ACTG 4610	Financial Accounting and Reporting	4
FIN 4630	Managerial Finance	4
INFO 4610	Business Statistics and Analytics	4
MKTG 4100	Marketing Concepts	4
<b>Electives</b>		<b>17</b>
Students will complete 16 credits of 4000-level general business coursework or 16 credits of electives towards a specialized graduate certificate and one 4000-level Sprint Course (1 cr).		
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> Consideration for business foundation course substitution may be provided to students who have completed an undergraduate degree from an accredited business institution and have earned a B- or better in the undergrad equivalent course as part of their undergraduate degree program.

## Graduate Certificate Programs

### Certificate in Business Foundations

Code	Title	Credits
MKTG 4100	Marketing Concepts	4
ACTG 4610	Financial Accounting and Reporting	4
INFO 4610	Business Statistics and Analytics	4
FIN 4630	Managerial Finance	4
MGMT 4400	Ethical Leadership (or Business Elective MGMT,MKTG,INFO,EVM,FIN,CMGT,REAL,TRAN)	4

BUS 4445	International Business: Strategy and Practice (or Business Elective MGMT,MKTG,INFO,EVM,FIN,CMGT,REAL,TRAN)	4
<b>Total Credits</b>		<b>24</b>

## Certificate in Management with a Concentration in Leadership

Minimum Credits Required for Certificate: 24

Code	Title	Credits
MGMT 4202	Leading Self	4
MGMT 4203	Leading Teams	4
MGMT 4204	Leading Organizations	4
MGMT 4400	Ethical Leadership	4
or BUS 4610	Business Ethics for the Public Good	
At least 8 credits of MGMT Electives		8
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Programs

### Specialized Certificate in Business Foundations

Code	Title	Credits
MKTG 4100	Marketing Concepts	4
ACTG 4610	Financial Accounting and Reporting	4
INFO 4610	Business Statistics and Analytics	4
FIN 4630	Managerial Finance	4
<b>Total Credits</b>		<b>16</b>

### Specialized Certificate Management with a Concentration in Leadership

Minimum Credits Required for Certificate: 16

Code	Title	Credits
MGMT 4202	Leading Self	4
MGMT 4203	Leading Teams	4
MGMT 4204	Leading Organizations	4
MGMT 4400	Ethical Leadership	4
or BUS 4610	Business Ethics for the Public Good	
<b>Total Credits</b>		<b>16</b>

#### MGMT 4201 Fundamentals of Managing and Leading (4 Credits)

Fundamentals of Managing and Leading is a graduate course that provides students with an introduction to essential management and leadership concepts and also their application. The course is organized around the classic managerial functions of planning, organizing, leading and controlling. In addition, the course surveys entrepreneurship, corporate strategy, and emerging topics in management and leadership.

#### MGMT 4202 Leading Self (4 Credits)

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

#### MGMT 4203 Leading Teams (4 Credits)

"Leading teams" is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

**MGMT 4204 Leading Organizations (4 Credits)**

In this experiential challenge-driven course, students will leverage their skills and further build upon their experience by analyzing a company, including the firm's mission, vision, and values, business model and financial health of the organization via the Spring Challenge. After finalizing the scope of the spring project, students will assess the firm's strengths and weaknesses using a series of tools and frameworks as well as identifying opportunities and threats in their respective industry. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news that can then be applied to the project subject company.

**MGMT 4240 Global Business (2-4 Credits)**

The Global Business course and ensuing international experience are designed to expose students to the challenges, opportunities and risks of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a country or region? Conducting business outside the United States involves a unique set of challenges. Diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment of the countries being visited. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country to develop a hands-on understanding of the business environment on the ground. The core end deliverable is a feasibility study. Before registering for MGMT 4240 - Global Business, students must have a degree review with Academic Advisor or Program Director.

**MGMT 4280 Business Design (4 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.

**MGMT 4301 Organizational Behavior (4 Credits)**

This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.

**MGMT 4302 Leading Talent (2 Credits)**

A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

**MGMT 4303 Negotiating with Power (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life. Once we have a basic understanding of power and political behavior, we will explore the relationship between power and effective negotiation. Yet, most of us know very little about why we are sometimes successful and other times not, and even fewer of us know what it takes to be consistently effective in negotiations. This course will broaden your understanding of how to effectively negotiate in a variety of contexts by engaging in simulated negotiations during class.

**MGMT 4304 Project Management for Leaders (4 Credits)**

This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.

**MGMT 4305 Business Model Design and Innovation (2 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

**MGMT 4306 Virtual Business Management Simulation (2 Credits)**

The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

**MGMT 4330 Financials for Leaders (4 Credits)**

This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company's short-and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

**MGMT 4340 Strategic Human Resource Mgmt (4 Credits)**

This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.

**MGMT 4345 Performance & Rewards System (4 Credits)**

Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.

**MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)**

The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado's Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.

**MGMT 4400 Ethical Leadership (4 Credits)**

Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of making practically wise and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one's role as a future manager and leader. Students will also be introduced current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

**MGMT 4401 Global Leadership I (2 Credits)**

This course is the first of two in the global leadership sequence. As a part of the sequence, there is a mandatory international travel component that will occur over the break between the winter and spring quarters. The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly "global" company.

**MGMT 4402 Global Leadership II (1 Credit)**

The centerpiece of the Global Leadership course series is the Global Leadership Experience (GLX) taking place in between Winter and Spring quarters. GLX involves travel to an overseas location where students have the opportunity to interact with business, government, academic and/or NGO players while exploring global leadership challenges and engaging in research to support their field project. Although locations may differ, each GLX is designed to offer students a deep cross-cultural experience and an opportunity to examine first-hand, global business activity in field locations. Global Leadership II offers students space to process and reflect on what they have learned during their Global Leadership Experience. Students will engage in collective debriefings on their experience using insights gained to develop a personal viewpoint on the future of globalization and implications of their experience for their careers. Students will also be challenged to apply learnings from Global Leadership I as they complete work on their team projects and present findings to their colleagues and an expert panel.



**MGMT 4403 Business and Society (2 Credits)**

This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

**MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)**

Strategic Execution is a Challenge Driven Educational (CDE) course that builds off several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

**MGMT 4410 Qualitative Research Methods (2 Credits)**

This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

**MGMT 4425 Leading People and Organizations (2 Credits)**

We live in a VUCA (Volatile, Uncertain, Complex and Ambiguous) world. Effective leaders are skilled in navigating the challenges presented by our VUCA world – especially when it comes to leading and managing people and organizations. This course focuses on the effective leadership and management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. People are an organization's resources who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. Effective and ethical leaders build and sustain employees' knowledge, skills, commitment, and creativity to build collaborative cultures that foster high performance, reap the benefits of a diverse workforce, and create sustained competitive advantage. In this course, we approach business from a general management perspective, integrating concepts from organizational behavior, organization theory, human resource management, strategy, political science, and cultural anthropology. Course topics include: • Organizational structure and systems. • Selection and hiring, onboarding, motivation, feedback and coaching, and employee engagement. • Organizational politics, power dynamics, and conflict. • Organizational culture.

**MGMT 4450 Power and Influence (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

**MGMT 4501 Springboard Tools I (1 Credit)**

PowerPoint, Microsoft Word, Adobe, Excel, Outlook... we could hardly imagine doing business in today's world without them. CRM software will soon be regarded in the same essential way. As technology fundamentally shifts the focus of business to a completely customer-centered environment, the pervasiveness of CRM tools will only grow. Though many of these tools exist, Salesforce is one of, if not the most, prevalent CRM tools available in today's market. Used by companies of all sizes and industries, Salesforce provides a suite of products that allow organizations to place their customers at the heart of their businesses, leveraging customer data to gain valuable insights, and provide the customer with a wholistic and seamless experience and interaction with the company's brand. Salesforce's CRM software provides products for the full spectrum of customer interactions, from sales to marketing, commerce to customer service. There are several paths to developing Salesforce proficiency, ranging from a business (end) user of the product, to an administrator (someone who customizes the tool to meet business requirements), to a consultant (someone who implements Salesforce rollouts at organizations), to a marketer (an expert in Salesforce's marketing tools), and beyond.

**MGMT 4502 Springboard Tools II (1 Credit)**

Your journey to securing a career upon graduation starts with the first day of classes and continues throughout your program. The Springboard Tools courses are designed to prepare students to be career-ready upon graduation. Students will learn various tools used in business today, such as Salesforce, Python, and more as determined by the business community. In addition to understanding the tool and its application, students will be required to incorporate problem-solving techniques when using a particular tool.

**MGMT 4525 Facility Management (4 Credits)**

What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theatres evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

**MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)**

This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

**MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)**

The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

**MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)**

The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

**MGMT 4545 Leadership, Team, and Career Development (2 Credits)**

Daniels MBA students are preparing for leadership roles-as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

**MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)**

A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

**MGMT 4560 Leadership of the Future (4 Credits)**

In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what "leadership" is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.

**MGMT 4620 Organizational Dynamics (4 Credits)**

In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.

**MGMT 4625 Leading People & Organizations (4 Credits)**

This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.

**MGMT 4630 Strategic Human Resources Management (4 Credits)**

This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

**MGMT 4650 Introduction to Management Consulting (4 Credits)**

This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.

**MGMT 4690 Strategic Management (4 Credits)**

Management 4690 focuses on the strategic management of an organization as a whole. This course will introduce students to key decisions that top executives have to make when developing and implementing strategies, methodologies for informing those decisions, and how to interpret information from those approaches to guide strategic decision-making. Overall, from the perspective of leading an organization, students will learn how strategic decisions impact a firm's competitive advantage and success.

**MGMT 4700 Topics in Management (1-4 Credits)****MGMT 4710 Sustaining Family Enterprises (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**MGMT 4720 Sustaining Family Enterprise (4 Credits)**

This course is intended to provide students with greater insight into the world of family enterprise. It will cover definitions, concepts, frameworks, and models to help students develop the system perspective of family, business, ownership, governance, and wealth issues. This course is applicable to those working in or governing their family enterprise (family businesses, family offices, real estate management firms, investment entities, boards, family councils, etc.), those students in or seeking careers as professional service advisors to family enterprise (accountants, estate planners, lawyers, wealth planners, psychologists, family therapists, board members, etc.), and those students with a global interest in how family enterprise affects, and is affected by, the global economy.

**MGMT 4740 Global Business I (2 Credits)**

Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

**MGMT 4745 Global Business II (2 Credits)**

Working across national boundaries and cultures demands a new approach to business management. This course will help students assess the local environment of the country in which they intend to do business; introduces students to global aspects of marketing, finance, and management; and examines examples of opportunities associated with doing business in so-called "base of the pyramid" markets. This course must be taken after MGMT 4740 and is the second in the series.

**MGMT 4790 Managing Strategic Alliances (4 Credits)**

The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

**MGMT 4855 Executive Education – Accelerated Leadership Experience (4 Credits)**

Delivering best practices and highly applicable team building skills, the Accelerated Leadership Experience (ALX) from Daniels Executive Education is designed for managers to act as a catalyst for transformation. The result? Successful and fulfilled leaders. ALX includes both classroom and experiential activities and covers topics such as emotional intelligence, communication, coaching, feedback, wellness, stress management, energy management, team effectiveness, people development, diversity and inclusion. The support of ALX's innovative leadership curriculum, experienced faculty, and a cohort of professionals who are at similar points in their careers will help you develop the tools and skills needed to succeed in our increasingly complex world. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4875 Executive Education – Denver Leadership Experience (4 Credits)**

The Denver Leadership Experience (DLX) from Daniels' Executive Education is a transformational workshop designed to challenge you to think and perform differently in order to reach your leadership potential. This award-winning program delivers timely, relevant, and innovative leadership development essentials for our ever-changing, increasingly complex business world. Employee well-being and mental health are more important than ever, therefore this program has deepened the focus on wellness, mindfulness, and stress management; habits which great leaders implement but tend to deprioritize. In addition to our robust leadership content and faculty expertise, you'll be surrounded by a group of professionals who will bring their own experiences and input which adds value to the conversation and deepens the impact of DLX. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)**

Hours and times arranged by student.

**MGMT 4991 Independent Study (1-10 Credits)**

Individual research and report. Hours and times arranged by student.

**MGMT 4995 Independent Research (1-10 Credits)****MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)**

The field of strategy is broad and covers a diverse set of 'macro' organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

**MGMT 6301 Research Seminar in Organizational Ethics (4 Credits)**

The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

**MGMT 6302 Research Seminar in Leadership: An Organizational Perspective (4 Credits)**

This seminar will focus on understanding the major theoretical streams in the leadership literature with a focus on leadership within organizations. Emphasis will be placed on comparing historical trends such as trait, behavioral, contingency, and transformational/charismatic theories of leadership and exploring contemporary approaches such as servant leadership, authentic leadership, positive leadership, and shared leadership.

## Courses

**MGMT 4201 Fundamentals of Managing and Leading (4 Credits)**

Fundamentals of Managing and Leading is a graduate course that provides students with an introduction to essential management and leadership concepts and also their application. The course is organized around the classic managerial functions of planning, organizing, leading and controlling. In addition, the course surveys entrepreneurship, corporate strategy, and emerging topics in management and leadership.

**MGMT 4202 Leading Self (4 Credits)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

**MGMT 4203 Leading Teams (4 Credits)**

"Leading teams" is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

**MGMT 4204 Leading Organizations (4 Credits)**

In this experiential challenge-driven course, students will leverage their skills and further build upon their experience by analyzing a company, including the firm's mission, vision, and values, business model and financial health of the organization via the Spring Challenge. After finalizing the scope of the spring project, students will assess the firm's strengths and weaknesses using a series of tools and frameworks as well as identifying opportunities and threats in their respective industry. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news that can then be applied to the project subject company.

**MGMT 4240 Global Business (2-4 Credits)**

The Global Business course and ensuing international experience are designed to expose students to the challenges, opportunities and risks of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a country or region? Conducting business outside the United States involves a unique set of challenges. Diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment of the countries being visited. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country to develop a hands-on understanding of the business environment on the ground. The core end deliverable is a feasibility study. Before registering for MGMT 4240 - Global Business, students must have a degree review with Academic Advisor or Program Director.

**MGMT 4280 Business Design (4 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.

**MGMT 4301 Organizational Behavior (4 Credits)**

This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.

**MGMT 4302 Leading Talent (2 Credits)**

A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

**MGMT 4303 Negotiating with Power (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life. Once we have a basic understanding of power and political behavior, we will explore the relationship between power and effective negotiation. Yet, most of us know very little about why we are sometimes successful and other times not, and even fewer of us know what it takes to be consistently effective in negotiations. This course will broaden your understanding of how to effectively negotiate in a variety of contexts by engaging in simulated negotiations during class.

**MGMT 4304 Project Management for Leaders (4 Credits)**

This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.

**MGMT 4305 Business Model Design and Innovation (2 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

**MGMT 4306 Virtual Business Management Simulation (2 Credits)**

The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

**MGMT 4330 Financials for Leaders (4 Credits)**

This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company's short-and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

**MGMT 4340 Strategic Human Resource Mgmt (4 Credits)**

This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.

**MGMT 4345 Performance & Rewards System (4 Credits)**

Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.

**MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)**

The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado's Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.

**MGMT 4400 Ethical Leadership (4 Credits)**

Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of making practically wise and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one's role as a future manager and leader. Students will also be introduced current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

**MGMT 4401 Global Leadership I (2 Credits)**

This course is the first of two in the global leadership sequence. As a part of the sequence, there is a mandatory international travel component that will occur over the break between the winter and spring quarters. The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly "global" company.

**MGMT 4402 Global Leadership II (1 Credit)**

The centerpiece of the Global Leadership course series is the Global Leadership Experience (GLX) taking place in between Winter and Spring quarters. GLX involves travel to an overseas location where students have the opportunity to interact with business, government, academic and/or NGO players while exploring global leadership challenges and engaging in research to support their field project. Although locations may differ, each GLX is designed to offer students a deep cross-cultural experience and an opportunity to examine first-hand, global business activity in field locations. Global Leadership II offers students space to process and reflect on what they have learned during their Global Leadership Experience. Students will engage in collective debriefings on their experience using insights gained to develop a personal viewpoint on the future of globalization and implications of their experience for their careers. Students will also be challenged to apply learnings from Global Leadership I as they complete work on their team projects and present findings to their colleagues and an expert panel.

**MGMT 4403 Business and Society (2 Credits)**

This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

**MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)**

Strategic Execution is a Challenge Driven Educational (CDE) course that builds off several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

**MGMT 4410 Qualitative Research Methods (2 Credits)**

This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

**MGMT 4425 Leading People and Organizations (2 Credits)**

We live in a VUCA (Volatile, Uncertain, Complex and Ambiguous) world. Effective leaders are skilled in navigating the challenges presented by our VUCA world – especially when it comes to leading and managing people and organizations. This course focuses on the effective leadership and management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. People are an organization's resources who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. Effective and ethical leaders build and sustain employees' knowledge, skills, commitment, and creativity to build collaborative cultures that foster high performance, reap the benefits of a diverse workforce, and create sustained competitive advantage. In this course, we approach business from a general management perspective, integrating concepts from organizational behavior, organization theory, human resource management, strategy, political science, and cultural anthropology. Course topics include: • Organizational structure and systems. • Selection and hiring, onboarding, motivation, feedback and coaching, and employee engagement. • Organizational politics, power dynamics, and conflict. • Organizational culture.

**MGMT 4450 Power and Influence (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

**MGMT 4501 Springboard Tools I (1 Credit)**

PowerPoint, Microsoft Word, Adobe, Excel, Outlook... we could hardly imagine doing business in today's world without them. CRM software will soon be regarded in the same essential way. As technology fundamentally shifts the focus of business to a completely customer-centered environment, the pervasiveness of CRM tools will only grow. Though many of these tools exist, Salesforce is one of, if not the most, prevalent CRM tools available in today's market. Used by companies of all sizes and industries, Salesforce provides a suite of products that allow organizations to place their customers at the heart of their businesses, leveraging customer data to gain valuable insights, and provide the customer with a wholistic and seamless experience and interaction with the company's brand. Salesforce's CRM software provides products for the full spectrum of customer interactions, from sales to marketing, commerce to customer service. There are several paths to developing Salesforce proficiency, ranging from a business (end) user of the product, to an administrator (someone who customizes the tool to meet business requirements), to a consultant (someone who implements Salesforce rollouts at organizations), to a marketer (an expert in Salesforce's marketing tools), and beyond.

**MGMT 4502 Springboard Tools II (1 Credit)**

Your journey to securing a career upon graduation starts with the first day of classes and continues throughout your program. The Springboard Tools courses are designed to prepare students to be career-ready upon graduation. Students will learn various tools used in business today, such as Salesforce, Python, and more as determined by the business community. In addition to understanding the tool and its application, students will be required to incorporate problem-solving techniques when using a particular tool.

**MGMT 4525 Facility Management (4 Credits)**

What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theatres evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

**MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)**

This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

**MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)**

The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

**MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)**

The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

**MGMT 4545 Leadership, Team, and Career Development (2 Credits)**

Daniels MBA students are preparing for leadership roles-as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

**MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)**

A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

**MGMT 4560 Leadership of the Future (4 Credits)**

In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what "leadership" is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.

**MGMT 4620 Organizational Dynamics (4 Credits)**

In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.

**MGMT 4625 Leading People & Organizations (4 Credits)**

This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.

**MGMT 4630 Strategic Human Resources Management (4 Credits)**

This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

**MGMT 4650 Introduction to Management Consulting (4 Credits)**

This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.



**MGMT 4690 Strategic Management (4 Credits)**

Management 4690 focuses on the strategic management of an organization as a whole. This course will introduce students to key decisions that top executives have to make when developing and implementing strategies, methodologies for informing those decisions, and how to interpret information from those approaches to guide strategic decision-making. Overall, from the perspective of leading an organization, students will learn how strategic decisions impact a firm's competitive advantage and success.

**MGMT 4700 Topics in Management (1-4 Credits)****MGMT 4710 Sustaining Family Enterprises (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**MGMT 4720 Sustaining Family Enterprise (4 Credits)**

This course is intended to provide students with greater insight into the world of family enterprise. It will cover definitions, concepts, frameworks, and models to help students develop the system perspective of family, business, ownership, governance, and wealth issues. This course is applicable to those working in or governing their family enterprise (family businesses, family offices, real estate management firms, investment entities, boards, family councils, etc.), those students in or seeking careers as professional service advisors to family enterprise (accountants, estate planners, lawyers, wealth planners, psychologists, family therapists, board members, etc.), and those students with a global interest in how family enterprise affects, and is affected by, the global economy.

**MGMT 4740 Global Business I (2 Credits)**

Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

**MGMT 4745 Global Business II (2 Credits)**

Working across national boundaries and cultures demands a new approach to business management. This course will help students assess the local environment of the country in which they intend to do business; introduces students to global aspects of marketing, finance, and management; and examines examples of opportunities associated with doing business in so-called "base of the pyramid" markets. This course must be taken after MGMT 4740 and is the second in the series.

**MGMT 4790 Managing Strategic Alliances (4 Credits)**

The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

**MGMT 4855 Executive Education – Accelerated Leadership Experience (4 Credits)**

Delivering best practices and highly applicable team building skills, the Accelerated Leadership Experience (ALX) from Daniels Executive Education is designed for managers to act as a catalyst for transformation. The result? Successful and fulfilled leaders. ALX includes both classroom and experiential activities and covers topics such as emotional intelligence, communication, coaching, feedback, wellness, stress management, energy management, team effectiveness, people development, diversity and inclusion. The support of ALX's innovative leadership curriculum, experienced faculty, and a cohort of professionals who are at similar points in their careers will help you develop the tools and skills needed to succeed in our increasingly complex world. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4875 Executive Education – Denver Leadership Experience (4 Credits)**

The Denver Leadership Experience (DLX) from Daniels' Executive Education is a transformational workshop designed to challenge you to think and perform differently in order to reach your leadership potential. This award-winning program delivers timely, relevant, and innovative leadership development essentials for our ever-changing, increasingly complex business world. Employee well-being and mental health are more important than ever, therefore this program has deepened the focus on wellness, mindfulness, and stress management; habits which great leaders implement but tend to deprioritize. In addition to our robust leadership content and faculty expertise, you'll be surrounded by a group of professionals who will bring their own experiences and input which adds value to the conversation and deepens the impact of DLX. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)**

Hours and times arranged by student.

**MGMT 4991 Independent Study (1-10 Credits)**

Individual research and report. Hours and times arranged by student.

**MGMT 4995 Independent Research (1-10 Credits)****MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)**

The field of strategy is broad and covers a diverse set of 'macro' organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

**MGMT 6301 Research Seminar in Organizational Ethics (4 Credits)**

The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

**MGMT 6302 Research Seminar in Leadership: An Organizational Perspective (4 Credits)**

This seminar will focus on understanding the major theoretical streams in the leadership literature with a focus on leadership within organizations. Emphasis will be placed on comparing historical trends such as trait, behavioral, contingency, and transformational/charismatic theories of leadership and exploring contemporary approaches such as servant leadership, authentic leadership, positive leadership, and shared leadership.

## Marketing

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### Master of Science in Marketing

The Daniels Master of Science in Marketing program is a 45-credit degree that combines the in-depth study of marketing practices and principles with values-based leadership and ethical decision making. Your studies span the theoretical to the real world—from an independent study research project of your choosing to client projects that will test your marketing mettle. You'll be immersed in real-time scenarios that let you dive deep into what interests you most to stay ahead of the curve in this rapidly changing industry. We have a strong marketing community, and you will be expected to join us in exhibiting your passion for marketing and engagement with the marketing professional community, your peers and your professors.

You will engage with the Denver marketing professional community in a number of ways. Participation in the required Marketing Leadership and Professionalism series will provide interaction with professionals over the course of your program, while allowing you to sharpen your professional skills. Guest speakers will contribute in many of our classes, sharing case studies directly from their experience. You may choose to engage with Denver professionals through participating in one of the many internships offered to you. Additionally, you will also be invited to take part in several case competitions, sponsored by the professional community, as part of your degree experience.

You will engage with your peers both inside and outside of the classroom through participation in client work, in the DU Marketing Association, in study groups, and in our Marketing@Daniels community. You will engage with your professors by contributing to class discussions both in class and online, by becoming an active part of our community, by participating in our online community presence. In all, this program requires your active and thoughtful participation, applying the principles you learn to solve important client and community problems.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Master of Science in Marketing

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-GT-65.

### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate or Specialized Certificate in Digital Marketing

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## Certificate or Specialized Certificate in Marketing Analytics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## Master's Degree Program

### Master of Science in Marketing

#### Degree Requirements

Code	Title	Credits
<b>Core coursework requirements</b>		
MKTG 4000	Foundations of Marketing <sup>1</sup>	0
MKTG 4100	Marketing Concepts <sup>2</sup>	4
MKTG 4400	Social Awareness and Ethics	2
MKTG 4510	Consumer Behavior	4
MKTG 4520	Marketing Analytics	4
MKTG 4530	Marketing Research	4
MKTG 4550	Marketing Planning	4
MKTG 4570	Digital Strategies	4
MKTG 4810	Integrated Marketing Communication	4
MKTG 4980	Marketing Internship <sup>3</sup>	0
MKTG 4981	Marketing Leadership and Professional Development I	1
MKTG 4982	Marketing Leadership and Professional Development II	1
MKTG 4983	Marketing Leadership and Professional Development III	1
MKTG 4999	Marketing Assessment <sup>4</sup>	0
<b>Elective requirements <sup>5</sup></b>		<b>12</b>
Course selection includes:		
MKTG 4515	International Consumer Behavior	
MKTG 4540	Product and Service Innovation	
MKTG 4580	Insights to Innovation	
MKTG 4605	Current Marketing Perspectives	
MKTG 4630	International Marketing	
MKTG 4660	Sports & Entertainment Marketing	
MKTG 4800	Global Integrated Marketing Communication	
MKTG 4805	Foundations of Digital Marketing	
MKTG 4815	Social Media Marketing	
MKTG 4820	Brand Management	
MKTG 4825	Mobile Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
MKTG 4900	Advanced Marketing Strategy	
<b>Additional Courses</b>		
MKTG 4705	Topics in Marketing	
MKTG 4980	Marketing Internship	
MKTG 4991	Independent Study (varies)	
<b>Total Credits</b>		<b>45</b>

<sup>1</sup> All students are required to complete this orientation course the first quarter they start the program to kick off the Marketing Leadership Series. A \$500 course fee covers the cost of Leadership Experientials throughout the program.

<sup>2</sup> Students with undergraduate coursework in marketing or related experience can substitute MKTG 4100 with an elective pending program director approval.

- <sup>3</sup> Students are required to complete a 0-credit marketing-related internship. Students with relevant work experience can waive this requirement pending program director approval.
- <sup>4</sup> All students are required to complete this self-assessment course in the final quarter of their program. Please register for this class in the quarter you expect to graduate.
- <sup>5</sup> Students may take electives in other marketing-related topics including entrepreneurship, business, media, and communications. Classes must be graduate level (4XXX) and approved by the program director.

## Graduate Certificate Programs

### Certificate in Marketing with a Concentration in Digital Marketing

The digital marketing certificate will provide essential work-ready creative, research, communications skills necessary in the digital advertising, content creation, and marketing strategy fields. There are no program or course prerequisites

Minimum Credits Required for Certificate: 24

Code	Title	Credits
<b>Required Courses</b>		
MKTG 4805	Foundations of Digital Marketing	4
MKTG 4815	Social Media Marketing	4
MKTG 4825	Mobile Marketing	4
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	4
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	4
MKTG 4705 or MKTG 4860	Topics in Marketing (Data Science for Marketers) Data Science for Marketers	4
<b>Total Credits</b>		<b>24</b>

### Certificate in Marketing with a Concentration in Marketing Analytics

Minimum Credits Required for Certificate: 24

Code	Title	Credits
<b>Required Courses:</b>		
MKTG 4510	Consumer Behavior	4
MKTG 4530	Marketing Research	4
MKTG 4520	Marketing Analytics	4
STAT 4610	Business Statistics	4
INFO 4300	Predictive Analytics	4
INFO 4120	Python Programming	4
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Programs

### Specialized Certificate in Marketing with a Concentration in Digital Marketing

Minimum Credits Required for Certificate: 16

Code	Title	Credits
<b>Select four of the courses below:</b>		
MKTG 4570	Digital Strategies	4
MKTG 4805	Foundations of Digital Marketing	4
MKTG 4815	Social Media Marketing	4
MKTG 4825	Mobile Marketing	4
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	4
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	4
MKTG 4705	Topics in Marketing (Data Science for Marketers)	4
<b>Total Credits</b>		<b>16</b>

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## Specialized Certificate in Marketing with a Concentration in Marketing Analytics

Minimum Credits Required for Certificate: 16

Code	Title	Credits
<b>Required Courses:</b>		
MKTG 4530	Marketing Research	4
MKTG 4520	Marketing Analytics	4
STAT 4610	Business Statistics	4
INFO 4300	Predictive Analytics	4
<b>Total Credits</b>		<b>16</b>

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## Specialized Certificate in Strategic Marketing and Innovation

The Strategic Marketing and Innovation certificate focuses on marketing and innovation to create a positive social impact. It conveys the intention to equip students with the necessary knowledge and skills to excel in integrated marketing communications and brand management while fostering innovation and driving meaningful change. It is targeted for individuals wishing to learn the various functions of marketing (innovation, corporate social responsibility, integrative marketing, and brand management or supply chain management) in order to be better equipped for a new or emerging role.

Minimum Credits Required for Certificate: 16

Code	Title	Credits
<b>Required Courses</b>		
MKTG 4580	Insights to Innovation	4
MKTG 4810	Integrated Marketing Communication	4
MKTG 4820	Brand Management	4
<b>Elective Requirements (Choose one course)</b>		
Choose from MKTG 4380 or MKTG 4675		4
<b>Total Credits</b>		<b>16</b>

### MKTG 4000 Foundations of Marketing (0 Credits)

The Master of Science of Marketing program is a deep dive into marketing knowledge and skills. This course onboards students into the program by outlining the program structure, professional leadership and development series, and the faculty and courses that provide a core foundation of marketing. It also provides an overview of six marketing pathways for students to consider as they plan for and navigate their careers as well as the resources and people to support their transformative educational journeys.

### MKTG 4100 Marketing Concepts (4 Credits)

This course focuses on formulating and implementing marketing management strategies and tactics for providing customer value. The focus of this course is on marketing strategy – constructing an environmental scan, segmenting the market properly and targeting the appropriate markets. Once strategy has been set, brand management is considered along with using marketing tactics as levers to bring value to the customer. The course provides you with a lens through which you may view the world as a marketer, relating marketing principles to consumer and business actions. There is no degree restriction for this course for the graduate students.

### MKTG 4150 Marketing and Product Strategy (includes Entrepreneurship Challenge) (4 Credits)

You'll be creating a business plan for the Entrepreneurship Challenge and one of the most essential pieces of that plan is the go-to-market strategy, which will be your final deliverable. For the Entrepreneurship Challenge we will be using design thinking to solve a problem that we can create a business around. Design thinking is an amazing, intuitive way to develop opportunities. We will be covering marketing essentials that enable you to create a compelling go-to-market strategy for your startup. We'll cover research, promotions, product, pricing and more!.

**MKTG 4220 Customer Experience Management (4 Credits)**

Customer Experience (CX) is a customer's brand perception throughout all aspects of the buying journey. As companies integrate with digital platforms, customers are now demanding to connect with brands before purchasing and beyond the features and benefits of a product or service. Marketers are utilizing customer insights, digital preferences, Open AI, and analytics to execute and deliver an outstanding end-to-end customer experience and build brand loyalty. This is a client-project-based course that explores the 5-component framework of customer experience (CX) strategy and includes digital user experience (UX), brand experience (BX), and stakeholder experience (SX) to understand how marketing efforts can drive brand loyalty. Through industry-relevant concepts such as customer journey mapping, CX ecosystem, ESG standards, voice of the customer (VoC), and other stakeholders' experiences, students will gain a tactical understanding and execution of customer experience management plans. This is an eight-week course and includes two-day experiential learning opportunity at our Kennedy Mountain Campus (KMC). There will be a course fee for use of KMC, which is \$75.00 per student. Student must attend the weekend retreat.

**MKTG 4380 Supply Chain Management (4 Credits)**

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets. These systems link processes such as product design, sourcing, supply chain planning, manufacturing, fulfillment, and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success. The purpose of this course is to provide a student with a baseline of knowledge, skills, and abilities to succeed in the various functions of supply chain management at a managerial level of an organization. Prerequisites: MKTG 4360 and MKTG 4370, or instructor permission. Cross-list with TRAN 4100.

**MKTG 4400 Social Awareness and Ethics (2 Credits)**

Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student's ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics' overarching intent to protect employees, the environment, and their customers with marketing ethics' principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiate Principles: [http://www.danielsfund.org/\\_Assets/files/Ethics%20Initiative%20Principles.pdf](http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf) Prerequisites: MKTG 4000.

**MKTG 4501 Client Lab I (1 Credit)**

MKTG 4501 is a requirement to be taken concurrently with a distinct marketing class over the duration of your program. In this course, you will be working with a business client to identify and solve a client problem in the area of focus for the companion course. By taking this course and solving three different types of client problems, over the duration of your program, you will have the chance to sharpen your problem identification abilities and to work with marketing professionals, demonstrating your marketing ability.

**MKTG 4510 Consumer Behavior (4 Credits)**

What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding the underlying drivers of consumer behavior. This course places a special emphasis on the cultural contexts that influence consumers. Students will learn and apply qualitative and experimental research methods used to study consumers to derive key insights for making marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4515 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

**MKTG 4520 Marketing Analytics (4 Credits)**

There's no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4530 Marketing Research (4 Credits)**

Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools relying on primary and secondary data, including interviews, focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4540 Product and Service Innovation (4 Credits)**

Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPG, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We'll be using Google Ventures rapid sprint framework to develop/test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4550 Marketing Planning (4 Credits)**

It has been said that "planning without action is futile, and action without planning is fatal." The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms.

**MKTG 4560 Pricing Strategy (4 Credits)**

This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 "Ps" of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one "P" that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4510, MKTG 4520, and MKTG 4530 or instructor permission.

**MKTG 4570 Digital Strategies (4 Credits)**

We're 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It's a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We'll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4580 Insights to Innovation (4 Credits)**

Consumer insights are a driving force behind innovation for industries, organizations, and products. To remain relevant in the marketplace, companies must innovate. Creating new products, services, or processes requires the contributions of multiple stakeholders, including the voice of the customer. Students will gather secondary and primary data and apply it to design processes and models to optimize value creation and drive innovation. Students will learn how consumer insights can enable the development and enhancement of compelling value propositions. Through a thoughtful design process, students will develop a new product, brand the product, and determine a go-to-market strategy. The learning outcomes include how to apply the design-thinking framework, identify human-centered insights, and collaborate to innovate and create delightful customer experiences. Prerequisite: MKTG 4100.

**MKTG 4605 Current Marketing Perspectives (4 Credits)**

Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

**MKTG 4612 Customer Experience Management (1 Credit)**

Sprint Course at the Kennedy Mountain Campus Navigating Excellence: The Power of Customer Experience Join our transformative Customer Experience Management (CX) short program (Sprint/Immersion) and expand your student 4D experience! This course is led by seasoned CX consulting professionals to bring real-world applications to an "outdoor" classroom. This dynamic program equips you with essential skills to begin to build a CX management program. Dive into CX competency framework, design thinking, data insights, and strategy. Immerse yourself at the University of Denver's Kennedy Mountain Campus, surrounded by breathtaking vistas and while discussing pressing business challenges. Through industry relevant concepts such as customer journey mapping, CX ecosystem, stakeholder engagement, voice of the customer (VoC) students will gain tactical understanding and execution of customer experience management planning. Elevate your student journey through the power of customer experience.



**MKTG 4630 International Marketing (4 Credits)**

The shrinking planet and constant pressure to maintain a firm's growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

**MKTG 4635 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4510 or instructor permission.

**MKTG 4655 Leading the Sales Organization: Structure, Strategy, and Management (4 Credits)**

Sales force design, strategy, and management provides both a strategic as well as a tactical perspective on the sales function. The course is suitable for anyone who will at some point in their career have a managerial position in an organization where salespeople are an integral part of the marketing mix. Topics discussed in class cover various elements of sales force design, strategy, and management including the role of salespeople in company's go-to-market strategy, design of sales organization structure, different sales role structures (inside vs. field etc.), territory management and quota (goal) setting, incentive and compensation design, and hiring and training strategies.

**MKTG 4660 Sports & Entertainment Marketing (4 Credits)**

There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

**MKTG 4670 Competitive Strategies (4 Credits)**

This course will examine what is happening in the world of corporate marketing today. Which companies' marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company's marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

**MKTG 4675 Marketing for Social Impact (4 Credits)**

The integration of Impact + Profit is one of the biggest trends in the startup world—influencing socially-responsible products and driving cause-related branding, customer choice, and loyalty. Marketing for social impact is multifaceted and requires an understanding of how Impact + Profit is essential to social enterprises, B Corps, and nonprofits. Through this course students will develop themselves as purpose-driven professionals knowledgeable in the latest trends of story-driven marketing, conscious capitalism, and social psychology. This course builds upon students' understanding of Design Thinking to think strategically about value creation as it relates to Impact + Profit. Upon completion of the course, students will understand the relationship between business and social good, as well as acquire the necessary knowledge and skills to design a marketing campaign specific to a social enterprise, B Corp or nonprofit. Applicable to all facets of the business and nonprofit world, this advanced elective is open to all MBA students and provides skills and knowledge to help you be indispensable to your company or organization. Prerequisites: MKTG 4100 and any additional 4000-level MKTG course.

**MKTG 4705 Topics in Marketing (1-4 Credits)**

TOPIC CHANGES EACH TERM.

**MKTG 4800 Global Integrated Marketing Communication (4 Credits)**

The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams creating a global campaign. Prerequisites: MKTG 4810 or instructor permission.

**MKTG 4805 Foundations of Digital Marketing (4 Credits)**

According to LinkedIn, the "Digital Marketing Specialist" role is among the top 10 most in-demand jobs in the USA. Knowing how to utilize digital marketing tools as part of a business strategy is critical in today's marketplace. This course provides the knowledge and skills necessary to plan and implement a digital marketing strategy, create and manage digital marketing campaigns, and select and utilize the most effective tools and technologies to achieve the business's objectives. This is a hands-on course where students will learn how to successfully integrate online tools, including user experience (UX), search engine optimization, pay-per-click advertising, email marketing, content marketing, reputation management, social media, and AI (e.g., ChatGPT.com / WriteSonic.com), within the overall marketing mix. Through simulations, certifications, and in-class assignments, students will acquire the fundamental digital experience that is a "must-have" for a marketing career in today's workplace. Cross listed with MKTG 3480.

**MKTG 4810 Integrated Marketing Communication (4 Credits)**

Integrated Marketing Communication (IMC), sometimes referred to as marketing campaigns, is a critical component of a marketing strategy and is vital for the success of any business. Organizational, technological, and societal trends over the past few years have presented marketers with a challenge: determining which marketing channels are needed to gain traction, engage customers, and drive economic growth. It's essential to integrate all marketing activities into one master short-term campaign plan. This client-project-based course is designed with the notion that marketing communications encompass much more than traditional advertising or social media, focusing on a multi-channel and integrated approach. Some of the concepts covered include consumer insights, branding, market segmentation, targeting, and positioning. The course provides a foundation in the development and execution of campaign strategies using digital tools, including AI, and promotional strategies through data-driven decision-making. Prerequisites: MKTG 4100 & MKTG 4510 or instructor permission.

**MKTG 4815 Social Media Marketing (4 Credits)**

(4 credit hours) Social Media Marketing is used by marketers to increase brand awareness, identify key audiences, generate leads, and build meaningful relationships with customers. Social media allows businesses to gain a competitive advantage through the creation and distribution of valuable, relevant, and consistent content to attract and retain clearly defined audiences. Marketing professionals entering the workforce today need to be equipped with how to utilize new and constantly updated social media marketing strategies for businesses. By the end of the course, students will know how to implement a successful content strategy for multiple platforms including but not limited to Facebook, Instagram, Twitter, Snapchat, Pinterest, LinkedIn, and YouTube. We will be working with real-world clients and scenarios to help them drive marketing ROI! Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

**MKTG 4820 Brand Management (4 Credits)**

Designing a compelling brand is the foundation of marketing. Explore the intricacies of developing a brand strategy to drive growth and ensure consistent brand messaging across the company and product/service lifecycle. Through this client-based course, explore how organizations create a compelling corporate image that inspires trust, builds a sense of community, differentiates, and fosters loyalty to generate brand value. As the digital landscape propels and empowers consumers, discover how brands are co-creating with customers to increase inclusiveness while reducing risk. Learn the concepts and models from brand authorities, then apply this knowledge to real-world business challenges. The learning outcomes are to create a goal-driven brand plan, harness tactics to cultivate brand loyalty, foster brand experiences, and ultimately build sustainable brand equity while measuring success. Prerequisite: MKTG 4100. Concurrent enrollment with MKTG 4100 allowed.

**MKTG 4825 Mobile Marketing (4 Credits)**

(4 credit hours) Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues, and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising, and location-based services are essential for today's business leaders. This course covers how mobile marketing is defining business today, including strategy, tracking ROI, advertising, mobile websites, mobile apps, text messaging, QR codes, and the laws and ethics of mobile marketing. Students will use the design thinking process to design a mobile app and create a prototype of the app to solve their target market's problem. At the end of the course, students will deliver a prototype of the mobile app and a mobile marketing plan to promote their mobile tactics. Cross-listed with MKTG3475. Prerequisite: MKTG 4100.

**MKTG 4835 Search Engine Marketing: Google Analytics & Google Ads (4 Credits)**

(4 credit hours) Search marketing is the cornerstone of many digital marketing campaigns. An understanding of consumers' search behavior provides deep insight into how people make purchasing decisions and form brand affinities. This course examines the strategic use of search engine optimization in marketing to build profitable customer relationships. Topics in the course will include consumer search behavior, search engines and algorithms, website user-experience, on- and off-page SEO, and strategies for conducting SEO campaigns for traditional and niche search engines. The course is designed to teach the fundamentals of SEO through experience with Google Ads and Google Analytics. By the end of this course, students obtain relevant and applicable certifications in search engine marketing. Cross listed with MKTG 3485.

**MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)**

"Software is eating the world." That was the quote from Marc Andreessen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We're at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We'll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We'll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3495.

**MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)**

This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student's choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

**MKTG 4860 Data Science for Marketers (4 Credits)**

Data is an essential part of (digital) marketing. In fact, data enables the promise of digital marketing: real-time feedback enabling businesses, marketing campaigns to pivot and become predictive. We'll cover what it takes to become a data-driven organization and how to tell stories through data.

**MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)**

This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker background as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

**MKTG 4900 Advanced Marketing Strategy (4 Credits)**

Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4980 Marketing Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are required to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. We learn by doing. That's what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein's, Johns Manville, Ski Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job.

**MKTG 4981 Marketing Leadership and Professional Development I (1 Credit)**

This course involves several executive coaching experiences. In the Fall Quarter, you will participate in a weekend leadership experience, where you develop self-awareness of your style as a member and leader of a team. This experience will help build relationships with others in the program and with program faculty, setting you up for successful team experiences in the year ahead. Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4982 Marketing Leadership and Professional Development II (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4983 Marketing Leadership and Professional Development III (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**MKTG 4999 Marketing Assessment (0 Credits)**

This course, taken at the end of the MS Marketing program, is designed to assess what students know and can do as a result of being in the program, as well as to capture student feedback about the overall program. The assessments provide input to the Marketing faculty to enable continuous improvement in the program.

**MKTG 6300 Seminar in Marketing (4 Credits)**

This doctoral seminar focuses on research in marketing. This course will expose students to cutting-edge research in marketing in order to help them define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

## Courses

### **MKTG 4000 Foundations of Marketing (0 Credits)**

The Master of Science of Marketing program is a deep dive into marketing knowledge and skills. This course onboards students into the program by outlining the program structure, professional leadership and development series, and the faculty and courses that provide a core foundation of marketing. It also provides an overview of six marketing pathways for students to consider as they plan for and navigate their careers as well as the resources and people to support their transformative educational journeys.

### **MKTG 4100 Marketing Concepts (4 Credits)**

This course focuses on formulating and implementing marketing management strategies and tactics for providing customer value. The focus of this course is on marketing strategy – constructing an environmental scan, segmenting the market properly and targeting the appropriate markets. Once strategy has been set, brand management is considered along with using marketing tactics as levers to bring value to the customer. The course provides you with a lens through which you may view the world as a marketer, relating marketing principles to consumer and business actions. There is no degree restriction for this course for the graduate students.

### **MKTG 4150 Marketing and Product Strategy (includes Entrepreneurship Challenge) (4 Credits)**

You'll be creating a business plan for the Entrepreneurship Challenge and one of the most essential pieces of that plan is the go-to-market strategy, which will be your final deliverable. For the Entrepreneurship Challenge we will be using design thinking to solve a problem that we can create a business around. Design thinking is an amazing, intuitive way to develop opportunities. We will be covering marketing essentials that enable you to create a compelling go-to-market strategy for your startup. We'll cover research, promotions, product, pricing and more!

### **MKTG 4220 Customer Experience Management (4 Credits)**

Customer Experience (CX) is a customer's brand perception throughout all aspects of the buying journey. As companies integrate with digital platforms, customers are now demanding to connect with brands before purchasing and beyond the features and benefits of a product or service. Marketers are utilizing customer insights, digital preferences, Open AI, and analytics to execute and deliver an outstanding end-to-end customer experience and build brand loyalty. This is a client-project-based course that explores the 5-component framework of customer experience (CX) strategy and includes digital user experience (UX), brand experience (BX), and stakeholder experience (SX) to understand how marketing efforts can drive brand loyalty. Through industry-relevant concepts such as customer journey mapping, CX ecosystem, ESG standards, voice of the customer (VoC), and other stakeholders' experiences, students will gain a tactical understanding and execution of customer experience management plans. This is an eight-week course and includes two-day experiential learning opportunity at our Kennedy Mountain Campus (KMC). There will be a course fee for use of KMC, which is \$75.00 per student. Student must attend the weekend retreat.

### **MKTG 4380 Supply Chain Management (4 Credits)**

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets. These systems link processes such as product design, sourcing, supply chain planning, manufacturing, fulfillment, and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success. The purpose of this course is to provide a student with a baseline of knowledge, skills, and abilities to succeed in the various functions of supply chain management at a managerial level of an organization. Prerequisites: MKTG 4360 and MKTG 4370, or instructor permission. Cross-list with TRAN 4100.

### **MKTG 4400 Social Awareness and Ethics (2 Credits)**

Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student's ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics' overarching intent to protect employees, the environment, and their customers with marketing ethics' principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiate Principles: [http://www.danielsfund.org/\\_Assets/files/Ethics%20Initiative%20Principles.pdf](http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf) Prerequisites: MKTG 4000.

### **MKTG 4501 Client Lab I (1 Credit)**

MKTG 4501 is a requirement to be taken concurrently with a distinct marketing class over the duration of your program. In this course, you will be working with a business client to identify and solve a client problem in the area of focus for the companion course. By taking this course and solving three different types of client problems, over the duration of your program, you will have the chance to sharpen your problem identification abilities and to work with marketing professionals, demonstrating your marketing ability.

### **MKTG 4510 Consumer Behavior (4 Credits)**

What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding the underlying drivers of consumer behavior. This course places a special emphasis on the cultural contexts that influence consumers. Students will learn and apply qualitative and experimental research methods used to study consumers to derive key insights for making marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4515 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

**MKTG 4520 Marketing Analytics (4 Credits)**

There's no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4530 Marketing Research (4 Credits)**

Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools relying on primary and secondary data, including interviews, focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4540 Product and Service Innovation (4 Credits)**

Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPG, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We'll be using Google Ventures rapid sprint framework to develop/test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4550 Marketing Planning (4 Credits)**

It has been said that "planning without action is futile, and action without planning is fatal." The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms.

**MKTG 4560 Pricing Strategy (4 Credits)**

This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 "Ps" of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one "P" that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4510, MKTG 4520, and MKTG 4530 or instructor permission.

**MKTG 4570 Digital Strategies (4 Credits)**

We're 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It's a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We'll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4580 Insights to Innovation (4 Credits)**

Consumer insights are a driving force behind innovation for industries, organizations, and products. To remain relevant in the marketplace, companies must innovate. Creating new products, services, or processes requires the contributions of multiple stakeholders, including the voice of the customer. Students will gather secondary and primary data and apply it to design processes and models to optimize value creation and drive innovation. Students will learn how consumer insights can enable the development and enhancement of compelling value propositions. Through a thoughtful design process, students will develop a new product, brand the product, and determine a go-to-market strategy. The learning outcomes include how to apply the design-thinking framework, identify human-centered insights, and collaborate to innovate and create delightful customer experiences. Prerequisite: MKTG 4100.

**MKTG 4605 Current Marketing Perspectives (4 Credits)**

Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

**MKTG 4612 Customer Experience Management (1 Credit)**

Sprint Course at the Kennedy Mountain Campus Navigating Excellence: The Power of Customer Experience Join our transformative Customer Experience Management (CX) short program (Sprint/Immersion) and expand your student 4D experience! This course is led by seasoned CX consulting professionals to bring real-world applications to an "outdoor" classroom. This dynamic program equips you with essential skills to begin to build a CX management program. Dive into CX competency framework, design thinking, data insights, and strategy. Immerse yourself at the University of Denver's Kennedy Mountain Campus, surrounded by breathtaking vistas and while discussing pressing business challenges. Through industry relevant concepts such as customer journey mapping, CX ecosystem, stakeholder engagement, voice of the customer (VoC) students will gain tactical understanding and execution of customer experience management planning. Elevate your student journey through the power of customer experience.

**MKTG 4630 International Marketing (4 Credits)**

The shrinking planet and constant pressure to maintain a firm's growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

**MKTG 4635 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4510 or instructor permission.

**MKTG 4655 Leading the Sales Organization: Structure, Strategy, and Management (4 Credits)**

Sales force design, strategy, and management provides both a strategic as well as a tactical perspective on the sales function. The course is suitable for anyone who will at some point in their career have a managerial position in an organization where salespeople are an integral part of the marketing mix. Topics discussed in class cover various elements of sales force design, strategy, and management including the role of salespeople in company's go-to-market strategy, design of sales organization structure, different sales role structures (inside vs. field etc.), territory management and quota (goal) setting, incentive and compensation design, and hiring and training strategies.

**MKTG 4660 Sports & Entertainment Marketing (4 Credits)**

There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

**MKTG 4670 Competitive Strategies (4 Credits)**

This course will examine what is happening in the world of corporate marketing today. Which companies' marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company's marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

**MKTG 4675 Marketing for Social Impact (4 Credits)**

The integration of Impact + Profit is one of the biggest trends in the startup world—influencing socially-responsible products and driving cause-related branding, customer choice, and loyalty. Marketing for social impact is multifaceted and requires an understanding of how Impact + Profit is essential to social enterprises, B Corps, and nonprofits. Through this course students will develop themselves as purpose-driven professionals knowledgeable in the latest trends of story-driven marketing, conscious capitalism, and social psychology. This course builds upon students' understanding of Design Thinking to think strategically about value creation as it relates to Impact + Profit. Upon completion of the course, students will understand the relationship between business and social good, as well as acquire the necessary knowledge and skills to design a marketing campaign specific to a social enterprise, B Corp or nonprofit. Applicable to all facets of the business and nonprofit world, this advanced elective is open to all MBA students and provides skills and knowledge to help you be indispensable to your company or organization. Prerequisites: MKTG 4100 and any additional 4000-level MKTG course.

**MKTG 4705 Topics in Marketing (1-4 Credits)**

TOPIC CHANGES EACH TERM.

**MKTG 4800 Global Integrated Marketing Communication (4 Credits)**

The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams creating a global campaign. Prerequisites: MKTG 4810 or instructor permission.

**MKTG 4805 Foundations of Digital Marketing (4 Credits)**

According to LinkedIn, the "Digital Marketing Specialist" role is among the top 10 most in-demand jobs in the USA. Knowing how to utilize digital marketing tools as part of a business strategy is critical in today's marketplace. This course provides the knowledge and skills necessary to plan and implement a digital marketing strategy, create and manage digital marketing campaigns, and select and utilize the most effective tools and technologies to achieve the business's objectives. This is a hands-on course where students will learn how to successfully integrate online tools, including user experience (UX), search engine optimization, pay-per-click advertising, email marketing, content marketing, reputation management, social media, and AI (e.g., ChatGPT.com / WriteSonic.com), within the overall marketing mix. Through simulations, certifications, and in-class assignments, students will acquire the fundamental digital experience that is a "must-have" for a marketing career in today's workplace. Cross listed with MKTG 3480.

**MKTG 4810 Integrated Marketing Communication (4 Credits)**

Integrated Marketing Communication (IMC), sometimes referred to as marketing campaigns, is a critical component of a marketing strategy and is vital for the success of any business. Organizational, technological, and societal trends over the past few years have presented marketers with a challenge: determining which marketing channels are needed to gain traction, engage customers, and drive economic growth. It's essential to integrate all marketing activities into one master short-term campaign plan. This client-project-based course is designed with the notion that marketing communications encompass much more than traditional advertising or social media, focusing on a multi-channel and integrated approach. Some of the concepts covered include consumer insights, branding, market segmentation, targeting, and positioning. The course provides a foundation in the development and execution of campaign strategies using digital tools, including AI, and promotional strategies through data-driven decision-making. Prerequisites: MKTG 4100 & MKTG 4510 or instructor permission.

**MKTG 4815 Social Media Marketing (4 Credits)**

(4 credit hours) Social Media Marketing is used by marketers to increase brand awareness, identify key audiences, generate leads, and build meaningful relationships with customers. Social media allows businesses to gain a competitive advantage through the creation and distribution of valuable, relevant, and consistent content to attract and retain clearly defined audiences. Marketing professionals entering the workforce today need to be equipped with how to utilize new and constantly updated social media marketing strategies for businesses. By the end of the course, students will know how to implement a successful content strategy for multiple platforms including but not limited to Facebook, Instagram, Twitter, Snapchat, Pinterest, LinkedIn, and YouTube. We will be working with real-world clients and scenarios to help them drive marketing ROI! Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

**MKTG 4820 Brand Management (4 Credits)**

Designing a compelling brand is the foundation of marketing. Explore the intricacies of developing a brand strategy to drive growth and ensure consistent brand messaging across the company and product/service lifecycle. Through this client-based course, explore how organizations create a compelling corporate image that inspires trust, builds a sense of community, differentiates, and fosters loyalty to generate brand value. As the digital landscape propels and empowers consumers, discover how brands are co-creating with customers to increase inclusiveness while reducing risk. Learn the concepts and models from brand authorities, then apply this knowledge to real-world business challenges. The learning outcomes are to create a goal-driven brand plan, harness tactics to cultivate brand loyalty, foster brand experiences, and ultimately build sustainable brand equity while measuring success. Prerequisite: MKTG 4100. Concurrent enrollment with MKTG 4100 allowed.

**MKTG 4825 Mobile Marketing (4 Credits)**

(4 credit hours) Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues, and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising, and location-based services are essential for today's business leaders. This course covers how mobile marketing is defining business today, including strategy, tracking ROI, advertising, mobile websites, mobile apps, text messaging, QR codes, and the laws and ethics of mobile marketing. Students will use the design thinking process to design a mobile app and create a prototype of the app to solve their target market's problem. At the end of the course, students will deliver a prototype of the mobile app and a mobile marketing plan to promote their mobile tactics. Cross-listed with MKTG3475. Prerequisite: MKTG 4100.

**MKTG 4835 Search Engine Marketing: Google Analytics & Google Ads (4 Credits)**

(4 credit hours) Search marketing is the cornerstone of many digital marketing campaigns. An understanding of consumers' search behavior provides deep insight into how people make purchasing decisions and form brand affinities. This course examines the strategic use of search engine optimization in marketing to build profitable customer relationships. Topics in the course will include consumer search behavior, search engines and algorithms, website user-experience, on- and off-page SEO, and strategies for conducting SEO campaigns for traditional and niche search engines. The course is designed to teach the fundamentals of SEO through experience with Google Ads and Google Analytics. By the end of this course, students obtain relevant and applicable certifications in search engine marketing. Cross listed with MKTG 3485.

**MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)**

"Software is eating the world." That was the quote from Marc Andreessen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We're at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We'll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We'll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3495.

**MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)**

This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student's choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

**MKTG 4860 Data Science for Marketers (4 Credits)**

Data is an essential part of (digital) marketing. In fact, data enables the promise of digital marketing: real-time feedback enabling businesses, marketing campaigns to pivot and become predictive. We'll cover what it takes to become a data-driven organization and how to tell stories through data.

**MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)**

This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker background as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

**MKTG 4900 Advanced Marketing Strategy (4 Credits)**

Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4980 Marketing Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are required to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. We learn by doing. That's what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein's, Johns Manville, Ski Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job.

**MKTG 4981 Marketing Leadership and Professional Development I (1 Credit)**

This course involves several executive coaching experiences. In the Fall Quarter, you will participate in a weekend leadership experience, where you develop self-awareness of your style as a member and leader of a team. This experience will help build relationships with others in the program and with program faculty, setting you up for successful team experiences in the year ahead. Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4982 Marketing Leadership and Professional Development II (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4983 Marketing Leadership and Professional Development III (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.



**MKTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**MKTG 4999 Marketing Assessment (0 Credits)**

This course, taken at the end of the MS Marketing program, is designed to assess what students know and can do as a result of being in the program, as well as to capture student feedback about the overall program. The assessments provide input to the Marketing faculty to enable continuous improvement in the program.

**MKTG 6300 Seminar in Marketing (4 Credits)**

This doctoral seminar focuses on research in marketing. This course will expose students to cutting-edge research in marketing in order to help them define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

## Master of Business Administration Programs

### Master of Business Administration in General Business: The Denver MBA

The Daniels College of Business full-time Denver MBA is a comprehensive program that immerses students in the study and practice of business. Students will gain the technical expertise and leadership skills required to navigate complex business situations with confidence and integrity.

The Daniels College of Business has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

#### Program Highlights

*A Dynamic Collaborative In-Person Environment.* The Denver MBA is a cohort program where students experience the MBA core courses with the same set of peers to maximize cross-learning, collaboration, and networking.

*Just-in-Time Learning.* Class discussions are informed by current business issues and class assignments. The faculty are committed to bringing the most relevant issues and challenges into class discussions. Whether it is Generative AI such as ChatGPT or the Future of Work through machine learning, these contemporary issues will become part of the course regardless of subject.

*Connection to Faculty.* Faculty teaching in the full-time MBA program are esteemed researchers, practicing professionals, and experienced teachers who bring their boardroom experience into the classroom. The faculty care deeply about the students. With small class sizes (30:1), students will have the opportunity to engage and get to know the faculty, in and out of the classroom.

*A Challenge Driven Education.* Students take on four real-world challenges, each increasing in rigor and complexity. Students begin by working through an Entrepreneurial Challenge using tools such as Design Thinking. The Social Good Challenge enables students to partner with a non-profit to apply business practices for the public good. As students work collaboratively on applying critical problem-solving skills throughout each challenge, faculty experienced in consulting will advise them throughout the process.

*Global Mindset.* The Corporate Challenge partners the students with businesses looking to solve real problems around the world. The Global Challenge adds the complexity of traveling abroad. Program tuition includes the trip to work with an international organization on one of its business problems.

*Leadership Development.* In-classroom curricular work is complemented by immersive programming on professional development, career advancement, networking, and other topics aimed at enhancing the holistic Denver MBA student experience. Every student has the opportunity to receive customized, ongoing one-on-one coaching throughout the program.

#### Cohort

The Denver MBA is a 21-month, 80-credit cohort program.

#### Class Schedule

Varies based upon course Monday through Thursday. Most courses are available in-person and online providing students with flexibility, if needed. Additional required activities include the Outdoor and International (trip) Experientials that may include weekends and holidays. Each class session is recorded should an unexpected absence occur.

#### Concentrations/Electives

Students pursuing the Denver MBA will have 28 credits of electives of which 16 credits are required to qualify as a specific concentration. These concentrations include: Accounting, Business Analytics, Customized, Finance, Marketing, Real Estate and the Built Environment, and Supply Chain Management.

## Master of Business Administration in Management Sciences and Quantitative Methods: The Denver Quantitative MBA

The Daniels College of Business full-time Denver Quantitative MBA is a comprehensive program that immerses students in the study and practice of business. Students will develop a deep understanding of management sciences and quantitative methods required to solve complex business problems with confidence and integrity.

The Daniels College of Business has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Program Highlights

*A Dynamic Collaborative In-Person Environment.* The Denver Quantitative MBA is a cohort program where students experience the MBA core courses with the same set of peers to maximize cross-learning, collaboration, and networking.

*Just-in-Time Learning.* Class discussions are informed by current business issues and class assignments. The faculty are committed to bringing the most relevant issues and challenges into class discussions. Whether it is Generative AI such as ChatGPT or the Future of Work through machine learning, these contemporary issues will become part of the course regardless of subject.

*Connection to Faculty.* Faculty teaching in the Denver Quantitative MBA are esteemed researchers, practicing professionals, and experienced teachers who bring their boardroom experience into the classroom. The faculty care deeply about the students. With small class sizes (30:1), students will have the opportunity to engage and get to know the faculty, in and out of the classroom.

*A Challenge Driven Education.* Students take on four real-world challenges, each increasing in rigor and complexity. Students begin by working through an Entrepreneurial Challenge using tools such as Design Thinking. The Social Good Challenge enables students to partner with a non-profit to apply business practices for the public good. As students work collaboratively on applying critical problem-solving skills throughout each challenge, faculty experienced in consulting will advise them throughout the process.

*Global Mindset.* The Corporate Challenge partners the students with businesses looking to solve real problems around the world. The Global Challenge adds the complexity of traveling abroad. Program tuition includes the trip to work with an international organization on one of its business problems.

*Leadership Development.* In-classroom curricular work is complemented by immersive programming on professional development, career advancement, networking, and other topics aimed at enhancing the holistic Denver Quantitative MBA student experience. Every student has the opportunity to receive customized, ongoing one-on-one coaching throughout the program.

### Cohort

The Denver Quantitative MBA is a 21-month, 80-credit cohort program.

### Class Schedule

Varies based upon course Monday through Thursday. Most courses are available in-person and online providing students with flexibility, if needed. Additional required activities include the Outdoor and International (trip) Experientials that may include weekends and holidays. Each class session is recorded should an unexpected absence occur.

### Concentrations/Electives

Students pursuing the Denver Quantitative MBA must complete 28 credit hours of electives in a specific management science or quantitative methods concentration. These specific concentrations include: Accounting, Technology and Analytics, Applied Quantitative Finance, or Business Analytics.

## Master of Business Administration in General Business: The Executive MBA Program

The Daniels Executive MBA (EMBA) at the University of Denver is a highly selective academic program designed for the mid-to-senior level professional with ten or more years of professional work experience. Strategically focused and integrated in approach, the EMBA classroom is a dynamic environment of leaders from a wide array of backgrounds and industries. Although the pace of the EMBA experience is accelerated and academically rigorous, it is offered in an efficient once-a-week format which allows for balance between career, school and personal life.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Cohort

This is a cohort MBA program with an integrated, lockstep curriculum of 24 courses (60 credit hours).

### Class Schedule

Alternating Fridays and Saturdays once a week, from 8 a.m. to 5 p.m. 18 calendar months. Additional required opportunities include the Sailing Experience and the two-week global business travel seminar.

## Master of Business Administration in General Business: The Professional MBA Program

The Daniels Professional MBA (PMBA) is an ideal fit for early-to-mid career professionals. It holds the same quality and rigor as our Full-time MBA with a curriculum suited for those with at least two years of professional work experience. Students in the cohort-based PMBA program are fully employed and enjoy a network of peers with comparable experience in diverse industries. Gaining exposure to one another's industries and challenges is a key benefit of this MBA option, as is the global business travel seminar.

The Daniels College of Business has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Program Highlights

*A Dynamic Collaborative In-Person Environment.* The Professional MBA is a cohort program where students experience the MBA core courses with the same set of peers to maximize cross-learning, collaboration and networking.

*Just-in-Time Learning.* Class discussions are informed by current business issues and class assignments. Faculty are committed to bringing the most relevant issues and challenges into class discussions. Whether it is Generative AI such as ChatGPT or the Future of Work through machine learning, these contemporary issues will become part of the course regardless of subject.

*Connection to Faculty.* Faculty teaching in the Professional MBA program are esteemed researchers, practicing professionals, and experienced teachers who bring their boardroom experience into the classroom. Faculty care deeply about the students, and with small class sizes, students will have the opportunity to engage and get to know the faculty, in and out of the classroom.

*Learning by Doing.* During the program, students will participate in a mountain leadership retreat and travel abroad to work with international organizations. This experiential learning will culminate with a social good challenge, where students will serve as consultants to a real Non-Profit organization with a genuine business problem.

### Cohort

The Professional MBA is a 21-month, 60-credit cohort program.

### Class Schedule

PMBA core courses meet in-person on Monday and Wednesday evenings between 6 p.m. and 10 p.m., with the exception of Global Business which meets on several Saturdays in the sixth quarter. To provide students with flexibility, core courses are available online, if needed. Each PMBA core class session is also recorded should an unexpected absence occur. Elective courses may meet on other days of the week. Additional required activities include the Outdoor and International (trip) Experientials that may include weekends and holidays.

### Concentration / Electives

Students pursuing the Professional MBA will have 20 credits of electives. If students choose a concentration path, 16 elective credits in a specialized area are required to qualify as a concentration. These concentrations include: Accounting, Business Analytics, Customized, Executive Leadership, Finance, Marketing, and Real Estate and the Built Environment.

## Master of Business Administration in General Business: MBA@Denver (Online)

The Daniels online MBA program—MBA@Denver—allows students to earn an MBA while maintaining a balanced life. Our blended format of online classes and in-person immersions offers convenience and connection. As students sharpen their skills and knowledge-base, they will also grow their network via our outstanding faculty and distinguished Daniels alumni.

### Program Highlights

*A Collaborative Online Environment.* Students meet face-to-face and on-screen to work on group projects and connect with classmates. Students apply theory to solve current business problems together with the class and professor. Using a mobile app, students can work on a tablet or other mobile device from anywhere around the world, even offline.

*Just-in-Time Learning.* Class discussions are informed by current business issues and class assignments. The faculty are committed to bringing the most relevant issues and challenges into class discussions. Whether it is Generative AI such as ChatGPT or the Future of Work through machine learning, these contemporary issues will become part of the course regardless of subject.

*Connection to Faculty.* MBA@Denver faculty are experienced not only in the graduate classroom, but also in business. The faculty includes esteemed researchers, practicing professionals, and experienced teachers who bring their boardroom experience into the classroom. Many of the faculty teach both online and in-person at Daniels, and care deeply about connecting with their students.

*Face-to-Face Experiences.* To increase a professional network beyond the live sessions, students will attend two required in-person learning experiences, called immersions. Immersions are offered throughout the year and are held in a variety of locations including the DU campus, locations outside of Denver but within the continental U.S., and also international locations. These multi-day, weekend events give students the chance to push their leadership skills further and meet classmates, faculty and alumni in person.

*An Extension Of The Campus Community.* As an MBA@Denver student, each will be as much a part of the DU and Daniels communities as on-campus students. Students will have access to career coaching, case competitions, academic resources, mentorship programs, and student gatherings and networking events. All students—whether on campus or online—are invited to participate in graduation celebrations and University Commencement to celebrate the hard work that goes into earning a graduate degree.

#### *Live 90-Minute Online Classes*

- Hosted via webcam at 6:30 p.m. or 8:30 p.m. during the week
- Approximate 20:1 student-to-professor ratio
- Lively peer-to-peer discussions
- Synchronous session recordings

#### *Flexible Scheduling*

- Students usually take two courses per quarter, though many choose to take only one course per quarter. The degree is 60 credit hours in length, so students have the flexibility to complete their coursework within 21 months. Alternatively, students may take as long as five years to complete their degree.
- All courses are available online and in-person, except for Global Business. MBA@Denver students complete Global Business in two parts and does not include an international trip.
- Students may choose to complete the general MBA or to concentrate in one of the following areas:
  - Executive Leadership (online only)
  - Finance (online or in-person)
  - Marketing (online or in-person)
  - Customized (online or in-person)
  - Accounting (in-person only)
  - Business Analytics (in-person only)
  - Real Estate and the Built Environment (in-person only)
- In-person courses are available on the University of Denver campus in Denver, Colorado.

## **Master of Business Administration in General Business: The Denver MBA Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Standardized Test Scores**

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The GMAT code for the Denver MBA (full-time) program is MZR-GT-43. The GRE code for the University of Denver is 4842.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### **Other Requirements**

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

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## Master of Business Administration in General Business (in the Executive MBA Program)

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Requirements

- An admissions interview is required of all Executive MBA applicants. Applicants will be contacted for scheduling.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Business Administration in General Business (in the Professional MBA Program)

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The GMAT code for the Part-time Professional MBA program is MZR-GT-07. The GRE code for the University of Denver is 4842.

### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Master of Business Administration in General Business: MBA@Denver**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Standardized Test Scores**

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The GMAT code to submit GMAT scores to the MBA@Denver (Online MBA) program is MZR-GT-43. The GRE code for the University of Denver is 4842.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### **Other Requirements**

Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

## **The Denver MBA**

### **Master of Business Administration in General Business: The Denver MBA**

#### **Degree Requirements**

Minimum number of credits required: 80

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
BUS 4611	Leading Self & People	2
BUS 4610	Business Ethics for the Public Good	2
FIN 4760	Managerial Economics	4
MKTG 4150	Marketing and Product Strategy (includes Entrepreneurship Challenge)	4
MBA 4210	Social Good Challenge	2
ACTG 4610	Financial Accounting and Reporting	4
MGMT 4690	Strategic Management	4
MBA 4610	Business Law and Public Policy	4
MBA 4310	Corporate Challenge	2
INFO 4610	Business Statistics and Analytics	4
or STAT 4610	Business Statistics	
FIN 4630	Managerial Finance	4
ACTG 4660	Strategic Cost Management	4
MBA 4410	Global Challenge I	2
MBA 4470	Introduction to International Business	2
MBA 4510	Global Challenge II	2
MBA 4340	Sustainable Enterprises	2
MGMT 4625	Leading People & Organizations	4

MBA 4971	Leadership & Development 1	0
MBA 4972	Leadership & Development 2	0
MBA 4973	Leadership & Development 3	0
MBA 4974	Leadership & Development 4	0
MBA 4975	Leadership & Development 5	0
MBA 4980	MBA Internship	0

**Elective requirements**

Students will complete 28 credits in 4000-level general business courses. 28

**Total Credits** 80

**Non-Coursework Requirements**

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Career Checkpoint 4

**Concentration in Accounting: The Denver MBA****Concentration Requirements**

Code	Title	Credits
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**Elective requirements**

28 credits in electives/concentration courses required. 28

**Concentration requirements**

A minimum of 16 of the 28 elective credits must be completed in 4000 level ACTG courses to complete a concentration. Must work directly with the ACTG Department on course selection.

**Total Credits** 28

**Concentration in Business Analytics: The Denver MBA****Concentration Requirements**

Code	Title	Credits
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**Elective requirements**

28 credits in electives/concentration courses required. 28

**Concentration requirements**

A minimum of 16 of the 28 elective credits must be completed in 4000 level INFO courses to complete a concentration, including:

INFO 4120	Python Programming
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INFO 4140	Business Databases
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INFO 4300	Predictive Analytics
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In addition, choose one of the following

INFO 4240	Data Warehousing
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INFO 4340	Data Mining and Visualization
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INFO 4390	Advanced Predictive Modeling with R
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INFO 4590	Optimization
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**Total Credits** 28

## Concentration in Business - Customized: The Denver MBA

### Concentration Requirements

Code	Title	Credits
<b>Elective requirements</b>		
28 credits in electives/concentration courses required.		28
<b>Concentration requirements</b>		
A minimum of 16 of the 28 elective credits must be completed in 4000 level Graduate courses approved by Advisor for specified customized concentration.		
<b>Total Credits</b>		<b>28</b>

## Concentration in Executive Leadership: The Denver MBA

### Concentration Requirements

Code	Title	Credits
<b>Elective requirements</b>		
24 credits in electives/concentration courses required.		24
<b>Concentration requirements</b>		
A minimum of 16 of the 24 elective credits must be completed in 4000 level courses to complete a concentration, including:		
BUS 4810	The Head and Heart of Leadership: Neuroscience and Emotion Regulation	4
BUS 4820	Leading and Developing Others for Success	4
BUS 4830	Leading Change and Building an Agile Culture	4
BUS 4840	The CEO Toolbox	4

## Concentration in Finance: The Denver MBA

### Concentration Requirements

Code	Title	Credits
<b>Elective requirements</b>		
28 credits in electives/concentration courses required.		28
<b>Concentration requirements</b>		
A minimum of 16 credits from Corporate Finance, Investments, Investment Banking or Wealth Management:		
Corporate Finance Courses		
FIN 4410	Financial Planning & Analysis	
FIN 4500	Financial Modeling	
In addition, choose two courses from the following:		
FIN 4150	Advanced Business Valuation	
FIN 4160	Treasury Management	
FIN 4420	Capital Expenditure Analysis	
FIN 4870	Strategic Finance	
FIN 4885	Investment Banking and External Financing	
FIN 4800	An Organized Walk Down Wall Street	
FIN 4700	Topics in Finance	
FIN 4991	Independent Study	
Investments Courses		
FIN 4200	Financial Investments and Markets	
FIN 4500	Financial Modeling	
In addition, choose two courses from the following:		
FIN 4320	Equity Analysis	
FIN 4330	Portfolio Management and Risk Analytics	
FIN 4710	Marsico Investment Fund I	
FIN 4720	Marsico Investment Fund II	
FIN 4890	Fixed Income Analysis	



FIN 4800	An Organized Walk Down Wall Street
FIN 4860	Derivatives
FIN 4700	Topics in Finance
FIN 4991	Independent Study
Investment Banking Courses	
FIN 4410	Financial Planning & Analysis
FIN 4500	Financial Modeling
In addition, choose two courses from the following:	
FIN 4150	Advanced Business Valuation
FIN 4200	Financial Investments and Markets
FIN 4320	Equity Analysis
FIN 4870	Strategic Finance
FIN 4885	Investment Banking and External Financing
FIN 4800	An Organized Walk Down Wall Street
FIN 4700	Topics in Finance
FIN 4991	Independent Study
Wealth Management Course	
FIN 4200	Financial Investments and Markets
In addition, choose three courses from the following:	
FIN 4700	Topics in Finance (Personal Finance)
FIN 4330	Portfolio Management and Risk Analytics
FIN 4060	Life Cycle/Financial Planning
FIN 4700	Topics in Finance (Wealth Management)
<b>Total Credits</b>	<b>28</b>

## Concentration in Marketing: The Denver MBA

### Concentration Requirements

Code	Title	Credits
<b>Elective requirements</b>		
28 credits in electives/concentration courses required		28
<b>Concentration requirements</b>		
A minimum of 16 of the 28 elective credits must be completed from the Digital Marketing or Brand Management tracks below:		
Digital Marketing Courses		
MKTG 4815	Social Media Marketing	
MKTG 4825	Mobile Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
Brand Management Courses		
MKTG 4530	Marketing Research	
MKTG 4820	Brand Management	
In addition, choose two courses from the following:		
MKTG 4380	Supply Chain Management	
MKTG 4510	Consumer Behavior	
MKTG 4580	Insights to Innovation	
MKTG 4675	Marketing for Social Impact	
MKTG 4810	Integrated Marketing Communication	
MKTG 4815	Social Media Marketing	
MKTG 4825	Mobile Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	

MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
<b>Total Credits</b>		<b>28</b>

## Concentration in Real Estate and the Built Environment: The Denver MBA

### Concentration Requirements

Code	Title	Credits
<b>Elective requirements</b>		
28 credits in electives/concentration courses required.		28
<b>Concentration requirements</b>		
A minimum of 16 of the 28 elective credits must be completed in 4000 level REBE courses to complete a concentration, including:		
Real Estate Courses		
REAL 4407	Income Property Finance	
REAL 4007	Real Estate Financial Analysis	
Select two courses from the following:		
REAL 4477	Income Property Investment	
REAL 4417	Income Property Valuation and Appraisal	
REAL 4467	Property Development and Feasibility	
Property Development Courses		
REAL 4407	Income Property Finance	
REAL 4210	Planning, Entitlements, and Public Finance	
CMGT 4490	Residential Development	
CMGT 4480	Const Project Management	
Integrated Project Delivery Courses		
CMGT 4110	Preconstruction Integration and Planning	
CMGT 4200	Lean Construction Project Management	
CMGT 4230	Design Management and Schedule Control	
CMGT 4310	Cost Modeling and Trend Management	
<b>Total Credits</b>		<b>28</b>

## Concentration in Sustainability: The Denver MBA

Code	Title	Credits
<b>Concentration requirements</b>		
A minimum of 16 elective credits must be completed in 4000 level Sustainability courses to complete a concentration. Work directly with your academic advisor on course selection.		
Required Courses include:		
BUS 4444	Global Bus, Governance & CSR	
MBA 4446	Advanced Sustainability	
<b>Elective requirements</b>		
Choose 8 credits of electives from the following:		
CMGT 4155	Sustainable Development	
FIN 4110	Ethics in Finance	
INTS 4220	Political Economy of Energy & Sustainable Development	
INTS 4226	Social Entrepreneurship & Sustainable Development	
INTS 4227	Social Impact & Sustainability Lab	
INTS 4339	Microfinance Lessons: Inclusive Markets and Development	
INTS 4397	The Environment, The Economy, and Human Well-Being	
INTS 4484	Agriculture and Sustainable Development	
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability	
LGST 4701	Topics in Ethics & Legal Study	

TRAN 4100	Fundamentals of Supply Chain Management
TRAN 4180	Sustainability and Supply Chain Management
EPM 4232	Sustainability:Policy and Practice
EPM 4233	Sustainable Transportation

## The Denver Quantitative MBA

### Master of Business Administration in Management Sciences and Quantitative Methods: Denver Quantitative MBA Degree Requirements

Minimum number of credits required: 80

Code	Title	Credits
ACTG 4610	Financial Accounting and Reporting	4
ACTG 4660	Strategic Cost Management	4
BUS 4611	Leading Self & People	2
BUS 4610	Business Ethics for the Public Good	2
FIN 4630	Managerial Finance	4
FIN 4760	Managerial Economics	4
INFO 4610	Business Statistics and Analytics	4
or STAT 4610	Business Statistics	
MBA 4210	Social Good Challenge	2
MBA 4310	Corporate Challenge	2
MBA 4340	Sustainable Enterprises	2
MBA 4410	Global Challenge I	2
MBA 4610	Business Law and Public Policy	4
MBA 4470	Introduction to International Business	2
MBA 4510	Global Challenge II	2
MBA 4971	Leadership & Development 1	0
MBA 4972	Leadership & Development 2	0
MBA 4973	Leadership & Development 3	0
MBA 4974	Leadership & Development 4	0
MBA 4975	Leadership & Development 5	0
MBA 4980	MBA Internship	0
MGMT 4625	Leading People & Organizations	4
MGMT 4690	Strategic Management	4
MKTG 4150	Marketing and Product Strategy (includes Entrepreneurship Challenge)	4
Elective requirements		
Students will complete 28 credits in 4000-level STEM designated courses.		28
<b>Total Credits</b>		<b>80</b>

#### Non-Coursework Requirements

Denver MBA students must meet the following non course requirements in addition to their coursework requirements in order to graduate:

1. Career Checkpoint 1
2. Career Checkpoint 2
3. Career Checkpoint 3
4. Career Checkpoint 4

**Concentration in Accounting, Technology and Analytics: MBA - Management Sciences and Quantitative Methods****Concentration Requirements: 28 credit hours**

Code	Title	Credits
<b>Required Electives</b>		
ACTG 4130	Accounting Process Technologies	4
ACTG 4155	Accounting Data Skills and Concepts	4
ACTG 4176	Accounting Data Analytics	4
ACTG 4340	Topics & Cases in Managerial Accounting	4
ACTG 4575	Accounting Information System Risk, Control and Audit	4
<b>Additional Electives</b>		
8 credits of electives in STEM-designated ACTG, INFO, or FIN courses required.		8
<b>Total Credits</b>		<b>28</b>

Course substitution is permitted provided the course is STEM designated and approved by the Department of Accounting.

**Concentration in Applied Quantitative Finance: The MBA - Management Sciences and Quantitative Methods****Concentration Requirements: 28 credit hours**

Code	Title	Credits
<b>Required Electives</b>		
INFO 4140	Business Databases	4
FIN 4000	Financial Modeling and Databases Bootcamp	1
FIN 4180	Global Finance	2
FIN 4500	Financial Modeling	4
FIN 4410	Financial Planning & Analysis	4
FIN 4200	Financial Investments and Markets	4
FIN 4830	Econometrics for Finance	4
FIN 4150	Advanced Business Valuation	4
<b>Additional Electives</b>		
Choose 1 credit hour 4000-level sprint in Digital Leadership or similar as approved by the Department of Finance		1
<b>Total Credits</b>		<b>28</b>

Course substitution is permitted provided the course is STEM designated and approved by the Department of Finance.

**Concentration in Business Analytics: The Denver Quantitative MBA****Concentration Requirements: 28 credit hours**

Code	Title	Credits
<b>Required Courses</b>		
INFO 4100	Survey of Business Analytics	4
INFO 4120	Python Programming	4
INFO 4140	Business Databases	4
INFO 4240	Data Warehousing	4
INFO 4300	Predictive Analytics	4
INFO 4340	Data Mining and Visualization	4
INFO 4590	Optimization	4
<b>Total Credits</b>		<b>28</b>

\* Course substitution is permitted provided the course is STEM designated and approved by the Department of Business Info & Analytics.

## The Executive MBA

### Master of Business Administration in General Business: The Executive MBA Program

#### Degree Requirements

Code	Title	Credits
<b>Core coursework requirements</b>		
XMBA 4015	Business Ethics	2
XMBA 4016	Integration: Board Advisory Analysis	1
XMBA 4017	Integration: The CFO's Perspective	1
XMBA 4018	Integration: Your Personal Development	1
XMBA 4019	Social Impact Project	2
XMBA 4102	Business & Economic Context	2
XMBA 4234	Digital Marketing	2
XMBA 4301	Mastering Fourth Industrial Revolution	2
XMBA 4330	Financial Accounting	2
XMBA 4331	Foundations of Financial Analysis	2
XMBA 4332	Management Accounting	2
XMBA 4336	Finance II - Financial Decision Making	2
XMBA 4340	Executive Leadership I	4
XMBA 4341	Executive Leadership II	2
XMBA 4342	Talent, People, & Culture	2
XMBA 4353	Global Business I	2
XMBA 4354	Global Business Strategy	5
XMBA 4360	Marketing I - Strategic Marketing	2
XMBA 4362	Strategic Management	2
XMBA 4364	Business Data & Analytics	2
XMBA 4365	Entrepreneurship & Innovation	2
XMBA 4367	Stakeholders Beyond the Shareholder I	1
XMBA 4368	Stakeholders Beyond the Shareholder II	1
XMBA 4369	Supply Chain Management	2
XMBA 4401	Design Thinking	2
XMBA 4720	Executive Business Law	2
XMBA 4343	Evolving as an Impactful Leader	2
4700	(EMBA Elective I)	1
4701	(EMBA Elective II)	1
4702	(EMBA Elective III)	1
4703	(EMBA Elective IV)	1
4704	(EMBA Elective V)	1
4705	(EMBA Elective VI)	1
<b>Total Credits</b>		<b>60</b>

Minimum number of credits required: 60

## The Professional MBA

### Master of Business Administration in General Business: The Professional MBA Program

#### Degree Requirements

Minimum number of credits required: 60

Code	Title	Credits
<b>Core coursework requirements</b>		
FIN 4760	Managerial Economics	4
BUS 4611	Leading Self & People	2
BUS 4610	Business Ethics for the Public Good	2
ACTG 4610	Financial Accounting and Reporting	4

MKTG 4100	Marketing Concepts	4
FIN 4630	Managerial Finance	4
MGMT 4690	Strategic Management	4
INFO 4610	Business Statistics and Analytics	4
MBA 4610	Business Law and Public Policy	4
MGMT 4240	Global Business	4
MGMT 4425	Leading People and Organizations	2
MBA 4210	Social Good Challenge	2
<b>Advance Core / Elective requirements</b>		
20 credits in 4000 level courses		20
<b>Total Credits</b>		<b>60</b>

Advance Core

Code	Title	Credits
<b>Advance Core</b>		
INFO 4250	Business Data and Analytics	
ACTG 4660	Strategic Cost Management	

Advance Core / Electives - Student can take any one of the above Advance Core courses along with four courses of a concentration. If no concentration is selected, student can take both of the above Advance Core courses along with three electives.

## Concentration in Accounting: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>Accounting concentration requirements</b>		
A minimum of 16 credits must be completed in 4000-level ACTG courses to complete a concentration. Must work directly with the ACTG Department on course selection.		16
<b>Total Credits</b>		<b>16</b>

## Concentration in Business Analytics: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>Business Analytics concentration requirements</b>		
A minimum of 16 credits must be completed in 4000-level INFO courses to complete a concentration, including:		16
INFO 4120	Python Programming	
INFO 4140	Business Databases	
INFO 4300	Predictive Analytics	
In addition, choose one of the following		
INFO 4240	Data Warehousing	
INFO 4340	Data Mining and Visualization	
INFO 4390	Advanced Predictive Modeling with R	
INFO 4590	Optimization	
<b>Total Credits</b>		<b>16</b>

## Concentration in Business - Customized: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>Customized concentration requirements</b>		
A minimum of 16 credits must be completed in 4000-level graduate courses approved by Advisor for specified customized concentration.		16
<b>Total Credits</b>		<b>16</b>

## Executive Leadership Concentration: Professional MBA Program

Code	Title	Credits
BUS 4810	The Head and Heart of Leadership: Neuroscience and Emotion Regulation	4
BUS 4820	Leading and Developing Others for Success	4
BUS 4830	Leading Change and Building an Agile Culture	4
BUS 4840	The CEO Toolbox	4
<b>Total Credits</b>		<b>16</b>

## Concentration in Finance: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>Finance concentration requirements</b>		
A minimum of 16 credits from Corporate Finance, Investments, Investment Banking or Wealth Management:		16
Corporate Finance Courses		
FIN 4410	Financial Planning & Analysis	
FIN 4500	Financial Modeling	
In addition, choose two courses from the following:		
FIN 4150	Advanced Business Valuation	
FIN 4160	Treasury Management	
FIN 4420	Capital Expenditure Analysis	
FIN 4870	Strategic Finance	
FIN 4885	Investment Banking and External Financing	
FIN 4800	An Organized Walk Down Wall Street	
FIN 4700	Topics in Finance	
FIN 4991	Independent Study	
Investments Courses		
FIN 4200	Financial Investments and Markets	
FIN 4500	Financial Modeling	
In addition, choose two courses from the following:		
FIN 4320	Equity Analysis	
FIN 4330	Portfolio Management and Risk Analytics	
FIN 4710	Marsico Investment Fund I	
FIN 4720	Marsico Investment Fund II	
FIN 4890	Fixed Income Analysis	
FIN 4800	An Organized Walk Down Wall Street	
FIN 4860	Derivatives	
FIN 4700	Topics in Finance	
FIN 4991	Independent Study	
Investment Banking Courses		
FIN 4410	Financial Planning & Analysis	
FIN 4500	Financial Modeling	
In addition, choose two courses from the following:		

FIN 4150	Advanced Business Valuation
FIN 4200	Financial Investments and Markets
FIN 4320	Equity Analysis
FIN 4870	Strategic Finance
FIN 4885	Investment Banking and External Financing
FIN 4800	An Organized Walk Down Wall Street
FIN 4700	Topics in Finance
FIN 4991	Independent Study
Wealth Management Courses	
FIN 4200	Financial Investments and Markets
In addition, choose three courses from the following:	
FIN 4700	Topics in Finance (Personal Finance)
FIN 4330	Portfolio Management and Risk Analytics
FIN 4060	Life Cycle/Financial Planning
FIN 4700	Topics in Finance (Wealth Management)
<b>Total Credits</b>	<b>16</b>

## Concentration in Marketing: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>Marketing concentration requirements</b>		
A minimum of 16 credits must be completed from the Digital Marketing or Brand Management tracks below:		16
Digital Marketing Courses		
MKTG 4815	Social Media Marketing	
MKTG 4825	Mobile Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
Brand Management Courses		
MKTG 4530	Marketing Research	
MKTG 4820	Brand Management	
In addition, choose two courses from the following:		
MKTG 4380	Supply Chain Management	
MKTG 4510	Consumer Behavior	
MKTG 4580	Insights to Innovation	
MKTG 4675	Marketing for Social Impact	
MKTG 4810	Integrated Marketing Communication	
MKTG 4815	Social Media Marketing	
MKTG 4825	Mobile Marketing	
MKTG 4835	Search Engine Marketing: Google Analytics & Google Ads	
MKTG 4845	Tech in Marketing: Design Tools and Digital Foundations	
<b>Total Credits</b>		<b>16</b>

## Concentration in Real Estate and the Built Environment: The Professional MBA Program

### Concentration Requirements

Code	Title	Credits
<b>REBE concentration requirements</b>		
A minimum of 16 credits must be completed in 4000 level REBE courses to complete a concentration, including:		16
Real Estate Courses		
REAL 4407	Income Property Finance	



REAL 4007	Real Estate Financial Analysis
Select two courses from the following:	
REAL 4477	Income Property Investment
REAL 4417	Income Property Valuation and Appraisal
REAL 4467	Property Development and Feasibility
Property Development Courses	
REAL 4407	Income Property Finance
REAL 4210	Planning, Entitlements, and Public Finance
CMGT 4490	Residential Development
CMGT 4480	Const Project Management
<b>Total Credits</b>	<b>16</b>

## The MBA@Denver

### Master of Business Administration in General Business: MBA@Denver

#### Degree Requirements

Minimum number of credits required: 60

Code	Title	Credits
<b>Core</b>		
FIN 4760	Managerial Economics	4
BUS 4611	Leading Self & People	2
BUS 4610	Business Ethics for the Public Good	2
ACTG 4610	Financial Accounting and Reporting	4
MKTG 4100	Marketing Concepts	4
FIN 4630	Managerial Finance	4
MGMT 4690	Strategic Management	4
INFO 4610	Business Statistics and Analytics	4
MBA 4610	Business Law and Public Policy	4
MGMT 4740	Global Business I	2
MGMT 4745	Global Business II	2
MGMT 4425	Leading People and Organizations	2
MBA 4210	Social Good Challenge	2
<b>Advance Core / Electives</b>		<b>20</b>
<b>Total Credits</b>		<b>60</b>

#### Non-Coursework Requirements

- Participation in two immersions / experientials (e.g. Outdoor Experiential)

#### Advance Core

Code	Title	Credits
INFO 4250	Business Data and Analytics	4
ACTG 4660	Strategic Cost Management	4
<b>Total Credits</b>		<b>8</b>

Advance Core / Electives - Student can take any one of the above Advance Core courses along with four courses of a concentration. If no concentration is selected, student can take both of the above Advance Core courses along with three electives.

**Accounting Concentration (Currently Only available on campus): MBA@Denver**

Code	Title	Credits
<b>16 credits of 4000 level ACTG coursework</b>		<b>16</b>
Students must work directly with the Accounting Department on course selection.		
<b>Total Credits</b>		<b>16</b>

**Business Information Analytics Concentration (Currently Only available on campus): MBA@Denver****Concentration Requirements**

Code	Title	Credits
<b>Business Analytics concentration requirements</b>		
A minimum of 16 credits must be completed in 4000-level INFO courses to complete a concentration, including:		16
INFO 4120	Python Programming	
INFO 4140	Business Databases	
INFO 4300	Predictive Analytics	
In addition, choose one of the following		
INFO 4240	Data Warehousing	
INFO 4340	Data Mining and Visualization	
INFO 4390	Advanced Predictive Modeling with R	
INFO 4590	Optimization	
<b>Total Credits</b>		<b>16</b>

**Customized Concentration: MBA@Denver**

Code	Title	Credits
<b>16 credits of approved 4000 level coursework</b>		<b>16</b>
Graduate courses approved by Advisor for a specified customized concentration.		
<b>Total Credits</b>		<b>16</b>

**Executive Leadership Concentration: MBA@Denver**

Code	Title	Credits
BUS 4810	The Head and Heart of Leadership: Neuroscience and Emotion Regulation	4
BUS 4820	Leading and Developing Others for Success	4
BUS 4830	Leading Change and Building an Agile Culture	4
BUS 4840	The CEO Toolbox	4
<b>Total Credits</b>		<b>16</b>

**Finance Concentration: MBA@Denver**

Code	Title	Credits
FIN 4200	Financial Investments and Markets	4
FIN 4410	Financial Planning & Analysis	4
FIN 4320	Equity Analysis	4
FIN 4150	Advanced Business Valuation	4
<b>Total Credits</b>		<b>16</b>

## Marketing Concentration: MBA@Denver

Code	Title	Credits
MKTG 4810	Integrated Marketing Communication	4
MKTG 4580	Insights to Innovation	4
MKTG 4820	Brand Management	4
MKTG 4675	Marketing for Social Impact	4
MKTG 4380	Supply Chain Management	4
This concentration requires 4 of the 5 listed courses for a total of 16 credit hours.		
Total Credits		16

## Real Estate Concentration (Currently Only available on campus): MBA@Denver

Code	Title	Credits
REAL 4007	Real Estate Financial Analysis	4
REAL 4407	Income Property Finance	4
<b>Select two from the following:</b>		<b>8</b>
REAL 4417	Income Property Valuation and Appraisal	
REAL 4477	Income Property Investment	
REAL 4467	Property Development and Feasibility	
<b>Property Development Courses</b>		
REAL 4210	Planning, Entitlements, and Public Finance	
CMGT 4480	Const Project Management	
CMGT 4490	Residential Development	
<b>Integrated Project Delivery</b>		
CMGT 4110	Preconstruction Integration and Planning	
CMGT 4200	Lean Construction Project Management	
CMGT 4230	Design Management and Schedule Control	
Total Credits		16

## Outdoor Recreation Industry

Office: Daniels College of Business

Mail Code:

Phone:

Web Site: <https://daniels.du.edu/leadership-in-outdoor-recreation/>

The University of Denver has partnered with the VF Foundation to offer the Outdoor Recreation Industry Certificate. With courses from the Daniels College of Business (<https://daniels.du.edu/>), Josef Korbel School of International Studies (<https://korbel.du.edu/>) and Sturm College of Law (<https://www.law.du.edu/>), this graduate certificate is designed for individuals seeking to enter or advance in the outdoor recreation industry.

### Specialized Graduate Certificate in Leadership in the Outdoor Recreation Industry

The certificate is inter-disciplinary and will leverage the strengths of three colleges at DU – Daniels College of Business, Sturm College of Law, and the Joseph Korbel School for International Studies.

Minimum Credits Required: 16

Code	Title	Credits
<b>Required Courses</b>		
BUS 4350	Overview of Outdoor Recreation Industry	1
BUS 4353	Business Models in the Outdoor Industry	1
BUS 4355	Sustainability and Markets in the Outdoor Recreation Industry	1
BUS 4375	Taking a DEI centric approach to Talent Management in the Outdoor Industry	1
BUS 4380	Regulatory Environment in the Outdoor Industry	1
BUS 4383	Public Policy Challenges in the Outdoor Industry	1
BUS 4385	Environmental and Social Governance in Outdoor Industry	1

BUS 4387	Supply Chains in the Outdoor Industry	1
BUS 4389	Enterprise Risk in Outdoor Industry	1
BUS 4390	Land Use in Outdoor Industry	1
<b>Choose six electives courses:</b>		<b>6</b>
BUS 4360	Leading Self: Leadership in Outdoor Recreation Industry	
BUS 4365	Leading Teams in the Outdoor Industry	
BUS 4367	Leading Organizations in the Outdoor Industry	
BUS 4370	Principles of Management in the Outdoor Industry	
BUS 4395	Service Excellence & Guest Experience in Outdoor Industry	
BUS 4397	Access in the Outdoor Industry	
BUS 4530	Data Visualization in the Outdoor Recreation Industry	
BUS 4535	Data Analytics in the Outdoor Recreation Industry	
BUS 4540	Data Management in the Outdoor Recreation Industry	
<b>Total Credits</b>		<b>16</b>

## Real Estate and Construction Management

Office: Daniels College of Business, Room 380

Mail Code: Daniels College of Business, Room 380, 2101 S. University Blvd. Denver CO 80208

Phone: 303-871-3432

Web Site: <https://daniels.du.edu/burns-school/>

### Master of Science in Real Estate and the Built Environment

The Franklin L. Burns School of Real Estate and Construction Management at the Daniels College of Business allows you to combine the core competencies across the full spectrum of the built environment. Our core curriculum in real estate includes courses in Real Estate Finance, Investment, Appraisal, Real Estate Feasibility and Development. On the construction Management side, core course includes Project Feasibility, Construction Estimating, Procurement, Project Delivery, Scheduling, and Contract Administration. Outside of the core courses, students can take highly specialized courses like real estate capital markets, city craft, real estate fund management and host of others. This holistic, integrated approach adds value in a way that no other program in the country adds and establishes a firm basis upon which to build a selected area of expertise. Outside the classroom, students participate in real and applied case study competitions, and get networking and other industry opportunities due to a very rich legacy, strong alumni base and excellent industry support. All our students get career and professional support through Burns and Daniels professional staffs. The program can be completed in one-year full time or 18 months part time. Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923.

### Master of Science in Real Estate and the Built Environment

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-GT-58.

#### Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

#### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Program

### Master of Science in Real Estate and the Built Environment

#### Degree Requirements

Minimum number of credits required: 48

Code	Title	Credits
<b>Real Estate and the Built Environment</b>		
(Choose a combination of 12 courses from the following areas.)		
<b>Real Estate Development Electives:</b>		
REAL 4210	Planning, Entitlements, and Public Finance	
REAL 4347	Property and Asset Management	
REAL 4357	Corporate Real Estate & Management <sup>1</sup>	
REAL 4438	Legal Aspects of Real Estate and the Built Environment <sup>1</sup>	
REAL 4467	Property Development and Feasibility	
REAL 4800	NAIOP Challenge	
CMGT 4490	Residential Development	
<b>Real Estate Electives:</b>		
REAL 4000	Fundamentals of Real Estate and the Built Environment <sup>1</sup>	
REAL 4007	Real Estate Financial Analysis	
REAL 4010	Real Estate Capital Markets	
REAL 4140	International Immersion in Real Estate and the Built Environment	
REAL 4337	RE Securities/Syn/Entrep	
REAL 4369	Real Estate Taxation	
REAL 4407	Income Property Finance <sup>1</sup>	
REAL 4417	Income Property Valuation and Appraisal	
REAL 4477	Income Property Investment	
REAL 4701	Topics in Real Estate	
<b>Construction Project Management Electives:</b>		
CMGT 4120	Construction Planning & Scheduling	
CMGT 4155	Sustainable Development	
CMGT 4177	Environmental Systems and MEP Coordination	
CMGT 4230	Design Management and Schedule Control	
CMGT 4250	Construction Job Site Management	
CMGT 4320	Introduction to Architecture and Design Management	
CMGT 4410	Construction Building Systems <sup>1</sup>	
CMGT 4420	Construction Estimating	
CMGT 4480	Const Project Management	
CMGT 4700	Topics in Construction Mgmt	

<sup>1</sup> Highly recommended course.

## Graduate Certificate Programs

### Graduate Certificate in Construction Project Management

(24 credits required for the certificate)

Code	Title	Credits
<b>Required Core Courses:</b>		
CMGT 4410	Construction Building Systems	4
CMGT 4420	Construction Estimating	4
CMGT 4120	Construction Planning & Scheduling	4
CMGT 4480	Const Project Management	4
<b>Select two additional courses from the following:</b>		<b>8</b>
CMGT 4155	Sustainable Development	
CMGT 4177	Environmental Systems and MEP Coordination	
CMGT 4230	Design Management and Schedule Control	
CMGT 4310	Cost Modeling and Trend Management	
CMGT 4490	Residential Development	
REAL 4000	Fundamentals of Real Estate and the Built Environment	
<b>Total Credits</b>		<b>24</b>

## Graduate Certificate in Real Estate Development

(24 credits required for the certificate)

Code	Title	Credits
<b>Required Core Courses:</b>		
REAL 4007	Real Estate Financial Analysis	4
REAL 4407	Income Property Finance	4
REAL 4210	Planning, Entitlements, and Public Finance	4
REAL 4467	Property Development and Feasibility	4
or CMGT 4490	Residential Development	
<b>Select two additional courses from the following:</b>		<b>8</b>
REAL 4000	Fundamentals of Real Estate and the Built Environment	
REAL 4477	Income Property Investment	
REAL 4417	Income Property Valuation and Appraisal	
REAL 4701	Topics in Real Estate	
CMGT 4410	Construction Building Systems	
CMGT 4155	Sustainable Development	
CMGT 4480	Const Project Management	
CMGT 4320	Introduction to Architecture and Design Management	
<b>Total Credits</b>		<b>24</b>

## Graduate Certificate in Real Estate Investment

(24 credits required for the certificate)

Code	Title	Credits
<b>Required Core Courses:</b>		
REAL 4007	Real Estate Financial Analysis	4
REAL 4407	Income Property Finance	4
REAL 4417	Income Property Valuation and Appraisal	4
REAL 4477	Income Property Investment	4
<b>Select two additional courses from the following:</b>		<b>8</b>
REAL 4010	Real Estate Capital Markets	
REAL 4337	RE Securities/Syn/Entrep	
REAL 4357	Corporate Real Estate & Management	
REAL 4369	Real Estate Taxation	

REAL 4467

Property Development and Feasibility

**Total Credits****24**

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Construction Project Management

(16 credits required for the certificate)

Code	Title	Credits
<b>Required Courses:</b>		
CMGT 4410	Construction Building Systems	4
CMGT 4480	Const Project Management	4
CMGT 4420	Construction Estimating	4
CMGT 4120	Construction Planning & Scheduling	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Real Estate Development

(16 credits required for the certificate)

Code	Title	Credits
<b>Required Courses:</b>		
REAL 4407	Income Property Finance	4
REAL 4007	Real Estate Financial Analysis	4
REAL 4467 or CMGT 4490	Property Development and Feasibility Residential Development	4
REAL 4210	Planning, Entitlements, and Public Finance	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Real Estate Investment

(16 credits required for the certificate)

Code	Title	Credits
<b>Required Courses:</b>		
REAL 4407	Income Property Finance	4
REAL 4007	Real Estate Financial Analysis	4
REAL 4417	Income Property Valuation and Appraisal	4
REAL 4477	Income Property Investment	4
<b>Total Credits</b>		<b>16</b>

## Construction Management (CMGT)

### CMGT 4120 Construction Planning & Scheduling (4 Credits)

Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite or Corequisite: CMGT 4420.

### CMGT 4155 Sustainable Development (4 Credits)

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

**CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)**

A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings.

**CMGT 4230 Design Management and Schedule Control (4 Credits)**

This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.

**CMGT 4250 Construction Job Site Management (4 Credits)**

This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

**CMGT 4320 Introduction to Architecture and Design Management (4 Credits)**

This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

**CMGT 4410 Construction Building Systems (4 Credits)**

A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

**CMGT 4420 Construction Estimating (4 Credits)**

This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Experiential learning lab is associated with this course. Prerequisite: CMGT 4320 and CMGT 4410. This course is a co/prerequisite for CMGT 4120.

**CMGT 4480 Const Project Management (4 Credits)**

Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application.

**CMGT 4490 Residential Development (4 Credits)**

A course sequence designed to emphasize the practical application of the theories and concepts of residential development. The course provides a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property in a case format. Students will apply accounting, finance, marketing, real estate and construction management techniques in the planning for a residential development. The application of green building materials and methods is emphasized.

**CMGT 4700 Topics in Construction Mgmt (0-4 Credits)****CMGT 4980 Construction Mgmt Internship (0-4 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities.



**CMGT 4991 Independent Study (1-10 Credits)****Real Estate (REAL)****REAL 4000 Fundamentals of Real Estate and the Built Environment (4 Credits)**

An exploration of the importance of real estate and the built environment through triple bottom line analysis of its social, environmental, and economic impacts. The course considers a "cradle to cradle" sustainability model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value-generating solutions for society. Professional practices/skill sets associated with the many career options that engage the built environment are demonstrated. Principles of real estate, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, environmental issues and disclosures, types of mortgages, basics of home loan finance, appraisal investment and tax benefits will also be covered. Partially satisfies Colorado real estate broker licensing requirements.

**REAL 4002 The Business of Real Estate (2 Credits)**

This is an introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title, concepts, deeds, and purchase contracts. Listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits are also covered in this class. Partially satisfies Colorado Real Estate sales licensing requirements.

**REAL 4007 Real Estate Financial Analysis (4 Credits)**

Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: REAL 4407.

**REAL 4010 Real Estate Capital Markets (4 Credits)**

This course exposes students to the commercial real estate capital markets; including real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS), plus institutional investors. The complexities of capital market products are discussed, students receive a greater understanding of the alternatives that are available. The class includes lectures, guest speakers, readings, class discussions, a major REIT analysis project, and case studies. Prerequisite: REAL 4007.

**REAL 4140 International Immersion in Real Estate and the Built Environment (4 Credits)**

Inbound U.S. and outbound U.S. real estate issues, with a mix of cultural issues that impact real estate transactions. Application of sustainability concepts is important in this course dealing with international real estate issues. This course will require on campus preparation for projects followed by 1-2 weeks of travel which will include working with host universities, students and industry partners.

**REAL 4210 Planning, Entitlements, and Public Finance (4 Credits)**

Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

**REAL 4337 RE Securities/Syn/Entrep (4 Credits)**

Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing of the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations.

**REAL 4347 Property and Asset Management (4 Credits)**

Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations.

**REAL 4357 Corporate Real Estate & Management (4 Credits)**

This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the built environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

**REAL 4369 Real Estate Taxation (4 Credits)**

Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate.

**REAL 4407 Income Property Finance (4 Credits)**

This course explores conventional and alternative financing, mortgage banking, law and markets, loan underwriting analysis and the impact of monetary and fiscal policies on the real estate and mortgage markets, with emphasis on decision making from the equity investors point of view. Specific topics include an overview and history of real estate finance, the taxation and legal aspects of real estate finance, compounding and discounting, functions of interest and real estate capital markets and securities. Specific areas of focus are residential property finance, income property finance, and construction and development financing.

**REAL 4417 Income Property Valuation and Appraisal (4 Credits)**

Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: REAL 4407.

**REAL 4438 Legal Aspects of Real Estate and the Built Environment (4 Credits)**

To gain an understanding of certain legal issues that are repeatedly encountered by real estate and construction professionals.

**REAL 4467 Property Development and Feasibility (4 Credits)**

Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: REAL 4407.

**REAL 4477 Income Property Investment (4 Credits)**

Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Prerequisite: REAL 4407.

**REAL 4701 Topics in Real Estate (0-4 Credits)****REAL 4800 NAIOP Challenge (2-4 Credits)**

A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

**REAL 4890 Internship (0-4 Credits)****REAL 4980 Adv Valuation/Report Writing (1-10 Credits)**

Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

**REAL 4991 Independent Study (1-10 Credits)****Construction Management Courses****CMGT 4120 Construction Planning & Scheduling (4 Credits)**

Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite or Corequisite: CMGT 4420.

**CMGT 4155 Sustainable Development (4 Credits)**

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

**CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)**

A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings.

**CMGT 4230 Design Management and Schedule Control (4 Credits)**

This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.

**CMGT 4250 Construction Job Site Management (4 Credits)**

This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

**CMGT 4320 Introduction to Architecture and Design Management (4 Credits)**

This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

**CMGT 4410 Construction Building Systems (4 Credits)**

A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

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Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing or the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations.

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Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations.

**REAL 4357 Corporate Real Estate & Management (4 Credits)**

This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

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Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: REAL 4407.

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Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Prerequisite: REAL 4007.

**REAL 4701 Topics in Real Estate (0-4 Credits)****REAL 4800 NAIOP Challenge (2-4 Credits)**

A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

**REAL 4890 Internship (0-4 Credits)****REAL 4980 Adv Valuation/Report Writing (1-10 Credits)**

Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

**REAL 4991 Independent Study (1-10 Credits)**

## School of Accountancy

Office: Daniels College of Business, Rooms 355-379

Mail Code: 2101 S. University Blvd., Suite 355, Denver, CO 80208

Phone: 303-871-2032

Web Site: <http://daniels.du.edu/accountancy/> (<http://daniels.du.edu/faculty-research/accountancy/>)

## Master of Accountancy

The Master of Accountancy (MAcc) program at the Daniels College of Business School of Accountancy provides rigorous training in accounting fundamentals, financial reporting, and assurance, preparing you for a rewarding career. The best indicator of the program's strength is the success of our graduates: nearly all of our domestic MAcc graduates accept positions before graduation.

Through demonstrated prerequisite knowledge, formal coursework, and elective internship opportunities students will develop technical knowledge in accounting and assurance. Students will gain critical thinking, communication, interpersonal and technology skills to be effective business advisors and establish the ethical grounding to act with integrity.

An undergraduate accounting or business major is not necessary and work experience is not a requirement for admission to the MAcc. Students may work toward meeting foundation requirements during their course of study. Foundation requirements are demonstrated competency in introductory and intermediate financial accounting and introductory managerial accounting. Students meet the competency requirement by having passed these foundation courses in an AACSB-accredited program. Students who believe they have competency in these areas through other means should consult with the program director.

Our mission as a School of Accountancy in a great private university dedicated to the public good is to foster Enlightened Practice, Professional Achievement, Knowledge Creation, and a Commitment to Community among our graduates, faculty, and others engaged in the accounting profession and related disciplines.

- Enlightened Practice means ensuring that our graduates understand the theory and practice of accounting and its ramifications on society, the profession, and organizations.
- Professional Achievement includes accomplishment at each level of one's career and commitment to life-long learning, competence, and integrity.
- Knowledge Creation means scholarship which improves our understanding of accounting, the practice of accounting and the process of educating future accountants.
- Commitment to Community is the process of giving of oneself both to the community that supports one's efforts and achievements and to the community at large. Commitment to Community is a vital aspect of the accounting profession and is critical to the School's ongoing success.

Daniels has been continuously accredited by the Association to Advance Collegiate Schools of Business International (AACSB) since 1923. The School of Accountancy has held supplemental, specialized AACSB accreditation since 1980 and is one of the first five universities to receive this distinction.

## Master of Accountancy

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

## Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-GT-82.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Other Requirements

- Applicants may be contacted by a Daniels representative to schedule the admissions interview, which will be conducted on campus or via webcam.

# Master of Accountancy in Accounting

## Degree Requirements

### Coursework Requirements

Students with an AACSB accredited accounting undergraduate degree who earned a B- or better in required accounting foundation courses.<sup>1</sup>

Code	Title	Credits
<b>Accounting Core Courses</b>		
Maximum number of required credits for Accounting Core Courses		16
ACTG 4155	Accounting Data Skills and Concepts	4
ACTG 4176	Accounting Data Analytics	4
ACTG 4240	Topics & Cases in Financial Accounting	4
ACTG 4340	Topics & Cases in Managerial Accounting	4
<b>Approved accounting electives<sup>2</sup></b>		<b>8</b>
ACTG 4284	Consolidated Financial Statements	2
ACTG 4285	Accounting for Foreign Operations	2
ACTG 4354	Cost Accounting	4
ACTG 4400	Taxation for Business and Investment Planning	4
ACTG 4462	Corporate and Partnership Taxation	4
ACTG 4520	Forensic Accounting and Auditing	4
ACTG 4551	Auditing	4
ACTG 4552	Advanced Auditing	4
ACTG 4557	Fair Value Auditing	4
ACTG 4575	Accounting Information System Risk, Control and Audit	4
ACTG 4620	Accounting Ethics	4
ACTG 4700	Graduate Seminar in Accounting	1-17
ACTG 4710	Managing the Family Business	4
ACTG 4740	Valuation and Modeling	4
ACTG 4750	Valuing a Business	4
ACTG 4760	CEOs and Corporate Governance	4
ACTG 4880	Internship - Graduate	0-4
<b>Approved business or accounting electives<sup>2</sup></b>		<b>16</b>
Minimum number of credits required		40

<sup>1</sup> Students must demonstrate competency in introductory and intermediate financial accounting and introductory managerial accounting. Competency in accounting courses can be demonstrated by earning a B- or better in equivalent courses as part of an AACSB accredited degree in accounting.

- <sup>2</sup> Must be advisor approved. Faculty advisors help you build a customized degree to meet your learning goals. Electives must be graduate (4000-level) courses.  
An overall GPA of 3.0 and an accounting GPA of 3.0 is required for graduation.

## Degree Requirements

Students with undergraduate degrees other than accounting, students with non-AACSB accredited accounting degrees, and students with an AACSB accredited accounting undergraduate degree who earned less than a B- in accounting foundation courses.

### Coursework Requirements

Code	Title	Credits
<b>Accounting Core Courses</b>		
Maximum number of required credits for Accounting Core Courses		16
ACTG 4155	Accounting Data Skills and Concepts	4
ACTG 4176	Accounting Data Analytics	4
ACTG 4240	Topics & Cases in Financial Accounting	4
ACTG 4340	Topics & Cases in Managerial Accounting	4
<b>Foundation Requirements <sup>1</sup></b>		
Maximum number of required credits for Foundation Requirements		16
ACTG 4610	Financial Accounting and Reporting	4
ACTG 4660	Strategic Cost Management	4
ACTG 4281	Intermediate Financial Accounting I	4
ACTG 4282	Intermediate Financial Accounting II	4
<b>Approved business or accounting electives <sup>2</sup></b>		<b>16</b>
<b>Approved accounting electives <sup>2</sup></b>		<b>8</b>
ACTG 4284	Consolidated Financial Statements	2
ACTG 4285	Accounting for Foreign Operations	2
ACTG 4400	Taxation for Business and Investment Planning	4
ACTG 4462	Corporate and Partnership Taxation	4
ACTG 4520	Forensic Accounting and Auditing	4
ACTG 4551	Auditing	4
ACTG 4552	Advanced Auditing	4
ACTG 4575	Accounting Information System Risk, Control and Audit	4
ACTG 4700	Graduate Seminar in Accounting	1-17
ACTG 4620	Accounting Ethics	4
ACTG 4740	Valuation and Modeling	4
ACTG 4750	Valuing a Business	4
ACTG 4760	CEOs and Corporate Governance	4
ACTG 4880	Internship - Graduate	0-4
Minimum number of credits required		40-56

- <sup>1</sup> Students must demonstrate competency in introductory and intermediate financial accounting and introductory managerial accounting. Competency in accounting courses can be demonstrated by earning a B- or better in equivalent courses as part of an AACSB accredited degree in accounting, or by passing the on-campus competency exams, or by completing the accounting foundation courses for the MAcc degree.

- <sup>2</sup> Must be advisor approved. Faculty advisors help you build a customized degree plan to meet your learning goals. Electives must be graduate (4000-level) courses.

An overall GPA of 3.0 and an accounting GPA of 3.0 is required for graduation.

**Minimum number of credits required for degree: 40-56**

## Master of Science in Accounting, Technology and Analytics

Master of Science in Accounting, Technology and Analytics (MSATA) at the Daniels College of Business School of Accountancy is a STEM-designated program designed for students who plan to specialize in technology and data analytics as accounting professionals. An undergraduate

accounting or business major is not necessary and work experience is not a requirement for admission to the MSATA. Students may work toward meeting foundation requirements during their course of study. Foundation requirements are demonstrated competency in introductory and intermediate financial accounting and introductory managerial accounting. Students who have met all foundation requirements complete the degree with 40 credit hours of study as specified. Foundation requirements can add up to an additional 16 credit hours of study for those who do not meet the prerequisite foundational requirements.

Code	Title	Credits
<b>Prerequisite Courses</b>		
ACTG 4281	Intermediate Financial Accounting I	4
ACTG 4282	Intermediate Financial Accounting II	4
ACTG 4610	Financial Accounting and Reporting	4
ACTG 4660	Strategic Cost Management	4
<b>Code</b>		
<b>Title</b>		
<b>Credits</b>		
<b>Required Courses</b>		
ACTG 4130	Accounting Process Technologies	4
ACTG 4155	Accounting Data Skills and Concepts	4
ACTG 4176	Accounting Data Analytics	4
ACTG 4240	Topics & Cases in Financial Accounting	4
ACTG 4340	Topics & Cases in Managerial Accounting	4
ACTG 4575	Accounting Information System Risk, Control and Audit	4
<b>Electives</b>		
Advisor approved courses in Accounting, Finance, or Business Information Analytics		16
<b>Total Credits</b>		<b>40</b>

#### **ACTG 4130 Accounting Process Technologies (4 Credits)**

Accounting Process Technologies are a continually evolving discipline within the profession of accounting. Students are introduced to current and developing technologies used for process mining, automation, and analysis. Students will gain hands-on experience with various technologies as well as learn the accounting theories behind them.

#### **ACTG 4155 Accounting Data Skills and Concepts (4 Credits)**

This course is designed to give students an understanding of the technology underlying accounting information systems and help students develop more advanced data analysis skills. We will use the programming language Python to develop an understanding of the digital business logic that supports the operations of modern firms. We will learn to use Business Process Modeling Notation (BPMN) to graphically document operations and their underlying business logic. We will discuss and analyze a set of studies that use survey data from a global sample of executives and analysts to develop an understanding of the levels of technological sophistication in modern firms. We will also discuss and analyze distributed databases, information security, and eXtensible Business Reporting Language. Prerequisites: none.

#### **ACTG 4176 Accounting Data Analytics (4 Credits)**

In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well as the audit data mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

#### **ACTG 4220 Financial Actg & Analysis (4 Credits)**

Cross-listed with ACTG 3230.

#### **ACTG 4222 Understanding Financial Statements (4 Credits)**

At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.



**ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)**

This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

**ACTG 4281 Intermediate Financial Accounting I (4 Credits)**

The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

**ACTG 4282 Intermediate Financial Accounting II (4 Credits)**

This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders' equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

**ACTG 4284 Consolidated Financial Statements (2 Credits)**

This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.

**ACTG 4285 Accounting for Foreign Operations (2 Credits)**

Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

**ACTG 4290 Financial Accounting Theory (4 Credits)**

This course introduces financial accounting theory with a focus on the application of accounting information as a tool for decision makers for firm valuation, contracting, executive compensation, enhancing corporate governance, and assessing earnings quality. The course draws from basic theories in economics, finance, and psychology to understand and predict accounting choices of firm managers and reactions of investors, lenders, auditors, and regulators to accounting information. The main objective is to foster conceptual, critical, and creative thinking about implications of accounting in the marketplace. Prerequisite: ACTG 4281.

**ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)**

Topics & Cases in Managerial Accounting focuses upon contemporary methodologies used by managerial accountants. Such methodologies are examined through classroom discussions of case studies and related articles. The course is designed to develop and enhance skills that are essential for the long-term success of career in accounting and finance.

**ACTG 4354 Cost Accounting (4 Credits)**

Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent. Prerequisite: MBA 4110, MBA 4111, or equivalent.

**ACTG 4400 Taxation for Business and Investment Planning (4 Credits)**

This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

**ACTG 4410 Federal Income Taxation (4 Credits)**

The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

**ACTG 4462 Corporate and Partnership Taxation (4 Credits)**

The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation. This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships. Prerequisites: ACTG 3440 or ACTG 3036 or ACTG 4400 or ACTG 4410 or ACTG 3461.

**ACTG 4520 Forensic Accounting and Auditing (4 Credits)**

Students will have an opportunity to learn, study, and discuss practical aspects of accounting as it is used to detect and prosecute fraud. Students will be exposed to improprieties, common fraud schemes, illegalities, and harassments. Prerequisites: ACTG 3551 or ACTG 4551 (Concurrent enrollment allowed).

**ACTG 4530 Business Advisory and Internal Audit (4 Credits)**

In today's business environment, a given company's "internal audit" function is asked to not only help keep the business out of trouble (control risks), but also help make the business better (leverage risk management to make better business decisions). In this course, we will "reimagine" internal audit with a heavy focus on the business advisory aspects of audit. Topics specifically covered in this course include risk appetite and tolerance, risk culture and an array of cutting-edge audit and advisory topics (cybersecurity, data privacy, social media, to name a few). Students experience "real life" examples and case studies to truly experience the role of an auditor as business advisor. Prerequisite: ACTG 3551 or ACTG 4551.

**ACTG 4551 Auditing (4 Credits)**

This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

**ACTG 4552 Advanced Auditing (4 Credits)**

This course is designed to build on the foundation of auditing knowledge developed in ACTG 4551 and apply that knowledge to specific accounts and assertions in a financial statement audit. Students also examine selected SEC enforcement actions and discuss what audit procedures may have been beneficial to prevent the misstatement. Prerequisite: ACTG 4551 or ACTG 3551.

**ACTG 4575 Accounting Information System Risk, Control and Audit (4 Credits)**

An auditor cannot just "audit the numbers" without strong consideration to the IT systems that generate those numbers. Today's accounting professionals must possess a strong understanding of accounting information system risks and controls. Topics specifically covered in this course include IT security controls, datacenter controls, data backup and disaster recovery planning, SDLC and change control processes. Students perform hands on simulated audit exercises and case studies to truly experience the role of an IT auditor. Prerequisites: ACTG 3551 or ACTG 4551 or test score AC51=1.

**ACTG 4610 Financial Accounting and Reporting (4 Credits)**

In this course, students will gain a strong understanding of corporate financial statements that are consumed by parties such as managers, shareholders, creditors and financial analysts. The course covers the fundamentals of accounting from recording individual business transactions through the preparation of a company's summarized financial statements. The course closely examines how economic events and business decisions impact the three main financial statements – Income Statement, Balance Sheet and Statement of Cash Flows. Students gain significant experience analyzing Form 10-K annual reports of publicly traded companies.

**ACTG 4620 Accounting Ethics (4 Credits)**

This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of issues that students will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed. Prerequisites: None.

**ACTG 4660 Strategic Cost Management (4 Credits)**

Course description: Strategic Cost Management (SCM) will teach students how to use accounting information to make correct decisions within their firms. These decisions will include costing, pricing, strategy, and performance management. SCM articulates how to use accounting information in order to properly price goods and/or services, how to decide between alternative strategies, and how perform relative performance evaluation among employees and/or departments within the firm. The focus is on interpreting accounting information and making business decisions. Topics in the course include cost behavior, activity-based costing, cost-volume-profit analysis, short-term decision-making, balanced scorecard, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting. Prerequisite: ACTG 4610.

**ACTG 4661 Strategic Accounting for Managers (4 Credits)**

Management accounting is in transition, moving from a quantitative procedural focus to include a qualitative strategic focus that uses accounting to facilitate the organization's success. Changes include a renewed focus on the customer, aggressive cost reduction, and increased use of information technologies, among others. Motivation for the changes in management accounting are driven by evolving business processes in response to increased competition, both global and domestic. The management accountant is no longer a reporter and analyzer of financial facts only, but a business partner – developing the financial and non-financial information the organization needs to be successful. The concepts of management accounting are used in manufacturing and service organizations and are increasingly applied to government and not-for-profit organizations to help them succeed in their service missions and to be responsible to the citizens and funding agencies. In this course, students will learn how the management accountant plays a strategic role in the organization, developing and presenting the information that is critical for the organization's success. Students will use higher order thinking to apply accounting information to the types of strategic decisions organizations make for long-term sustainability. Prerequisites: ACTG 4610.

**ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)****ACTG 4701 Special Topics in Accounting (1-5 Credits)****ACTG 4702 Special Topics in Accounting (1-5 Credits)****ACTG 4703 Special Topics in Accounting (1-5 Credits)****ACTG 4704 Special Topics in Accounting (1-5 Credits)****ACTG 4705 Topics in Accounting (1-4 Credits)****ACTG 4710 Managing the Family Business (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**ACTG 4730 International Accounting - London (4 Credits)**

This course is designed for students to study international accounting from both academic and practical perspectives. The main objective of this course is to develop a greater awareness of contemporary accounting issues faced in the international marketplace. This course will consist of two components: pre-departure classes designed to provide the student with knowledge of issues experienced in a global economy; a ten-day international travel experience which includes experiential learning exercises, group discussions and presentations, and seven visits to international companies and CPA firms. Prerequisite: Instructor Permission.

**ACTG 4735 Accounting for ESG -- Eastern Europe (4 Credits)**

This course is designed to give students an introduction to ESG accounting measurement and reporting issues from the perspective of multiple players in this arena (companies, accounting firms, standard setters, regulators etc.). This course juxtaposes US ESG accounting standard setting, measurement issues and best practices with Eastern European viewpoints on the same issues. With that in mind, this course will provide participants with the ability to be able to research, obtain and interpret current information on ESG accounting rules and standard setting.

**ACTG 4740 Valuation and Modeling (4 Credits)**

The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made. Prerequisite ACTG 4610 or test code AC10 >=1.

**ACTG 4750 Valuing a Business (4 Credits)**

This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

**ACTG 4760 CEOs and Corporate Governance (4 Credits)**

This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

**ACTG 4795 Graduate Research Sem-Actg (1-17 Credits)****ACTG 4880 Internship - Graduate (0-4 Credits)**

Hours and times arranged by student.

**ACTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)**

This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.

## Courses

### **ACTG 4130 Accounting Process Technologies (4 Credits)**

Accounting Process Technologies are a continually evolving discipline within the profession of accounting. Students are introduced to current and developing technologies used for process mining, automation, and analysis. Students will gain hands-on experience with various technologies as well as learn the accounting theories behind them.

### **ACTG 4155 Accounting Data Skills and Concepts (4 Credits)**

This course is designed to give students an understanding of the technology underlying accounting information systems and help students develop more advanced data analysis skills. We will use the programming language Python to develop an understanding of the digital business logic that supports the operations of modern firms. We will learn to use Business Process Modeling Notation (BPMN) to graphically document operations and their underlying business logic. We will discuss and analyze a set of studies that use survey data from a global sample of executives and analysts to develop an understanding of the levels of technological sophistication in modern firms. We will also discuss and analyze distributed databases, information security, and eXtensible Business Reporting Language. Prerequisites: none.

### **ACTG 4176 Accounting Data Analytics (4 Credits)**

In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well as the audit data mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

### **ACTG 4220 Financial Actg & Analysis (4 Credits)**

Cross-listed with ACTG 3230.

### **ACTG 4222 Understanding Financial Statements (4 Credits)**

At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.

### **ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)**

This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

### **ACTG 4281 Intermediate Financial Accounting I (4 Credits)**

The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

### **ACTG 4282 Intermediate Financial Accounting II (4 Credits)**

This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders' equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

### **ACTG 4284 Consolidated Financial Statements (2 Credits)**

This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.

### **ACTG 4285 Accounting for Foreign Operations (2 Credits)**

Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

**ACTG 4290 Financial Accounting Theory (4 Credits)**

This course introduces financial accounting theory with a focus on the application of accounting information as a tool for decision makers for firm valuation, contracting, executive compensation, enhancing corporate governance, and assessing earnings quality. The course draws from basic theories in economics, finance, and psychology to understand and predict accounting choices of firm managers and reactions of investors, lenders, auditors, and regulators to accounting information. The main objective is to foster conceptual, critical, and creative thinking about implications of accounting in the marketplace. Prerequisite: ACTG 4281.

**ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)**

Topics & Cases in Managerial Accounting focuses upon contemporary methodologies used by managerial accountants. Such methodologies are examined through classroom discussions of case studies and related articles. The course is designed to develop and enhance skills that are essential for the long-term success of career in accounting and finance.

**ACTG 4354 Cost Accounting (4 Credits)**

Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent. Prerequisite: MBA 4110, MBA 4111, or equivalent.

**ACTG 4400 Taxation for Business and Investment Planning (4 Credits)**

This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

**ACTG 4410 Federal Income Taxation (4 Credits)**

The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

**ACTG 4462 Corporate and Partnership Taxation (4 Credits)**

The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation. This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships. Prerequisites: ACTG 3440 or ACTG 3036 or ACTG 4400 or ACTG 4410 or ACTG 3461.

**ACTG 4520 Forensic Accounting and Auditing (4 Credits)**

Students will have an opportunity to learn, study, and discuss practical aspects of accounting as it is used to detect and prosecute fraud. Students will be exposed to improprieties, common fraud schemes, illegalities, and harassments. Prerequisites: ACTG 3551 or ACTG 4551 (Concurrent enrollment allowed).

**ACTG 4530 Business Advisory and Internal Audit (4 Credits)**

In today's business environment, a given company's "internal audit" function is asked to not only help keep the business out of trouble (control risks), but also help make the business better (leverage risk management to make better business decisions). In this course, we will "reimagine" internal audit with a heavy focus on the business advisory aspects of audit. Topics specifically covered in this course include risk appetite and tolerance, risk culture and an array of cutting-edge audit and advisory topics (cybersecurity, data privacy, social media, to name a few). Students experience "real life" examples and case studies to truly experience the role of an auditor as business advisor. Prerequisite: ACTG 3551 or ACTG 4551.

**ACTG 4551 Auditing (4 Credits)**

This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

**ACTG 4552 Advanced Auditing (4 Credits)**

This course is designed to build on the foundation of auditing knowledge developed in ACTG 4551 and apply that knowledge to specific accounts and assertions in a financial statement audit. Students also examine selected SEC enforcement actions and discuss what audit procedures may have been beneficial to prevent the misstatement. Prerequisite: ACTG 4551 or ACTG 3551.

**ACTG 4575 Accounting Information System Risk, Control and Audit (4 Credits)**

An auditor cannot just "audit the numbers" without strong consideration to the IT systems that generate those numbers. Today's accounting professionals must possess a strong understanding of accounting information system risks and controls. Topics specifically covered in this course include IT security controls, datacenter controls, data backup and disaster recovery planning, SDLC and change control processes. Students perform hands on simulated audit exercises and case studies to truly experience the role of an IT auditor. Prerequisites: ACTG 3551 or ACTG 4551 or test score AC51=1.

**ACTG 4610 Financial Accounting and Reporting (4 Credits)**

In this course, students will gain a strong understanding of corporate financial statements that are consumed by parties such as managers, shareholders, creditors and financial analysts. The course covers the fundamentals of accounting from recording individual business transactions through the preparation of a company's summarized financial statements. The course closely examines how economic events and business decisions impact the three main financial statements – Income Statement, Balance Sheet and Statement of Cash Flows. Students gain significant experience analyzing Form 10-K annual reports of publicly traded companies.

**ACTG 4620 Accounting Ethics (4 Credits)**

This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of issues that students will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed. Prerequisites: None.

**ACTG 4660 Strategic Cost Management (4 Credits)**

Course description: Strategic Cost Management (SCM) will teach students how to use accounting information to make correct decisions within their firms. These decisions will include costing, pricing, strategy, and performance management. SCM articulates how to use accounting information in order to properly price goods and/or services, how to decide between alternative strategies, and how perform relative performance evaluation among employees and/or departments within the firm. The focus is on interpreting accounting information and making business decisions. Topics in the course include cost behavior, activity-based costing, cost-volume-profit analysis, short-term decision-making, balanced scorecard, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting. Prerequisite: ACTG 4610.

**ACTG 4661 Strategic Accounting for Managers (4 Credits)**

Management accounting is in transition, moving from a quantitative procedural focus to include a qualitative strategic focus that uses accounting to facilitate the organization's success. Changes include a renewed focus on the customer, aggressive cost reduction, and increased use of information technologies, among others. Motivation for the changes in management accounting are driven by evolving business processes in response to increased competition, both global and domestic. The management accountant is no longer a reporter and analyzer of financial facts only, but a business partner – developing the financial and non-financial information the organization needs to be successful. The concepts of management accounting are used in manufacturing and service organizations and are increasingly applied to government and not-for-profit organizations to help them succeed in their service missions and to be responsible to the citizens and funding agencies. In this course, students will learn how the management accountant plays a strategic role in the organization, developing and presenting the information that is critical for the organization's success. Students will use higher order thinking to apply accounting information to the types of strategic decisions organizations make for long-term sustainability. Prerequisites: ACTG 4610.

**ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)****ACTG 4701 Special Topics in Accounting (1-5 Credits)****ACTG 4702 Special Topics in Accounting (1-5 Credits)****ACTG 4703 Special Topics in Accounting (1-5 Credits)****ACTG 4704 Special Topics in Accounting (1-5 Credits)****ACTG 4705 Topics in Accounting (1-4 Credits)****ACTG 4710 Managing the Family Business (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**ACTG 4730 International Accounting - London (4 Credits)**

This course is designed for students to study international accounting from both academic and practical perspectives. The main objective of this course is to develop a greater awareness of contemporary accounting issues faced in the international marketplace. This course will consist of two components: pre-departure classes designed to provide the student with knowledge of issues experienced in a global economy; a ten-day international travel experience which includes experiential learning exercises, group discussions and presentations, and seven visits to international companies and CPA firms. Prerequisite: Instructor Permission.

**ACTG 4735 Accounting for ESG -- Eastern Europe (4 Credits)**

This course is designed to give students an introduction to ESG accounting measurement and reporting issues from the perspective of multiple players in this arena (companies, accounting firms, standard setters, regulators etc.). This course juxtaposes US ESG accounting standard setting, measurement issues and best practices with Eastern European viewpoints on the same issues. With that in mind, this course will provide participants with the ability to be able to research, obtain and interpret current information on ESG accounting rules and standard setting.

**ACTG 4740 Valuation and Modeling (4 Credits)**

The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made. Prerequisite ACTG 4610 or test code AC10 >=1.

**ACTG 4750 Valuing a Business (4 Credits)**

This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

**ACTG 4760 CEOs and Corporate Governance (4 Credits)**

This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

**ACTG 4795 Graduate Research Sem-Actg (1-17 Credits)****ACTG 4880 Internship - Graduate (0-4 Credits)**

Hours and times arranged by student.

**ACTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)**

This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.

## Joint Doctoral Program in the Study of Religion

This PhD program is a joint venture between the University of Denver and the Iliff School of Theology. With faculty from both schools equally available for coursework and mentoring, the Joint Doctoral Program (JDP) combines the expansive opportunities of the University of Denver with the deep theological resources of the Iliff School of Theology. Coursework emphasizes interdisciplinary dialogue and research. Some of the areas that participate include the University's graduate schools of Professional Psychology, Social Work, Education and International Studies, as well as the departments of Anthropology, Art History, Communication Studies, English, Philosophy, Religious Studies, the Center for Judaic Studies, and others. This degree equips students to become scholar-teachers who are committed to addressing contemporary social and spiritual matters. Other career options include positions in religious communities, governmental and non-profit organizations, counseling centers, curators and directors of education in museums, academic technologists, and administrative positions in higher education.

You can learn more about the program on our website (<https://www.du.edu/duiliffjoint/>).

## DU Iliff Joint Doctoral Program in the Study of Religion

Office: Iliff School of Theology I-110

Mail Code: 4842

Phone: 1-303-765-3136

Email: [Jointphd@iliff.edu](mailto:Jointphd@iliff.edu)

Web Site: <http://www.du.edu/duiliffjoint/>

### Doctor of Philosophy in the Study of Religion

The Joint Doctoral Program in the Study of Religion (JDP), housed at the University of Denver and the Iliff School of Theology, has been developing leaders in the field of religion for forty years. The program offers students a rich and rigorous, yet flexible and interdisciplinary, environment for academic conversation and study. Students in the JDP benefit from a strong sense of community. Our students participate in a range of colloquia, workshops, and symposia that promote innovative and relevant scholarship. The JDP prepares students for careers in academia, religious communities, governmental organizations, counseling centers, as curators and directors of education in museums, academic technologists, administrative positions in higher education, and a variety of other vocational venues. Through close peer and faculty relationships and support, students develop their professional identities within the academic study of religion.

Across various specializations, JDP faculty are committed to educating all our students in the critical study of religion and to helping them develop the ability to understand their areas of specialization as a part of the larger discipline. The curriculum of the JDP seeks to prepare students to understand

and participate in conversations about key ideas, themes, theories, questions, problems, and trends in the study of religion, including those within professional organizations such as the American Academy of Religion.

### Spheres of Inquiry for Interdisciplinary Study

The academic program utilizes lenses for study and research called *spheres of inquiry*.

- Lived Religion (persons and communities)
- Conceptual Approaches to Religion (issues, concepts, and social and cultural phenomena)
- Religion in Text, Image, and Artifact

The spheres are not discrete tracks of study but are intended to create spaces for conversation among faculty and students who have different areas of specialization. Each year, three colloquia will be offered, one for each sphere, focusing on a different theme. One faculty member will serve as moderator, but several faculty will participate as determined by their research interests. During their course work, students must take one colloquium in each sphere, though they may take more than one if they choose, since the themes will vary year to year.

### Program Strengths for In-Depth Study

The JDP has resources to offer specialized study in a limited number of subject areas. The strengths of JDP faculty determine the most productive opportunities for study and for directed research, such as dissertation projects. The academic areas below are not distinct concentrations, but rather areas of strength among the current faculty of DU and Iliff.

- Bible, Ancient Judaism, Early Christianity
- Religion, Art, and Media
- Social Justice, Race, and Identity
- Religion and Politics
- Theories of Religion
- Religion and Human Experience

### Certificate in Latinx Studies

Highlighting our commitment to diversity and our celebration of inclusive excellence, the Joint PhD program in the Study of Religion offers a certificate in Latinx Studies. Guided by faculty at both DU and Iliff, Joint PhD students consider questions of Latinx histories and culture from a theological and religious studies perspective and engage directly with Latinx communities. This certificate prepares student to teach Latinx Studies focusing on religion, theology, and social praxis. It is open only to students already admitted to the DU/Iliff Joint PhD in the Study of Religion.

### Doctor of Philosophy in Religion

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale. A completed master's degree relevant to the student's proposed concentration(s) from a HLC accredited American university or a comparably accredited institution outside the United States is required. A GPA from all graduate work of no less than 3.0 is required for admission into the program.

#### Prerequisites

- Students with an interest in studying the Bible or ancient texts are required to have at least one year of Koine Greek and one year of Biblical Hebrew within the last five years, or the equivalent. If you are uncertain if this requirement is relevant to you, please contact [jointphd@iliff.edu](mailto:jointphd@iliff.edu) for details.

#### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115



English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate in Latinx Studies

Only students admitted to the DU/Iliff Joint Doctoral Program in the Study of Religion may apply.

Students will need to complete the certificate application form and an interview with the Latinx Certificate Coordinator.

Students must demonstrate a commitment to Latinx communities and Latinx Studies and demonstrate an initial awareness of Latinx cultural contexts and the effects of systemic inequities experienced by these communities and the religious or social legacies of such experiences.

## Doctoral Program

### Doctor of Philosophy in the Study of Religion

#### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Core coursework requirements</b>		<b>24</b>
RLGN 4000	Theories and Methods in the Study of Religion	4
RLGN 5000	Pedagogy and the Teaching of Religion	4
RLGN 6000	Dissertation Proposal Seminar	4
RLGN 5010	Lived Religion Colloquium	4
RLGN 5020	Conceptual Approaches to Religion Colloquium	4
RLGN 5030	Religion in Text, Image, and Artifact Colloquium	4
<b>Additional coursework</b>		<b>42</b>
Complete 42 credits of additional elective coursework, including up to 10 approved transfer credits, before beginning dissertation research. The maximum number of Independent Study credits allowed is 12. The maximum number of Directed Study credits allowed is also 12.		
Elective coursework must be graduate level. Courses from University College and Sturm College of Law do not apply toward the degree. Courses taken to fulfill the language tool requirement also do not apply.		
<b>Comprehensive Exam Review Courses</b>		<b>16</b>
RLGN 6010	Comprehensive Review I: Perspectives in the Study of Religion	4
RLGN 6020	Comprehensive Review II: Area Theories and Methods	4
RLGN 6030	Comprehensive Review III: Knowledge in a Professional Field	4
RLGN 6040	Comprehensive Review IV: Knowledge in Minor Areas or Subfields	4
Pass 4 comprehensive exams. Exams are pass/fail. A late exam may constitute an automatic fail. Any student who fails an exam may retake it one time. A student who fails the retake is terminated from the Program.		
<b>Dissertation Research</b>		<b>8</b>
Complete 8 credits of RLGN 6995 Independent Research (formerly called Dissertation Research). Register for 1 independent research credit each quarter, beginning in the fall of the year following completion of comps and dissertation proposal course, until 8 credits are reached. Then register for 1 credit every fall (once per year) until graduation.		
<b>Total Credits</b>		<b>90</b>

Minimum number of credits required for degree: 90 credits

#### Non-coursework Requirements

- Successful oral defense of the dissertation proposal
- Written dissertation
- Successful oral defense of the dissertation
- Demonstrated proficiency in one modern research language other than the student's native language
- For students who also need to demonstrate expertise in ancient languages in order to pursue their research, an exam will be administered by appropriate faculty
- Completion of all requirements for the degree within seven years with 9 quarters in residence

## Master of Arts in the Study of Religion

This degree can be awarded to students who leave the PhD program before completing the dissertation.

### Degree Requirements

#### Coursework Requirements

- Completion of 82 hours of coursework in this program, including all 6 required classes

#### Non-coursework Requirements

- Demonstrated proficiency in a modern research language other than the student's native language
- Pass four comprehensive exams

## Certificate Program

### Certificate in Latinx Studies

#### Program Requirements

Code	Title	Credits
<b>Required Courses</b>		<b>8</b>
RLGN 4608	Latinx Theology and Ethics	
RLGN 6991	Independent Study (A 4 credit independent study course with one of the Latinx Studies faculty on Latinx religion, theology, ethics, history or sociology.)	
<b>Elective Courses</b>		<b>16</b>
RLGN 4402	American Indian Cultures and Worldview	
RLGN 4418	Decolonizing Congregational Leadership	
RLGN 4404	Race and Religion in the United States	
RLGN 4504	Muslims, Jews and Christians in Medieval Spain	
RLGN 4505	Spanish Mystics and Reformers	
RLGN 4614	Liberation Theologies	
RLGN 4640	Doing Christian Ethics from the Margins	
SOWK 4465	Human Security	
SOWK 4635	Immigration Policies and Services	
SOWK 4749	Culturally Responsive Practice with LatinX	
SOWK 4750	Critical Perspectives on the Latinx Context	
SOWK 4753	Social Development in Latin America	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4764	Historical Trauma and Healing	
SOWK 4990	Topics in Social Work	
<b>Total Credits</b>		<b>24</b>

**Minimum number of credit hours to fulfill the Certificate: 24 credits**

#### Non-coursework requirements:

- Students must demonstrate competency in Spanish language as evidenced by passing a Spanish qualifying exam. 2000-level Spanish-speaking courses are available at the university, but undergraduate classes will not count toward the 90-hour degree, and financial aid may not be applied to these undergraduate classes.
- A comprehensive exam in Latinx Religion, Theology, History, Sociology, or Ethics.
- Demonstrate active engagement within a Latinx community before or during the doctoral program.
- Students will write a dissertation on a topic of Latinx Religion, Theology, History, Sociology, or Ethics.
- At least one dissertation committee member must also be Latinx Certificate faculty.

#### RLGN 4000 Theories and Methods in the Study of Religion (4 Credits)

This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When we reach the modern period, the course shifts to considering 'representative' theories of religion, broken down roughly along ideological and/or disciplinary lines.

**RLGN 4105 Empire and the Rise of Christianity (4 Credits)**

This course covers approximately the first five centuries of Christian history with a view toward understanding the role empire played in the rise of Christianity, both in terms of the confluence between Christianity and the Roman Empire as well as its role in the development of Christian beliefs, practices, production of discourse, institutions, and strategies of social control.

**RLGN 4106 Second Century Life & Thought (4 Credits)**

An attempt to understand Christian life and thought in the Roman Empire in the Second-century by analyzing primary sources.

**RLGN 4107 Women in Early Christianity (4 Credits)**

An exploration of the role women played in early Christianity, with attention given to the social and literary constructions of women in Greco-Roman antiquity.

**RLGN 4108 Jewish and Christian Non-Canonical Literature (4 Credits)**

This seminar examines Jewish and Hellenistic backgrounds; the social scientific study of early Christianity; and the New Testament in its literary environment.

**RLGN 4109 Formation of the Bible (4 Credits)**

This course focuses on the development of the Christian Bible. Some attention, however, will be given to the emergence of the Jewish canon, primarily as it relates to and impacts the Christian canon. The chronological expanse of the course ranges from the Hellenistic through the late Roman period. The approach of the course is necessarily literary and historical, but theoretical issues about what constitutes scripture and canon will also be given attention.

**RLGN 4110 Hebrew Reading (2 Credits)**

Advanced work in biblical languages or a selected issue in a language study.

**RLGN 4111 Greek Reading (2 Credits)**

Selected readings from the New Testament and other early Christian literature. Greek I, II and Exegesis are prerequisites Offered each year. May be repeated for credit.

**RLGN 4113 The Bible and Its Afterlives: Jonah (4 Credits)**

This course invites students to place the biblical book of Jonah in conversation with works of literature, art, and theology that interpret Jonah or explore themes in the book, including the nature of God, prophecy, election, death, and transformation. The course will introduce students to the history of interpretation (or reception history) by considering Jonah's afterlives in a variety of Jewish, Christian, and Islamic texts, artistic programs, and manuscript illuminations.

**RLGN 4115 Hebrew Bible Literature: Genesis (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4116 Hebrew Bible Literature: Exodus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4117 Hebrew Bible Literature: Leviticus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4118 Hebrew Bible Literature: Numbers (4 Credits)****RLGN 4119 Hebrew Bible Literature: Deuteronomy (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4125 Hebrew Bible Literature -Job (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4128 Hebrew Bible Literature: Jeremiah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4129 Hebrew Bible Literature: Jonah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4130 Hebrew Bible Literature: Prophetic Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4131 Hebrew Bible Literature: Wisdom Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4135 Poetry in the Hebrew Bible (4 Credits)**

In this course, we will analyze poems primarily from the books of Job, Lamentations, Psalms, 2 Isaiah, and Jeremiah. Class sessions will be divided between studying some aspect of Hebrew prosody (e.g., metaphor, parallelism, lineation) and looking at the ways in which various poets use these particular devices. We will be particularly interested in identifying how poets bring their messages to life, engage their audiences, challenge (or uphold) the status quo, and revitalize the community's imagination and, in turn, its faith in YHWH. Each week, we will read about a particular aspect of poetry and prepare specific poems with the readings in mind; the readings will provide us with a language that we might discuss specifically how the poets impart and encode their messages.

**RLGN 4141 New Testament Literature: Mark (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4142 New Testament Literature: Luke (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4143 New Testament Literature: John (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4144 New Testament Literature: Acts of the Apostles (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4145 New Testament Literature: Romans (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4146 New Testament Literature: Corinthians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4147 New Testament Literature: Galatians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4148 New Testament Literature: Hebrews (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4150 New Testament Literature: Revelation (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4151 Studies in Early Christianity (4 Credits)**

A critical study of themes and selected movements within early Christianity and other religions of the Greco-Roman world. May be repeated for credit.

**RLGN 4152 Identity in the Hebrew Bible (4 Credits)**

This course explores diverse constructions of selfhood in the Hebrew Bible in conversation with theories of identity and the self from a range of disciplines, including anthropology, philosophy, sociology, and psychology. In this class, we will consider how the biblical texts present different models of selfhood through discourse, practice, and ritual. Each class session will focus on a different aspect of identity: gender, social class, ethnicity, nationality, colonialism, the body, and kinship and family. Throughout the course, we will discuss the implications of these constructs of identity for ethics, agency, and theology.

**RLGN 4153 War, Politics, & Society in the Hebrew Bible (4 Credits)**

This course examines the interrelationship between war, politics, and society in the Hebrew Bible and their interplay both in the texts and in larger historical, social, and cultural contexts.

**RLGN 4154 Migration and the Bible (4 Credits)**

Migration and people on the move pervades the Bible, from Adam and Eve to Jesus. This course examines migration in the Bible and the resources it offers for responding to the current realities of migration, immigration, exile, deportation, and other aspects of migration in the world today. A range of perspectives on migration and the Bible are considered, including denominational resources, international aid agencies, and theoretical viewpoints.

**RLGN 4155 Being Human in the Bible (4 Credits)**

What does it mean to be human, according to the biblical writers? This is both a simple and complicated question to ask, much less answer. How it is addressed has important consequences. A range of perspectives and answers to the question therefore will be taken up in this course. These can include life and death, gender and sexuality, technology, education, family relations, politics, peoplehood, ecology, human vs. animal, philosophy, and economics. These perspectives and answers are engaged in pursuit of gaining a greater appreciation for how one might think through this question.

**RLGN 4160 Teaching the Bible (4 Credits)**

Designed to integrate faith development theory, biblical interpretation and confluent education. Education instructional models for the purpose of assisting students to develop professional self-understanding and functional skills as interpreters and teachers; experience in teaching adults in a local setting.

**RLGN 4161 Queering Early Christianity (4 Credits)**

This course surveys some of the major influences of queer theory on the study of the New Testament and early Christianity, beginning with the work of Judith Butler and continuing through the contributions of queer theorizations inflected by affect, violence, diaspora, race and racialization, and trans discourses. The course considers a variety of canonical and non-canonical texts and practices from the first centuries of the Christian tradition, with an eye to how theorizations of queerness help frame inquiry into the formation of Christian "identity" and belonging.

**RLGN 4162 Minoritized Interpretation of the New Testament (4 Credits)**

Though the academic study of the New Testament has long been controlled by European and North American institutions and persons of European descent, recent decades have seen a surge of other perspectives that are sometimes collected under the heading of "minoritized." These perspectives include postcolonial and decolonial approaches, and methods centered on racial or ethnic identities, geographies, cultures, shared historical experiences, and gender and sexuality, to name a few. This course considers these forms of interpretation together and separately, as ways of reading biblical texts outside of the field's historical biases.

**RLGN 4204 Multi-Cultural Pastoral Care & Counseling (4 Credits)**

Examines multicultural issues in pastoral care and counseling and explores the dynamics and complexities of culture, race and other socializing factors in pastoral care conversations.

**RLGN 4205 Introduction to Process Thought (4 Credits)**

This course provides an overview of Process Theology from its early developments out of Process Philosophy to its current incarnations in theo-poetics, ecological civilization, and radical interrelationality.

**RLGN 4206 Spiritual Care of Trauma (4 Credits)**

This advanced course integrates knowledge, capacities, and skills for practicing justice-seeking, interreligious, and research-literate spiritual care of trauma. This course draws upon psychological research on trauma and spiritual struggles. Readings on socially just spiritual care focus on practices, beliefs, and values that lament harm done by religiously based violence. A spiritually integrative pedagogy uses (1) body-based self-care practices and deep listening conversations about self-care; (2) self-assessment of one's interpersonal capacities for deep interreligious listening; (3) a qualitative analysis of one's spiritual orienting system (self-care practices, struggles, values, and beliefs) embedded in conversations about one's spiritual practices; (4) spiritually integrative assignment about a personal experience of trauma; (5) conversations with a learning partner and Dr. Doehring about this integrative assignment. These experiential components help students develop capacities for spiritual self-differentiation, empathy, and reflexivity. These experiential components are designed to help students integrate critical theory and research into practices of spiritual self-care, integration, and interreligious deep listening.

**RLGN 4207 Moral Stress, Resilience & Spiritual Integration (4 Credits)**

Moral stress arises from shame/guilt/fear of causing harm involving conflicts in values. Moral injury arises from traumatic stress that is more shame than fear based, and has been researched extensively among military personnel. Spiritual integration of moral stress and injury uses spiritual practices and theological meaning-making to compassionately identify life-limiting embedded shame-based values, beliefs, and ways of coping with moral stress and injury (lived theologies) in order to compassionately understand the origins of moral stress and injury. Relational resilience is the outcome of spiritual integration based on spiritual practices fostering compassion and more complex theological ways of understanding moral conflicts, stress and injury.

**RLGN 4208 Erik Erikson: Resource for Pastoral Care (4 Credits)**

This course explores Erik H. Erikson's life cycle theory as a resource for the pastoral care of children, adolescents, young adults, adults, and older adults. Attention is given to Erikson's psychoanalytic orientation and the development of his life cycle theory over the course of his career. The course encourages the use of developmental theory to deepen the student's introspective reflection and vocational orientation. By focusing on the work of a single author, this course is meant to illustrate how a pastoral theology student may use the work of a prominent psychologist in the development of a dissertation topic.

**RLGN 4209 Spiritual Care in Pluralistic Contexts (4 Credits)**

This course helps students learn emergent pastoral theologies of spiritual care in a pluralistic context and use them to reflect on case studies written by experienced practitioners. In this course, students will identify their personal values, attitudes, and beliefs and examine their own social identities to better understand how these dimensions of self can guide and challenge them in reflecting on spiritual care with those who are different from them.

**RLGN 4210 Theories of the Self in Pastoral Theology (4 Credits)**

This advanced course introduces students to psychological concepts and theories of the self that are operative in pastoral and spiritual care and counseling. Toward that end, this course traces understandings of the self within the works of pastoral theologians, psychologists of religion(s), and practitioners in pastoral and spiritual care. Particular attention will be given to identity formation, relationality, interdependence, and psychic-injury.

**RLGN 4220 Research Methods and Ethics in Lived Religion/Practical Theology (4 Credits)**

This course introduces students to a variety of qualitative and quantitative approaches to rigorous scholarly research in lived religious contexts, as well as to particular ethical challenges and questions that such approaches may elicit. Students will also be introduced to the Institutional Review Board (IRB) process as a foundational component in developing a critically informed, contextualized methodology for any research-based project in the fields of lived religion and practical theology.

**RLGN 4302 Buddhist Philosophy (4 Credits)**

An introduction to the Buddhist philosophical tradition that covers both the different philosophical movements within Buddhism as schools of thoughts and major philosophical issues, such as the theory of karma and determinism, the nature of mind, proofs for past and future lives, theories of knowledge, ethics, the doctrine of emptiness and the nature of enlightenment.

**RLGN 4303 Sacred Space and Place in Comparative Perspective (4 Credits)**

This course examines sacred spaces and sacred places from a comparative perspective. Through close reading and discussion of primary and secondary sources, students are challenged to think critically and theoretically about sacred spaces and places.

**RLGN 4304 Material Divinity (4 Credits)**

This course explores how religion happens in material culture- broadly defined as images, devotional and liturgical objects, architecture and sacred space, works of art, and mass-produced artifacts.

**RLGN 4305 Pilgrimage in Comparative Perspective (4 Credits)**

This is a comparative course that examines the dynamics of pilgrimage from a number of different angles - theoretical, doctrinal, ritual, social - and which utilizes a variety of sources - including classical, ethnographic studies of actual pilgrimages, and focused studies of particular pilgrimage places - with the goal of gaining a thorough understanding of the phenomena of pilgrimage in all of its complexity.

**RLGN 4321 Islam and Gender (4 Credits)**

This course examines issues surrounding gender and sexuality in Islam. Through a close reading of religious texts, critiques of patriarchy, and historical studies, students are challenged to think critically about the construction of gender roles and the regulation of sexual practices in Islam. By the conclusion of the class, students gain insight and understanding regarding the ways modernity has radically altered norms surrounding gender and sexual preference in Muslim-majority societies.

**RLGN 4322 Interreligious Dialogue: A Critical Analysis (4 Credits)**

This course exposes students to the theory and practice of interreligious dialogue (broadly defined) and the issues raised by interreligious dialogue, such as theologies of religious pluralism, secularism, religiously motivated violence, and religion and public life. Students have opportunity to read critical scholarship on these topics generally, as well as study specific cases where points of contact occur between religious groups—either in terms of dialogue (or other mutually edifying endeavors) or conflicts that have arisen between religious groups. In the process students will also learn about some of the more prominent organizations working in interreligious dialogue.

**RLGN 4401 Race, Gender, Class: Historical & Social Analysis of Racism in the Modern World (4 Credits)**

An historical survey of the role of racism, sexism and classism in shaping the oppressive institutional structures of the existing world order and of how sociological analysis of these structures can help justice and peace activists direct effective action toward the elimination of race, gender and class oppression.

**RLGN 4402 American Indian Cultures and Worldview (4 Credits)**

A survey of the worldviews of Native American people, as these pertain to both inter-tribal beliefs and Native American ceremonial life, with an attempt to show how Native American practice proceeds from their worldview.

**RLGN 4403 Sects, Cults & New Religions (4 Credits)**

An exploration of non-mainstream religious groups. Topics include innovation and recruitment; "cult" controversies; sectarian Christianity, gender and sexuality; UFO religions; and religion and marginalized racial projects.

**RLGN 4404 Race and Religion in the United States (4 Credits)**

An exploration of the different ways in which race is understood religiously in the United States and how race impacts both white and racial minority religious institutions. Specific topics include the black church, the Nation of Islam, Native American theology, the Christian far right, Asian American religions, Latino/a religions, and multiracial congregations.

**RLGN 4405 Social Construction & Selfhood (4 Credits)**

This course invites us into a collection of investigations into the intersections of social structures and individual identity or selfhood. While reading in a variety of disciplines and genres, we are drawn together around the questions of how one understands the possibilities for individual or communal agency in light of the formative, systemic power of social structures and institutions. Beyond conceptual understanding of this relationship, we ask questions of how to encourage coherent religious, educational, and other forms of practice in light of the realities of social construction. These reflections are particularly important for persons who are interested in social change and the very real barriers to its generation.

**RLGN 4406 Education and Social Change (4 Credits)**

This course investigates the role of education in maintaining and transforming social structures, identity, and commitments. We examine how educational practices can contribute towards social change in both religious and public settings.

**RLGN 4407 Ritual Studies (4 Credits)**

By reading some of the most important "classic" and recent theorists of ritual, and by learning to observe and understand ritual behavior, this class will examine the important role of ritual in defining religious groups, creating religious identity, forming religious beliefs, and structuring how we view the world. Prerequisite: Masters students need permission of instructor.

**RLGN 4408 Science & the Christian Right (4 Credits)**

An examination of the American Christian Right's challenges to mainstream scientific theories and practices. Specific topics include Intelligent Design movement, reparative therapy of homosexuality, denial of human-driven climate change, and opposition to stem cell research.

**RLGN 4409 Social Movements from Liberationist Perspectives (4 Credits)**

Liberationist thought has greatly impacted how social movements, and the theological and ethical perspective which inform them, has been implemented to bring about social and political change since the mid-twentieth century. But with the state of the new millennium, many have proclaimed the death of liberation theology, dismissing its significance as a passing fad. The purpose of this course is to explore the roots, development, and history of liberationist thought as it first manifested itself within a Latin American context then expanding to other continents and faith traditions, and how that thought has been utilized to inform social movements.

**RLGN 4410 American Christianity and Indian Genocide (4 Credits)**

A collaborative research seminar exploring different aspects of the history of the relationship between American Christianity and genocidal campaigns against native peoples, including the colonial period through the 20th century. Students will research particular personalities and historical events related to this topic, including the campaigns of the military on the 18th century Western frontier, sites of massacres including Sand Creek in Colorado, and other events normally obscured by accounts of US history. Students will learn the relationships of ideology and worldview to the narration of history, as well as skills in identifying and working with primary historical sources.

**RLGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)**

Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.

**RLGN 4413 Theology and the Construction of Race (4 Credits)**

Several important books have recently been published making the case that religion, and more specifically, Christian theology, have played a constitutive role in creating the ideas of race and racial hierarchies. This course is an extended argument (with which students are free to agree or disagree in part or in whole—in any case they will become familiar with the relevant literature and concepts) that 1. In significant ways religion and race are modern, not universal or permanent, constructions; that 2. Religion and race are two of the very few fundamental conceptual building blocks of the modern world, such that, no matter what one thinks of religion and race, one is unable to think or operate in the modern world without them; and that 3. Religion and race are mutually imbricated in such a way that, even when race is not explicitly a topic of discussion or observation, modern religion is always already racialized.

**RLGN 4414 Atheists, Secularists & Nones (4 Credits)**

An examination of non-religious and/or non-affiliated populations, with a primary focus on the United States. We will explore: 1) the variety of beliefs among those not affiliated with religious institutions; 2) different social expressions of atheism; 3) the implications of recent religious trends for debates about secularization in the modern West.

**RLGN 4415 Environmental Racism: The Problem with Water (4 Credits)**

The course seeks to develop a constructive conversation on the intersection of environmental racism and water by examining significant issues surrounding present-day issues the degradation of water quality its negative impact on communities of color. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

**RLGN 4416 Decolonizing Theories and Methods (4 Credits)**

Religious studies draws from multiple disciplines which include anthropology, history, feminism, transnationalism, empire studies and sociology. Often, students approach theories and methods by reading classic authors and mainly contemporary eurocentric scholars of religion. This course will approach theories and methods from through the lens of decoloniality, concentrating of the perspectives and contributions emerging from the margins of eurocentric thought.

**RLGN 4417 Still Black Post-human: Blackness Beyond Posthumanism (4 Credits)**

Blackness waits at the door. It sits in the room. It seeps into crevices. It disrupts stable sensibilities. It is the abyss. It is an overwhelming presence of life and the beyond. And it waits. This course will explore many presentations of Blackness as an ontology, material essence, and tangible modality. In doing so, this course will not only explore ontomateriality of Blackness, but present a case for it as an integral framework to engage posthumanism's proclivity to emphasizes animal studies and ecology while holding fast to liberalism's damaging modes of uncritical inclusivity. This is important to the state of the theological experiment as James Cone insisted Blackness is the key to global salvation over 50 years ago. With recent moves to decenter human exceptionalism, shifts in focus to future realities, and intentional re-imaginings of the human-creature-divine relationship. It is important to continue to unravel humanist descendent offerings. As such, this course will provide a lens to investigate/disrupt the potentiality that posthumanity presents, pushing beyond its less obviously regressing boundaries, towards liberative future realities.

**RLGN 4418 Decolonizing Congregational Leadership (4 Credits)**

This course explores the applications of postcolonial and decolonial discourses to the theory and practice of parish leadership, particularly within Christian congregational contexts. Students will reflect on leadership praxis across several areas (i.e., euro-western constructions) of congregational life including: worship and liturgy, education and formation, organizational culture, and missions. As a whole, the course interrogates notions of tradition, practice, and leadership identities in the context of congregations toward the de/construction of lived realities.

**RLGN 4501 Holy Spirit: History and Traditions (4 Credits)**

What have Christians believed and written about the Holy Spirit through the centuries? Why does Pentecost show up in such different ways across the pages of Christian theology and literature? In the midst of the European Enlightenment, why did John Wesley hold such special reverence for the role of experience in Christian thought and education? Why has the Pentecostal legacy functioned simultaneously as a subversive trope for critiquing dominant church paradigms while also sparking creative, re-interpretations of Christian tradition among so many reformers? These are just a few of the questions explored in this class as we discuss historical and theological works by contemporary scholars in pneumatology and church history.

**RLGN 4502 Historiography (4 Credits)**

This course surveys the various theories and methods developed by historians since the emergence of the historical profession from the roots of historicism and philosophy of history in the mid-1800s; and examine the relationship of history to theology, cultural theory and literary studies.

**RLGN 4503 Women in Medieval Europe (4 Credits)**

This class focuses on the role of medieval women, who struggled to find a voice in the political, religious, social and literary arenas of medieval Europe from about 1100 to 1600. Through primary and secondary source readings we look at everyday women's lives in this period. The class also includes the lives and careers of some of the most famous women writers and leaders of the period, such as Hildegard of Bingen, Eleanore of Aquitaine, Marie de France, Margery Kempe, Julian of Norwich, Queen Isabel of Castile, Teresa of Ávila, and Queen Elizabeth I of England.

**RLGN 4504 Muslims, Jews and Christians in Medieval Spain (4 Credits)**

An exploration of the "Golden Age" of cross-cultural encounters that occurred in Medieval Spain from the Muslim conquest in 711 to the fall of Granada and the expulsion of Jews in 1492. This course offers an overview of the historical and ecumenical dimensions of Jewish, Christian, and Islamic coexistence, known as "La Convivencia," and critical reflection on the relevant lessons this era still holds in the post 9/11 period.

**RLGN 4505 Spanish Mystics and Reformers (4 Credits)**

Early modern Spain witnessed the emergence of Catholic and Protestant individuals whose timeless works and popular appeal in subsequent centuries rested largely upon the practice of "contemplation in action." This course examines the historical context and works of such mystics and reformers as Teresa of Ávila, John of the Cross, Ignatius of Loyola, Juan de Valdés, Constantino Ponce de la Fuente Cipriano de Valera, Casiodoro de Reina, Antonio del Corro, and others, and others. It also explores the influence of Islam and Judaism on these sixteenth century religious movements, as well as modern Spain's subsequent rejection of this pluralistic legacy as it sought to define the young nation-state sought to define its new national identity and consolidate power across Europe and its vast colonial territories in the Western Hemisphere.

**RLGN 4506 The Pursuit of Happiness: A History (4 Credits)**

This course provides a historical examination of key concepts, major questions, and practices about humanity's search for happiness from the Hellenistic-Roman period of Antiquity through the Early Christian and Medieval periods. The content centers on the role of Classical moral philosophy and Christian theology in the formulation of eudemonic theories about the problem of happiness in relation to metaphysical and religious influences as well as to socio-cultural, political, and institutional norms and practices that shaped Christian notions of human purpose and potential. The legacies of these ancient ideas on the development of modern assumptions about happiness and human flourishing are also discussed towards the end of the course.

**RLGN 4507 Violence & Tolerance in Medieval Europe (4 Credits)**

This course examines a wide range of texts and events from the 11th to the 16th centuries dealing with various forms of violence across the medieval European world and contrasts these with medieval European notions of toleration in theological, literary, and political discourse. Among the topics to be covered will be the Peace of God and the Truce of God, feudal warfare and its legacy, the Crusades and their impact upon the Latin West as well as the on Arab East, anti-Semitism in the Latin West, the Inquisition, persecution of heretics and witches, Church and State struggles, and the various dialogues of mutual, theocentric edification among Islamic, Jewish, and Christian authors.

**RLGN 4508 Judaism, Gender, and Religion (4 Credits)**

Germans refer to the period of roughly 1770-1850 as the Sattelzeit, or "Saddle Era"—the time between the end of the early modern world and Europe and the modern world. During this era basic assumptions that we continue to make about what religion is and what gender is are constructed. This is also the era when what we think of a Judaism is re-shaped in major ways. Through a close reading of primary texts by Jewish women we will examine the intersection of gender, Judaism, and religion and examine the modern construction of these categories.

**RLGN 4509 Jewish Christian Relations 50-500 C.E. (4 Credits)**

This course considers the "parting of the ways" between Judaism and Christianity, beginning with the tumultuous first century (the Jewish War and the beginnings of the Jesus tradition) and continuing through the synthesis of Christianity and Empire in late antiquity. Along the way, we will consider how Christianity and Judaism emerged from a common matrix, influenced and co-created each other, and Othered each other in their processes of self-definition. We will attend especially to the problems with the "World Religions" model, ancient identity formation, the origins of Christian anti-Semitism, the effects of empire and diaspora, and modern attempts to explain the "parting."

**RLGN 4520 Religion and Film (4 Credits)**

Can film elicit the holy? Does the story of Jacob and Esau look different when told by a North African filmmaker? How does a Buddhist sensibility shape the form of Japanese films? Can we ask theological questions about secular films? In this course films are the primary texts, supplemented by readings, lecture and discussion. Students develop the film literacy and theological and theoretical acumen to explore these and other interactions between religion and film in cultural context. While there is no explicit prerequisite, background in film or literary criticism and/or theological or religious studies is helpful.

**RLGN 4604 Religion in the Public Square (4 Credits)**

What is the proper role of religion in the public debates necessary to healthy democracy? Some argue that religion in the public square threatens the fundamental democratic right the freedom of conscience; others that only religion can insulate the communal values that make democracy possible. This course examines the best and most prominent arguments in this contemporary debate.

**RLGN 4605 Feminist Theology (4 Credits)**

Analysis of feminist theology with attention to methodological issues, the relation of contemporary feminist visions to historical material, the ideas of God/Goddess and the question of what it means to be female. Prerequisite: At least one introductory level theology course.

**RLGN 4607 Liberating Sex (4 Credits)**

The purpose of the course is to search the Christian Scriptures, in spite of its accusations of being patriarchal, to find biblically-based guidelines for developing an ethical sexual lifestyle that is aware of how racism, classism, and specifically sexism influences the current conversation on sexual ethics. This course focuses on developing healthy models that foster intimacy and vulnerability for a disjointed and at times oppressive community.

**RLGN 4608 Latinx Theology and Ethics (4 Credits)**

The primary sources of Latinx theological and ethical thought are read to discover its foundational tenets. The course explores this contextual approach to religion to discover how it could serve to liberate the Latinx community from prevalent oppressive social structures. Comparisons are made with Eurocentric ethics and theology.

**RLGN 4609 Queer Theory, Theoethics & Activism (4 Credits)**

Queer theory has transformed religious thought in extraordinary ways especially over the course of the past four decades. This course explores the nature of queer theory as a discipline within and outside of the religious academy. This course also invites students to explore the ways that queer theory intersects with theories of race and praxes of activism.



**RLGN 4610 Ethics of Neoliberalism and Globalization (4 Credits)**

People of faith have responded to the triumph of the free market economy around the world in a variety of ways. To some, "neoliberalism" seems to hold the key to sustained economic growth worldwide and, eventually, to nothing less than the eradication of poverty itself. To others, it represents the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further Christian ethical values, or subvert them?

**RLGN 4611 Theology and the Challenge of Postmodernism (4 Credits)**

An examination of representative postmodern thinkers, how they have changed the context for theology, and how theology has responded to them.

**RLGN 4612 African Theology and Post-Colonial Discourse (4 Credits)**

This course attempts to examine the relationship between the emergence of African Theology and the historical conditions which characterize Africa's encounter with the European/American will to power. The initial hypothesis to be tested is the claim that the will to power provides the locus classicus for formulating the identity of African theological reflection. This makes the latter a part of a much larger discourse on Africanity. The course takes the student through a close reading of basic texts produced by African theologians themselves. All the major issues characteristic of the discourse of African Theology is dealt with.

**RLGN 4613 Augustine and His Influence: 400 C.E. to 1000 C.E. (4 Credits)**

Theological contribution of the great North African Bishop; his major writings, such as Confessions, City of God and The Trinity; and his anti-Pelagian, anti-Donatist, and anti-Manichean writings.

**RLGN 4614 Liberation Theologies (4 Credits)**

Consideration of contemporary liberation movements with focus on feminist, black and Third World theologies. Special concern is with what the various perspectives of sex, race and class analysis suggest for one another and for theology and social ethics generally.

**RLGN 4615 Being Human in the Modern World (4 Credits)**

What does it mean to be human? After a brief survey of traditional Christian answers to this question, we focus on the theological anthropology that has become the de facto theory of human nature since the emergence of the modern western world in the early 19th century. Theological anthropology can be the driver of other doctrines in a systematic theology; it also underpins work not necessarily seen as theological, such as ethics, development, and human rights. A rich understanding of this anthropology is necessary for theological reflection in our current context.

**RLGN 4617 Forgiveness (4 Credits)**

In the histories of philosophy and religions, 'forgiveness' emerges as a grounding concept for thinking about God, self, and community. This course examines core texts and contexts within a range of religious, philosophical, and theological discourses on forgiveness, 'loving the enemy', and reconciliation. The course explores a variety of spaces of forgiveness as well as the possibility that the 'impossibility of forgiveness' must be allowed to emerge as a valued theological, ethical, and civic principle of personal and communal identity.

**RLGN 4618 Doctrine of God in the Modern World: The Pantheism Controversy (4 Credits)**

What is the most fruitful model for thinking about God? There are a few perennial options, each of which have social, political, and ethical implications in addition to metaphysical ones. In the post-Enlightenment world a version of the pantheism model swept through philosophers and theologians, Jews and Christians, raising issues which, if possible, are even more pressing in our post-Christian context. The so-called Pantheism Controversy has the advantage of not only unpacking all the issues involved in the various models of God, but of also being a good story of the personal lives and relationships of a fascinating group of people. This course introduces students to the most pertinent writings from this controversy and engages theological and philosophical work, influenced by the controversy, from our own contexts.

**RLGN 4619 Christian Theology and Disability (4 Credits)**

Using the category of "disability" as a starting point, this seminar examines constructive theologies in which attention to human vulnerability, limitation, and interdependence is fundamental to religious thought and practice. It presents "ableism" as a form of social injustice, emphasizing its intersections with other forms of oppression. It names Christianity's past and present complicity in ableism, while also highlighting the tradition's resources for effective opposition. Consideration expands beyond persons with disabilities to include common phases of life like infancy and frail old age. The course's primary aim is to equip students to articulate theologies that affirm that which ableism devalues.

**RLGN 4620 Fanon, Foucault and Friends (4 Credits)**

This course reads the primary sources of post colonialists (mainly Fanon) and postmodernists (mainly Foucault) to explore creating ethical approaches to globalized manifestations of race, class, and gender oppression. Special attention is given to the use of Christianity as a liberationist response to global structures of oppression in spite of its historic use in causing much of said oppression.

**RLGN 4621 Kierkegaard and Existential Theology (4 Credits)**

Kierkegaard and the origins of existentialism; twentieth-century forms of existentialism and recent developments; the decline of neo-orthodoxy and resurgence of phenomenology.

**RLGN 4622 Schleiermacher as Resource (4 Credits)**

Consideration of the theology of Friedrich Schleiermacher. Analysis of the philosophical and theological predecessors of Schleiermacher as well as the tradition of theological liberalism that followed him.

**RLGN 4640 Doing Christian Ethics from the Margins (4 Credits)**

Many of us have been taught religion through the eyes of white, middle-class males. How then do we do ethics from the perspective of the disenfranchised? The aim of this course is to enable students to: construct ethical responses to case studies from the perspectives of those suffering from race, class and gender oppression; to investigate Biblical protest narratives as to the resistance and struggle against race, class and gender domination and oppression; and to examine various liberationist ethical interpretations as a source for overcoming dominant religious power structures.

**RLGN 4641 Formative White Male Ethicists (4 Credits)**

This course on formative white male figures in Christian Ethics examines the ethical canon from a historical perspective. Special attention is given to texts and traditions as living changing heritages.

**RLGN 4642 Theology and the Rise of the Historical Consciousness (4 Credits)**

Theological work today is done in the context of the rise of the historical consciousness, a phenomenon with its roots in the late 18th and early 19th centuries. We inherit a fundamentally different worldview from the worldviews of the ancient and medieval worlds that gave rise to many of the classical Christian practices and beliefs, and different from contemporary non-western worldviews. The historical consciousness leads to a particular set of assumptions about Biblical authority, identity and subjectivity, epistemology, the relationship of individuals to communities, etc. This class examines important texts in the development of the historical consciousness, analyzes issues raised for Christian theology, and points to some of the theological resources developed in its wake.

**RLGN 4643 Women and Christian Theologies from the Global South: A Postcolonial Feminist Approach (4 Credits)**

This course is a critical study of the challenges and contributions of Christian feminist theologies from the global south to theological studies in North America, particularly, Christian feminist theologies. Framed in postcolonial discourses, this course will study works of representative figures in Christian feminist theologies from Africa, Latin America, and Asia. Topics will include the impact of globalization, postcolonial discourse, religion and culture, sexuality and spirituality, and ecological concerns.

**RLGN 4644 Environmental Ethics and Global Hunger (4 Credits)**

The course seeks to develop a constructive conversation on the causes of global hunger by examining significant issues surrounding the present-day distribution of food and its negative impact on the environment. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

**RLGN 4645 Artificial Intelligence and What It Means to Be Human (4 Credits)**

Artificial Intelligence raises pressing questions about machines: Are they really intelligent? Can they have consciousness? Ought they have moral status? Are algorithms related to computers like minds are to bodies? Do smart machines change the relationship of humans to technology? Each of these questions, in turn, is actually a question about human nature: What are the kinds of human intelligence, and are they unique to humans? Why do humans have moral status? What kinds of embodiment are essential to humans? (Do we include things like race and gender?) Are humans tool-users, or did we evolve as humans because of tools? In that case, have humans always been cyborgs? Questions about human nature are one of the classic theological loci, falling under the rubric of theological anthropology. In other words, religious traditions have thousands of years of deep thinking on these questions that are being raised in new ways (as Nick Bostrom has famously argued, AI is like "philosophy with a deadline"). This course is a sophisticated but non-technical introduction to the history of AI and to the tools and ideas of AI in its current forms. We will cover the most important ethical issues with which AI confronts us, and bring the resources of philosophy and theology to tackling some of the questions of human nature raised by AI.

**RLGN 4646 Ethics in an Age of Plagues, Pestilence, and Pandemics (2 Credits)**

The world is gripped by a deadly pandemic. This is neither the first time, nor probably will be the last. What we do know is in the aftermath of such deadly epidemics, the societal bonds which once held community together are frayed if not completely broken as radical changes take hold and new ways of being arise. This course will wrestle with the importance of maintaining a moral compass during crisis and an ethical vision as a new reality is constructed. Special attention will be given to how not all suffer equally, and the roles of racism, classism, and sexism during national emergencies. Finally, the course would assist the student in finding their own ethical voice during a time of hopelessness and desperation.

**RLGN 4647 Jesus for Christians and Non-Christians (4 Credits)**

Who is Jesus of Nazareth, and what is his relationship to Jesus Christ? This course will examine this central question in multiple religious and non-religious cultural contexts. We will use the methods of comparative theology to read ideas about Jesus in the contexts of Christianity, Islam, Judaism, Paganism, Spiritual But Not Religious (SBNR), and non-theistic texts. Students will compare and contrast these ideas of Jesus to create their own understanding of Jesus' narrative and his relationship to our present world in their particular context.

**RLGN 4648 Biblical Ethics (4 Credits)**

Anyone who reads the Bible does so from a particular social location. We are all born into an on-going society that shapes us. When we turn our attention to the biblical text as the source of our ethical perspectives, we participate in a dialogue between the written word and the meanings our community taught us to give to these words. Many of us have been taught to read the Bible through the eyes of white, middle-class males. Yet, can the text liberate those who are oppressed? To do so, it must be read with the eyes of the disenfranchised. This course will explore how the Bible can be used to bring about justice for those who suffer due to race, class and gender oppression.

**RLGN 4649 WOMANIST THEOETHICS (4 Credits)**

This course will focus on the canonical works of womanist theology and womanist ethics. Students will read the seminal texts of first wave womanist theologians and first wave womanist ethicists. Students will also read works by third wave womanists and evaluate how these texts build upon the canonical works to form what is known as the Womanist House of Wisdom. The course will seek to examine how pioneer womanist scholarship was interpreted in its historical context and how the discipline of womanist religious thought in theology and ethics was formed. Students will also explore womanist methodologies and how they can be operationalized by people outside of Black female embodiment. Finally, students will learn how womanist theoethics is used in womanist social justice praxis, pastoral care, and preached in congregational settings.

**RLGN 4650 Advanced Practical Theological Research (4 Credits)**

This collaborative seminar provides an opportunity for students to explore the process of practical theological research for their own dissertation projects and to work collaboratively to shape research that is impactful and compelling. Students will establish the theoretical framing of their project through deep engagement with a body of literature relevant to their topic, engage in rigorous contextual analysis of their research site/community, and begin the descriptive work necessary for their particular question, and in doing so refine their research question and appropriate self-reflexive research strategies necessary to their project.

**RLGN 4651 Social Issues, Social Ethics (4 Credits)**

The purpose of this course is to examine social issues through the lens of Christian Social Ethics. Students will learn about the discipline of Christian Social Ethics with focused learning on ethics from the margins and the ethics of responsibility. Students will learn how to analyze social issues through a Christian social ethical framework. A component of the course will focus on student leadership development with assignments that will develop students as leaders through the course's focus on skill development. The social issues examined in the course will vary each time the course is taught.

**RLGN 4701 Topics in the Study of Religion (0-4 Credits)****RLGN 4702 Topics in Biblical Studies (0-4 Credits)****RLGN 4703 Topics in Theological Studies (0-4 Credits)****RLGN 4761 Social Ethical Issues (4 Credits)**

Examination of the scope of Christian social ethics and the relationship of the analytic and diagnostic task to normative and prescriptive endeavor. May be repeated.

**RLGN 4762 Justice & Peace Struggles (2,4 Credits)**

Regular offerings include "Columbusday and the History of Christian Denial," "Justice in Native America," and "Church and the Colonial Residual: Pine Ridge, the Black Hills, Missionaries and Indian Justice.

**RLGN 4991 Independent Study (1-4 Credits)****RLGN 5000 Pedagogy and the Teaching of Religion (4 Credits)**

This course looks at pedagogical methods as they relate to the teaching of religion. Students design syllabi and materials appropriate for the teaching of religion in at least two different contexts. In addition, the course covers theoretical issues related to the teaching and learning process.

**RLGN 5010 Lived Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on religion as it is lived by persons and communities. The specific theme of the colloquium changes each time it is taught.

**RLGN 5020 Conceptual Approaches to Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on conceptual approaches to the study of Religion. The literature may focus on specific issues, concepts, and/or social and cultural phenomena. The specific theme of the colloquium changes each time it is taught.

**RLGN 5030 Religion in Text, Image, and Artifact Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on texts, images, and/or artifacts through which religion, culture and worldview can be studied. The specific theme of the colloquium changes each time it is taught.

**RLGN 5101 Methods for Interpreting Biblical Texts (4 Credits)**

This seminar addresses critical study of biblical texts, the history of interpretations and hermeneutics.

**RLGN 5102 Religious Identity in Antiquity (4 Credits)**

An exploration of the way individuals and communities understood their religious beliefs and behaviors during the Hellenistic and Roman periods. The focus is on varieties of Jews and Christians (including how they formed their identities in relation to each other), but consideration is also given to the Greco-Roman religious context.

**RLGN 5750 Professional Development (0 Credits)**

This course provides the "nuts and bolts" on not only surviving, but also thriving within the academy. Assuming that the student's goal is an eventual tenure-track position, the course demystifies the PhD route so that the student, through a working knowledge of the academy, can better position her/himself to succeed. Besides providing professional development, the course attempts to raise the level of involvement of PhD candidates in the profession, from presenting papers to publishing articles.

**RLGN 5751 Experiential Learning (0 Credits)**

This 0-credit course enables students to acquire valuable teaching and other professional experience as teaching assistants, instructors of record, researchers, or other positions on or off campus. In the case of a teaching position, it will normally only be taken after completing RLGN 5000 Pedagogy & Teaching Religion. Students should work with the JDP Program Manager at least one quarter before they plan to register in order to get this course in the class schedule when it will be needed.

**RLGN 5991 Independent Study (1-10 Credits)****RLGN 6000 Dissertation Proposal Seminar (4 Credits)**

This seminar focuses upon the range of research topics and methods in religious and theological studies by examining dissertations and dissertation proposals related to the Joint Ph.D. Program at Iliff and the University of Denver. Bibliographic and research methods and matters of style and format receives particular emphasis. Students present their own dissertation proposals for discussion.

**RLGN 6010 Comprehensive Review I: Perspectives in the Study of Religion (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in the study of religion. The bibliography is available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in theories and methods in the study of religion. This course is taken in the fall quarter of the student's third year.

**RLGN 6020 Comprehensive Review II: Area Theories and Methods (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in one of the current areas of JDP program strength: 1) Bible, ancient Judaism and early Christianity 2) Religion, Race and Ethnicity 3) Media, Art and Religion 4) Religion and its Publics 5) Religion and Human Experience or 6) Theories of Religion. Bibliographies are available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in the area. This review course and exam is taken in the fall quarter of the student's third year.

**RLGN 6030 Comprehensive Review III: Knowledge in a Professional Field (4 Credits)**

Students work individually or in small groups with their dissertation advisor and committee members or other faculty in the students' chosen field of specialization. The purpose is to synthesize coursework, fill in gaps, and expand knowledge needed as a professional in the specific field. The final exam is the comprehensive exam in the major field. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review IV, and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6040 Comprehensive Review IV: Knowledge in Minor Areas or Subfields (4 Credits)**

Students work individually or in small groups with faculty in the students' chosen subfield or minor area of study, or with the dissertation advisor on a deeper area of specialization within the professional field. The final exam is the comprehensive exam in the subfield or minor area. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review III and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6991 Independent Study (1-10 Credits)****RLGN 6995 Independent Research (0-10 Credits)**

Joint Doctoral Program students use these credits as they work on their dissertations, beginning upon completion of comprehensive exams. Normally 8 credits are completed by each student.

**Courses****RLGN 4000 Theories and Methods in the Study of Religion (4 Credits)**

This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When we reach the modern period, the course shifts to considering 'representative' theories of religion, broken down roughly along ideological and/or disciplinary lines.

**RLGN 4105 Empire and the Rise of Christianity (4 Credits)**

This course covers approximately the first five centuries of Christian history with a view toward understanding the role empire played in the rise of Christianity, both in terms of the confluence between Christianity and the Roman Empire as well as its role in the development of Christian beliefs, practices, production of discourse, institutions, and strategies of social control.

**RLGN 4106 Second Century Life & Thought (4 Credits)**

An attempt to understand Christian life and thought in the Roman Empire in the Second-century by analyzing primary sources.

**RLGN 4107 Women in Early Christianity (4 Credits)**

An exploration of the role women played in early Christianity, with attention given to the social and literary constructions of women in Greco-Roman antiquity.

**RLGN 4108 Jewish and Christian Non-Canonical Literature (4 Credits)**

This seminar examines Jewish and Hellenistic backgrounds; the social scientific study of early Christianity; and the New Testament in its literary environment.

**RLGN 4109 Formation of the Bible (4 Credits)**

This course focuses on the development of the Christian Bible. Some attention, however, will be given to the emergence of the Jewish canon, primarily as it relates to and impacts the Christian canon. The chronological expanse of the course ranges from the Hellenistic through the late Roman period. The approach of the course is necessarily literary and historical, but theoretical issues about what constitutes scripture and canon will also be given attention.

**RLGN 4110 Hebrew Reading (2 Credits)**

Advanced work in biblical languages or a selected issue in a language study.

**RLGN 4111 Greek Reading (2 Credits)**

Selected readings from the New Testament and other early Christian literature. Greek I, II and Exegesis are prerequisites Offered each year. May be repeated for credit.

**RLGN 4113 The Bible and Its Afterlives: Jonah (4 Credits)**

This course invites students to place the biblical book of Jonah in conversation with works of literature, art, and theology that interpret Jonah or explore themes in the book, including the nature of God, prophecy, election, death, and transformation. The course will introduce students to the history of interpretation (or reception history) by considering Jonah's afterlives in a variety of Jewish, Christian, and Islamic texts, artistic programs, and manuscript illuminations.

**RLGN 4115 Hebrew Bible Literature: Genesis (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4116 Hebrew Bible Literature: Exodus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4117 Hebrew Bible Literature: Leviticus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4118 Hebrew Bible Literature: Numbers (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4119 Hebrew Bible Literature: Deuteronomy (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4125 Hebrew Bible Literature -Job (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4128 Hebrew Bible Literature: Jeremiah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4129 Hebrew Bible Literature: Jonah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4130 Hebrew Bible Literature: Prophetic Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4131 Hebrew Bible Literature: Wisdom Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4135 Poetry in the Hebrew Bible (4 Credits)**

In this course, we will analyze poems primarily from the books of Job, Lamentations, Psalms, 2 Isaiah, and Jeremiah. Class sessions will be divided between studying some aspect of Hebrew prosody (e.g., metaphor, parallelism, lineation) and looking at the ways in which various poets use these particular devices. We will be particularly interested in identifying how poets bring their messages to life, engage their audiences, challenge (or uphold) the status quo, and revitalize the community's imagination and, in turn, its faith in YHWH. Each week, we will read about a particular aspect of poetry and prepare specific poems with the readings in mind; the readings will provide us with a language that we might discuss specifically how the poets impart and encode their messages.

**RLGN 4141 New Testament Literature: Mark (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4142 New Testament Literature: Luke (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4143 New Testament Literature: John (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4144 New Testament Literature: Acts of the Apostles (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4145 New Testament Literature: Romans (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4146 New Testament Literature: Corinthians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4147 New Testament Literature: Galatians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4148 New Testament Literature: Hebrews (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4150 New Testament Literature: Revelation (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4151 Studies in Early Christianity (4 Credits)**

A critical study of themes and selected movements within early Christianity and other religions of the Greco-Roman world. May be repeated for credit.

**RLGN 4152 Identity in the Hebrew Bible (4 Credits)**

This course explores diverse constructions of selfhood in the Hebrew Bible in conversation with theories of identity and the self from a range of disciplines, including anthropology, philosophy, sociology, and psychology. In this class, we will consider how the biblical texts present different models of selfhood through discourse, practice, and ritual. Each class session will focus on a different aspect of identity: gender, social class, ethnicity, nationality, colonialism, the body, and kinship and family. Throughout the course, we will discuss the implications of these constructs of identity for ethics, agency, and theology.

**RLGN 4153 War, Politics, & Society in the Hebrew Bible (4 Credits)**

This course examines the interrelationship between war, politics, and society in the Hebrew Bible and their interplay both in the texts and in larger historical, social, and cultural contexts.

**RLGN 4154 Migration and the Bible (4 Credits)**

Migration and people on the move pervades the Bible, from Adam and Eve to Jesus. This course examines migration in the Bible and the resources it offers for responding to the current realities of migration, immigration, exile, deportation, and other aspects of migration in the world today. A range of perspectives on migration and the Bible are considered, including denominational resources, international aid agencies, and theoretical viewpoints.

**RLGN 4155 Being Human in the Bible (4 Credits)**

What does it mean to be human, according to the biblical writers? This is both a simple and complicated question to ask, much less answer. How it is addressed has important consequences. A range of perspectives and answers to the question therefore will be taken up in this course. These can include life and death, gender and sexuality, technology, education, family relations, politics, peoplehood, ecology, human vs. animal, philosophy, and economics. These perspectives and answers are engaged in pursuit of gaining a greater appreciation for how one might think through this question.

**RLGN 4160 Teaching the Bible (4 Credits)**

Designed to integrate faith development theory, biblical interpretation and confluent education. Education instructional models for the purpose of assisting students to develop professional self-understanding and functional skills as interpreters and teachers; experience in teaching adults in a local setting.

**RLGN 4161 Queering Early Christianity (4 Credits)**

This course surveys some of the major influences of queer theory on the study of the New Testament and early Christianity, beginning with the work of Judith Butler and continuing through the contributions of queer theorizations inflected by affect, violence, diaspora, race and racialization, and trans discourses. The course considers a variety of canonical and non-canonical texts and practices from the first centuries of the Christian tradition, with an eye to how theorizations of queerness help frame inquiry into the formation of Christian "identity" and belonging.

**RLGN 4162 Minoritized Interpretation of the New Testament (4 Credits)**

Though the academic study of the New Testament has long been controlled by European and North American institutions and persons of European descent, recent decades have seen a surge of other perspectives that are sometimes collected under the heading of "minoritized." These perspectives include postcolonial and decolonial approaches, and methods centered on racial or ethnic identities, geographies, cultures, shared historical experiences, and gender and sexuality, to name a few. This course considers these forms of interpretation together and separately, as ways of reading biblical texts outside of the field's historical biases.

**RLGN 4204 Multi-Cultural Pastoral Care & Counseling (4 Credits)**

Examines multicultural issues in pastoral care and counseling and explores the dynamics and complexities of culture, race and other socializing factors in pastoral care conversations.

**RLGN 4205 Introduction to Process Thought (4 Credits)**

This course provides an overview of Process Theology from its early developments out of Process Philosophy to its current incarnations in theo-poetics, ecological civilization, and radical interrelationality.

**RLGN 4206 Spiritual Care of Trauma (4 Credits)**

This advanced course integrates knowledge, capacities, and skills for practicing justice-seeking, interreligious, and research-literate spiritual care of trauma. This course draws upon psychological research on trauma and spiritual struggles. Readings on socially just spiritual care focus on practices, beliefs, and values that lament harm done by religiously based violence. A spiritually integrative pedagogy uses (1) body-based self-care practices and deep listening conversations about self-care; (2) self-assessment of one's interpersonal capacities for deep interreligious listening; (3) a qualitative analysis of one's spiritual orienting system (self-care practices, struggles, values, and beliefs) embedded in conversations about one's spiritual practices; (4) spiritually integrative assignment about a personal experience of trauma; (5) conversations with a learning partner and Dr. Doehring about this integrative assignment. These experiential components help students develop capacities for spiritual self-differentiation, empathy, and reflexivity. These experiential components are designed to help students integrate critical theory and research into practices of spiritual self-care, integration, and interreligious deep listening.

**RLGN 4207 Moral Stress, Resilience & Spiritual Integration (4 Credits)**

Moral stress arises from shame/guilt/fear of causing harm involving conflicts in values. Moral injury arises from traumatic stress that is more shame than fear based, and has been researched extensively among military personnel. Spiritual integration of moral stress and injury uses spiritual practices and theological meaning-making to compassionately identify life-limiting embedded shame-based values, beliefs, and ways of coping with moral stress and injury (lived theologies) in order to compassionately understand the origins of moral stress and injury. Relational resilience is the outcome of spiritual integration based on spiritual practices fostering compassion and more complex theological ways of understanding moral conflicts, stress and injury.

**RLGN 4208 Erik Erikson: Resource for Pastoral Care (4 Credits)**

This course explores Erik H. Erikson's life cycle theory as a resource for the pastoral care of children, adolescents, young adults, adults, and older adults. Attention is given to Erikson's psychoanalytic orientation and the development of his life cycle theory over the course of his career. The course encourages the use of developmental theory to deepen the student's introspective reflection and vocational orientation. By focusing on the work of a single author, this course is meant to illustrate how a pastoral theology student may use the work of a prominent psychologist in the development of a dissertation topic.

**RLGN 4209 Spiritual Care in Pluralistic Contexts (4 Credits)**

This course helps students learn emergent pastoral theologies of spiritual care in a pluralistic context and use them to reflect on case studies written by experienced practitioners. In this course, students will identify their personal values, attitudes, and beliefs and examine their own social identities to better understand how these dimensions of self can guide and challenge them in reflecting on spiritual care with those who are different from them.

**RLGN 4210 Theories of the Self in Pastoral Theology (4 Credits)**

This advanced course introduces students to psychological concepts and theories of the self that are operative in pastoral and spiritual care and counseling. Toward that end, this course traces understandings of the self within the works of pastoral theologians, psychologists of religion(s), and practitioners in pastoral and spiritual care. Particular attention will be given to identity formation, relationality, interdependence, and psychic-injury.

**RLGN 4220 Research Methods and Ethics in Lived Religion/Practical Theology (4 Credits)**

This course introduces students to a variety of qualitative and quantitative approaches to rigorous scholarly research in lived religious contexts, as well as to particular ethical challenges and questions that such approaches may elicit. Students will also be introduced to the Institutional Review Board (IRB) process as a foundational component in developing a critically informed, contextualized methodology for any research-based project in the fields of lived religion and practical theology.

**RLGN 4302 Buddhist Philosophy (4 Credits)**

An introduction to the Buddhist philosophical tradition that covers both the different philosophical movements within Buddhism as schools of thoughts and major philosophical issues, such as the theory of karma and determinism, the nature of mind, proofs for past and future lives, theories of knowledge, ethics, the doctrine of emptiness and the nature of enlightenment.

**RLGN 4303 Sacred Space and Place in Comparative Perspective (4 Credits)**

This course examines sacred spaces and sacred places from a comparative perspective. Through close reading and discussion of primary and secondary sources, students are challenged to think critically and theoretically about sacred spaces and places.

**RLGN 4304 Material Divinity (4 Credits)**

This course explores how religion happens in material culture- broadly defined as images, devotional and liturgical objects, architecture and sacred space, works of art, and mass-produced artifacts.

**RLGN 4305 Pilgrimage in Comparative Perspective (4 Credits)**

This is a comparative course that examines the dynamics of pilgrimage from a number of different angles - theoretical, doctrinal, ritual, social - and which utilizes a variety of sources - including classical, ethnographic studies of actual pilgrimages, and focused studies of particular pilgrimage places - with the goal of gaining a thorough understanding of the phenomena of pilgrimage in all of its complexity.

**RLGN 4321 Islam and Gender (4 Credits)**

This course examines issues surrounding gender and sexuality in Islam. Through a close reading of religious texts, critiques of patriarchy, and historical studies, students are challenged to think critically about the construction of gender roles and the regulation of sexual practices in Islam. By the conclusion of the class, students gain insight and understanding regarding the ways modernity has radically altered norms surrounding gender and sexual preference in Muslim-majority societies.

**RLGN 4322 Interreligious Dialogue: A Critical Analysis (4 Credits)**

This course exposes students to the theory and practice of interreligious dialogue (broadly defined) and the issues raised by interreligious dialogue, such theologies of religious pluralism, secularism, religiously motivated violence, and religion and public life. Students have opportunity to read critical scholarship on these topics generally, as well as study specific cases where points of contact occur between religious groups—either in terms of dialogue (or other mutually edifying endeavors) or conflicts that have arisen between religious groups. In the process students will also learn about some of the more prominent organizations working in interreligious dialogue.

**RLGN 4401 Race, Gender, Class: Historical & Social Analysis of Racism in the Modern World (4 Credits)**

An historical survey of the role of racism, sexism and classism in shaping the oppressive institutional structures of the existing world order and of how sociological analysis of these structures can help justice and peace activists direct effective action toward the elimination of race, gender and class oppression.

**RLGN 4402 American Indian Cultures and Worldview (4 Credits)**

A survey of the worldviews of Native American people, as these pertain to both inter-tribal beliefs and Native American ceremonial life, with an attempt to show how Native American practice proceeds from their worldview.

**RLGN 4403 Sects, Cults & New Religions (4 Credits)**

An exploration of non-mainstream religious groups. Topics include innovation and recruitment; "cult" controversies; sectarian Christianity, gender and sexuality; UFO religions; and religion and marginalized racial projects.

**RLGN 4404 Race and Religion in the United States (4 Credits)**

An exploration of the different ways in which race is understood religiously in the United States and how race impacts both white and racial minority religious institutions. Specific topics include the black church, the Nation of Islam, Native American theology, the Christian far right, Asian American religions, Latino/a religions, and multiracial congregations.

**RLGN 4405 Social Construction & Selfhood (4 Credits)**

This course invites us into a collection of investigations into the intersections of social structures and individual identity or selfhood. While reading in a variety of disciplines and genres, we are drawn together around the questions of how one understands the possibilities for individual or communal agency in light of the formative, systemic power of social structures and institutions. Beyond conceptual understanding of this relationship, we ask questions of how to encourage coherent religious, educational, and other forms of practice in light of the realities of social construction. These reflections are particularly important for persons who are interested in social change and the very real barriers to its generation.

**RLGN 4406 Education and Social Change (4 Credits)**

This course investigates the role of education in maintaining and transforming social structures, identity, and commitments. We examine how educational practices can contribute towards social change in both religious and public settings.

**RLGN 4407 Ritual Studies (4 Credits)**

By reading some of the most important "classic" and recent theorists of ritual, and by learning to observe and understand ritual behavior, this class will examine the important role of ritual in defining religious groups, creating religious identity, forming religious beliefs, and structuring how we view the world. Prerequisite: Masters students need permission of instructor.

**RLGN 4408 Science & the Christian Right (4 Credits)**

An examination of the American Christian Right's challenges to mainstream scientific theories and practices. Specific topics include Intelligent Design movement, reparative therapy of homosexuality, denial of human-driven climate change, and opposition to stem cell research.

**RLGN 4409 Social Movements from Liberationist Perspectives (4 Credits)**

Liberationist thought has greatly impacted how social movements, and the theological and ethical perspective which inform them, has been implemented to bring about social and political change since the mid-twentieth century. But with the state of the new millennium, many have proclaimed the death of liberation theology, dismissing its significance as a passing fad. The purpose of this course is to explore the roots, development, and history of liberationist thought as it first manifested itself within a Latin American context then expanding to other continents and faith traditions, and how that thought has been utilized to inform social movements.

**RLGN 4410 American Christianity and Indian Genocide (4 Credits)**

A collaborative research seminar exploring different aspects of the history of the relationship between American Christianity and genocidal campaigns against native peoples, including the colonial period through the 20th century. Students will research particular personalities and historical events related to this topic, including the campaigns of the military on the 18th century Western frontier, sites of massacres including Sand Creek in Colorado, and other events normally obscured by accounts of US history. Students will learn the relationships of ideology and worldview to the narration of history, as well as skills in identifying and working with primary historical sources.

**RLGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)**

Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.

**RLGN 4413 Theology and the Construction of Race (4 Credits)**

Several important books have recently been published making the case that religion, and more specifically, Christian theology, have played a constitutive role in creating the ideas of race and racial hierarchies. This course is an extended argument (with which students are free to agree or disagree in part or in whole—in any case they will become familiar with the relevant literature and concepts) that 1. In significant ways religion and race are modern, not universal or permanent, constructions; that 2. Religion and race are two of the very few fundamental conceptual building blocks of the modern world, such that, no matter what one thinks of religion and race, one is unable to think or operate in the modern world without them; and that 3. Religion and race are mutually imbricated in such a way that, even when race is not explicitly a topic of discussion or observation, modern religion is always already racialized.

**RLGN 4414 Atheists, Secularists & Nones (4 Credits)**

An examination of non-religious and/or non-affiliated populations, with a primary focus on the United States. We will explore: 1) the variety of beliefs among those not affiliated with religious institutions; 2) different social expressions of atheism; 3) the implications of recent religious trends for debates about secularization in the modern West.

**RLGN 4415 Environmental Racism: The Problem with Water (4 Credits)**

The course seeks to develop a constructive conversation on the intersection of environmental racism and water by examining significant issues surrounding present-day issues the degradation of water quality its negative impact on communities of color. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.



**RLGN 4416 Decolonizing Theories and Methods (4 Credits)**

Religious studies draws from multiple disciplines which include anthropology, history, feminism, transnationalism, empire studies and sociology. Often, students approach theories and methods by reading classic authors and mainly contemporary eurocentric scholars of religion. This course will approach theories and methods from through the lens of decoloniality, concentrating of the perspectives and contributions emerging from the margins of eurocentric thought.

**RLGN 4417 Still Black Post-human: Blackness Beyond Posthumanism (4 Credits)**

Blackness waits at the door. It sits in the room. It seeps into crevices. It disrupts stable sensibilities. It is the abyss. It is an overwhelming presence of life and the beyond. And it waits. This course will explore many presentations of Blackness as an ontology, material essence, and tangible modality. In doing so, this course will not only explore ontomateriality of Blackness, but present a case for it as an integral framework to engage posthumanism's proclivity to emphasizes animal studies and ecology while holding fast to liberalism's damaging modes of uncritical inclusivity. This is important to the state of the theological experiment as James Cone insisted Blackness is the key to global salvation over 50 years ago. With recent moves to decenter human exceptionalism, shifts in focus to future realities, and intentional re-imaginings of the human-creature-divine relationship. It is important to continue to unravel humanist descendent offerings. As such, this course will provide a lens to investigate/disrupt the potentiality that posthumanity presents, pushing beyond its less obviously regressing boundaries, towards liberative future realities.

**RLGN 4418 Decolonizing Congregational Leadership (4 Credits)**

This course explores the applications of postcolonial and decolonial discourses to the theory and practice of parish leadership, particularly within Christian congregational contexts. Students will reflect on leadership praxis across several areas (i.e., euro-western constructions) of congregational life including: worship and liturgy, education and formation, organizational culture, and missions. As a whole, the course interrogates notions of tradition, practice, and leadership identities in the context of congregations toward the de/construction of lived realities.

**RLGN 4501 Holy Spirit: History and Traditions (4 Credits)**

What have Christians believed and written about the Holy Spirit through the centuries? Why does Pentecost show up in such different ways across the pages of Christian theology and literature? In the midst of the European Enlightenment, why did John Wesley hold such special reverence for the role of experience in Christian thought and education? Why has the Pentecostal legacy functioned simultaneously as a subversive trope for critiquing dominant church paradigms while also sparking creative, re-interpretations of Christian tradition among so many reformers? These are just a few of the questions explored in this class as we discuss historical and theological works by contemporary scholars in pneumatology and church history.

**RLGN 4502 Historiography (4 Credits)**

This course surveys the various theories and methods developed by historians since the emergence of the historical profession from the roots of historicism and philosophy of history in the mid-1800s; and examine the relationship of history to theology, cultural theory and literary studies.

**RLGN 4503 Women in Medieval Europe (4 Credits)**

This class focuses on the role of medieval women, who struggled to find a voice in the political, religious, social and literary arenas of medieval Europe from about 1100 to 1600. Through primary and secondary source readings we look at everyday women's lives in this period. The class also includes the lives and careers of some of the most famous women writers and leaders of the period, such as Hildegard of Bingen, Eleanore of Aquitaine, Marie de France, Margery Kempe, Julian of Norwich, Queen Isabel of Castile, Teresa of Ávila, and Queen Elizabeth I of England.

**RLGN 4504 Muslims, Jews and Christians in Medieval Spain (4 Credits)**

An exploration of the "Golden Age" of cross-cultural encounters that occurred in Medieval Spain from the Muslim conquest in 711 to the fall of Granada and the expulsion of Jews in 1492. This course offers an overview of the historical and ecumenical dimensions of Jewish, Christian, and Islamic coexistence, known as "La Convivencia," and critical reflection on the relevant lessons this era still holds in the post 9/11 period.

**RLGN 4505 Spanish Mystics and Reformers (4 Credits)**

Early modern Spain witnessed the emergence of Catholic and Protestant individuals whose timeless works and popular appeal in subsequent centuries rested largely upon the practice of "contemplation in action." This course examines the historical context and works of such mystics and reformers as Teresa of Ávila, John of the Cross, Ignatius of Loyola, Juan de Valdés, Constantino Ponce de la Fuente Cipriano de Valera, Casiodoro de Reina, Antonio del Corro, and others, and others. It also explores the influence of Islam and Judaism on these sixteenth century religious movements, as well as modern Spain's subsequent rejection of this pluralistic legacy as it sought to define the young nation-state sought to define its new national identity and consolidate power across Europe and its vast colonial territories in the Western Hemisphere.

**RLGN 4506 The Pursuit of Happiness: A History (4 Credits)**

This course provides a historical examination of key concepts, major questions, and practices about humanity's search for happiness from the Hellenistic-Roman period of Antiquity through the Early Christian and Medieval periods. The content centers on the role of Classical moral philosophy and Christian theology in the formulation of eudemonic theories about the problem of happiness in relation to metaphysical and religious influences as well as to socio-cultural, political, and institutional norms and practices that shaped Christian notions of human purpose and potential. The legacies of these ancient ideas on the development of modern assumptions about happiness and human flourishing are also discussed towards the end of the course.

**RLGN 4507 Violence & Tolerance in Medieval Europe (4 Credits)**

This course examines a wide range of texts and events from the 11th to the 16th centuries dealing with various forms of violence across the medieval European world and contrasts these with medieval European notions of toleration in theological, literary, and political discourse. Among the topics to be covered will be the Peace of God and the Truce of God, feudal warfare and its legacy, the Crusades and their impact upon the Latin West as well as the on Arab East, anti-Semitism in the Latin West, the Inquisition, persecution of heretics and witches, Church and State struggles, and the various dialogues of mutual, theocentric edification among Islamic, Jewish, and Christian authors.

**RLGN 4508 Judaism, Gender, and Religion (4 Credits)**

Germans refer to the period of roughly 1770-1850 as the Sattelzeit, or “Saddle Era”—the time between the end of the early modern world and Europe and the modern world. During this era basic assumptions that we continue to make about what religion is and what gender is are constructed. This is also the era when what we think of a Judaism is re-shaped in major ways. Through a close reading of primary texts by Jewish women we will examine the intersection of gender, Judaism, and religion and examine the modern construction of these categories.

**RLGN 4509 Jewish Christian Relations 50-500 C.E. (4 Credits)**

This course considers the “parting of the ways” between Judaism and Christianity, beginning with the tumultuous first century (the Jewish War and the beginnings of the Jesus tradition) and continuing through the synthesis of Christianity and Empire in late antiquity. Along the way, we will consider how Christianity and Judaism emerged from a common matrix, influenced and co-created each other, and Othered each other in their processes of self-definition. We will attend especially to the problems with the “World Religions” model, ancient identity formation, the origins of Christian anti-Semitism, the effects of empire and diaspora, and modern attempts to explain the “parting.”

**RLGN 4520 Religion and Film (4 Credits)**

Can film elicit the holy? Does the story of Jacob and Esau look different when told by a North African filmmaker? How does a Buddhist sensibility shape the form of Japanese films? Can we ask theological questions about secular films? In this course films are the primary texts, supplemented by readings, lecture and discussion. Students develop the film literacy and theological and theoretical acumen to explore these and other interactions between religion and film in cultural context. While there is no explicit prerequisite, background in film or literary criticism and/or theological or religious studies is helpful.

**RLGN 4604 Religion in the Public Square (4 Credits)**

What is the proper role of religion in the public debates necessary to healthy democracy? Some argue that religion in the public square threatens the fundamental democratic right the freedom of conscience; others that only religion can insulate the communal values that make democracy possible. This course examines the best and most prominent arguments in this contemporary debate.

**RLGN 4605 Feminist Theology (4 Credits)**

Analysis of feminist theology with attention to methodological issues, the relation of contemporary feminist visions to historical material, the ideas of God/Goddess and the question of what it means to be female. Prerequisite: At least one introductory level theology course.

**RLGN 4607 Liberating Sex (4 Credits)**

The purpose of the course is to search the Christian Scriptures, in spite of its accusations of being patriarchal, to find biblically-based guidelines for developing an ethical sexual lifestyle that is aware of how racism, classism, and specifically sexism influences the current conversation on sexual ethics. This course focuses on developing healthy models that foster intimacy and vulnerability for a disjointed and at times oppressive community.

**RLGN 4608 Latinx Theology and Ethics (4 Credits)**

The primary sources of Latinx theological and ethical thought are read to discover its foundational tenets. The course explores this contextual approach to religion to discover how it could serve to liberate the Latinx community from prevalent oppressive social structures. Comparisons are made with Eurocentric ethics and theology.

**RLGN 4609 Queer Theory, Theoethics & Activism (4 Credits)**

Queer theory has transformed religious thought in extraordinary ways especially over the course of the past four decades. This course explores the nature of queer theory as a discipline within and outside of the religious academy. This course also invites students to explore the ways that queer theory intersects with theories of race and praxes of activism.

**RLGN 4610 Ethics of Neoliberalism and Globalization (4 Credits)**

People of faith have responded to the triumph of the free market economy around the world in a variety of ways. To some, “neoliberalism” seems to hold the key to sustained economic growth worldwide and, eventually, to nothing less than the eradication of poverty itself. To others, it represents the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further Christian ethical values, or subvert them?.

**RLGN 4611 Theology and the Challenge of Postmodernism (4 Credits)**

An examination of representative postmodern thinkers, how they have changed the context for theology, and how theology has responded to them.

**RLGN 4612 African Theology and Post-Colonial Discourse (4 Credits)**

This course attempts to examine the relationship between the emergence of African Theology and the historical conditions which characterize Africa's encounter with the European/American will to power. The initial hypothesis to be tested is the claim that the will to power provides the locus classicus for formulating the identity of African theological reflection. This makes the latter a part of a much larger discourse on Africanity. The course takes the student through a close reading of basic texts produced by African theologians themselves. All the major issues characteristic of the discourse of African Theology is dealt with.

**RLGN 4613 Augustine and His Influence: 400 C.E. to 1000 C.E. (4 Credits)**

Theological contribution of the great North African Bishop; his major writings, such as Confessions, City of God and The Trinity; and his anti-Pelagian, anti-Donatist, and anti-Manichaean writings.

**RLGN 4614 Liberation Theologies (4 Credits)**

Consideration of contemporary liberation movements with focus on feminist, black and Third World theologies. Special concern is with what the various perspectives of sex, race and class analysis suggest for one another and for theology and social ethics generally.

**RLGN 4615 Being Human in the Modern World (4 Credits)**

What does it mean to be human? After a brief survey of traditional Christian answers to this question, we focus on the theological anthropology that has become the de facto theory of human nature since the emergence of the modern western world in the early 19th century. Theological anthropology can be the driver of other doctrines in a systematic theology; it also underpins work not necessarily seen as theological, such as ethics, development, and human rights. A rich understanding of this anthropology is necessary for theological reflection in our current context.

**RLGN 4617 Forgiveness (4 Credits)**

In the histories of philosophy and religions, 'forgiveness' emerges as a grounding concept for thinking about God, self, and community. This course examines core texts and contexts within a range of religious, philosophical, and theological discourses on forgiveness, 'loving the enemy', and reconciliation. The course explores a variety of spaces of forgiveness as well as the possibility that the 'impossibility of forgiveness' must be allowed to emerge as a valued theological, ethical, and civic principle of personal and communal identity.

**RLGN 4618 Doctrine of God in the Modern World: The Pantheism Controversy (4 Credits)**

What is the most fruitful model for thinking about God? There are a few perennial options, each of which have social, political, and ethical implications in addition to metaphysical ones. In the post-Enlightenment world a version of the pantheism model swept through philosophers and theologians, Jews and Christians, raising issues which, if possible, are even more pressing in our post-Christian context. The so-called Pantheism Controversy has the advantage of not only unpacking all the issues involved in the various models of God, but of also being a good story of the personal lives and relationships of a fascinating group of people. This course introduces students to the most pertinent writings from this controversy and engages theological and philosophical work, influenced by the controversy, from our own contexts.

**RLGN 4619 Christian Theology and Disability (4 Credits)**

Using the category of "disability" as a starting point, this seminar examines constructive theologies in which attention to human vulnerability, limitation, and interdependence is fundamental to religious thought and practice. It presents "ableism" as a form of social injustice, emphasizing its intersections with other forms of oppression. It names Christianity's past and present complicity in ableism, while also highlighting the tradition's resources for effective opposition. Consideration expands beyond persons with disabilities to include common phases of life like infancy and frail old age. The course's primary aim is to equip students to articulate theologies that affirm that which ableism devalues.

**RLGN 4620 Fanon, Foucault and Friends (4 Credits)**

This course reads the primary sources of post colonialists (mainly Fanon) and postmodernists (mainly Foucault) to explore creating ethical approaches to globalized manifestations of race, class, and gender oppression. Special attention is given to the use of Christianity as a liberationist response to global structures of oppression in spite of its historic use in causing much of said oppression.

**RLGN 4621 Kierkegaard and Existential Theology (4 Credits)**

Kierkegaard and the origins of existentialism; twentieth-century forms of existentialism and recent developments; the decline of neo-orthodoxy and resurgence of phenomenology.

**RLGN 4622 Schleiermacher as Resource (4 Credits)**

Consideration of the theology of Friedrich Schleiermacher. Analysis of the philosophical and theological predecessors of Schleiermacher as well as the tradition of theological liberalism that followed him.

**RLGN 4640 Doing Christian Ethics from the Margins (4 Credits)**

Many of us have been taught religion through the eyes of white, middle-class males. How then do we do ethics from the perspective of the disenfranchised? The aim of this course is to enable students to: construct ethical responses to case studies from the perspectives of those suffering from race, class and gender oppression; to investigate Biblical protest narratives as to the resistance and struggle against race, class and gender domination and oppression; and to examine various liberationist ethical interpretations as a source for overcoming dominant religious power structures.

**RLGN 4641 Formative White Male Ethicists (4 Credits)**

This course on formative white male figures in Christian Ethics examines the ethical canon from a historical perspective. Special attention is given to texts and traditions as living changing heritages.

**RLGN 4642 Theology and the Rise of the Historical Consciousness (4 Credits)**

Theological work today is done in the context of the rise of the historical consciousness, a phenomenon with its roots in the late 18th and early 19th centuries. We inherit a fundamentally different worldview from the worldviews of the ancient and medieval worlds that gave rise to many of the classical Christian practices and beliefs, and different from contemporary non-western worldviews. The historical consciousness leads to a particular set of assumptions about Biblical authority, identity and subjectivity, epistemology, the relationship of individuals to communities, etc. This class examines important texts in the development of the historical consciousness, analyzes issues raised for Christian theology, and points to some of the theological resources developed in its wake.

**RLGN 4643 Women and Christian Theologies from the Global South: A Postcolonial Feminist Approach (4 Credits)**

This course is a critical study of the challenges and contributions of Christian feminist theologies from the global south to theological studies in North America, particularly, Christian feminist theologies. Framed in postcolonial discourses, this course will study works of representative figures in Christian feminist theologies from Africa, Latin America, and Asia. Topics will include the impact of globalization, postcolonial discourse, religion and culture, sexuality and spirituality, and ecological concerns.

**RLGN 4644 Environmental Ethics and Global Hunger (4 Credits)**

The course seeks to develop a constructive conversation on the causes of global hunger by examining significant issues surrounding the present-day distribution of food and its negative impact on the environment. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

**RLGN 4645 Artificial Intelligence and What It Means to Be Human (4 Credits)**

Artificial Intelligence raises pressing questions about machines: Are they really intelligent? Can they have consciousness? Ought they have moral status? Are algorithms related to computers like minds are to bodies? Do smart machines change the relationship of humans to technology? Each of these questions, in turn, is actually a question about human nature: What are the kinds of human intelligence, and are they unique to humans? Why do humans have moral status? What kinds of embodiment are essential to humans? (Do we include things like race and gender?) Are humans tool-users, or did we evolve as humans because of tools? In that case, have humans always been cyborgs? Questions about human nature are one of the classic theological loci, falling under the rubric of theological anthropology. In other words, religious traditions have thousands of years of deep thinking on these questions that are being raised in new ways (as Nick Bostrom has famously argued, AI is like "philosophy with a deadline"). This course is a sophisticated but non-technical introduction to the history of AI and to the tools and ideas of AI in its current forms. We will cover the most important ethical issues with which AI confronts us, and bring the resources of philosophy and theology to tackling some of the questions of human nature raised by AI.

**RLGN 4646 Ethics in an Age of Plagues, Pestilence, and Pandemics (2 Credits)**

The world is gripped by a deadly pandemic. This is neither the first time, nor probably will be the last. What we do know is in the aftermath of such deadly epidemics, the societal bonds which once held community together are frayed if not completely broken as radical changes take hold and new ways of being arise. This course will wrestle with the importance of maintaining a moral compass during crisis and an ethical vision as a new reality is constructed. Special attention will be given to how not all suffer equally, and the roles of racism, classism, and sexism during national emergencies. Finally, the course would assist the student in finding their own ethical voice during a time of hopelessness and desperation.

**RLGN 4647 Jesus for Christians and Non-Christians (4 Credits)**

Who is Jesus of Nazareth, and what is his relationship to Jesus Christ? This course will examine this central question in multiple religious and non-religious cultural contexts. We will use the methods of comparative theology to read ideas about Jesus in the contexts of Christianity, Islam, Judaism, Paganism, Spiritual But Not Religious (SBNR), and non-theistic texts. Students will compare and contrast these ideas of Jesus to create their own understanding of Jesus' narrative and his relationship to our present world in their particular context.

**RLGN 4648 Biblical Ethics (4 Credits)**

Anyone who reads the Bible does so from a particular social location. We are all born into an on-going society that shapes us. When we turn our attention to the biblical text as the source of our ethical perspectives, we participate in a dialogue between the written word and the meanings our community taught us to give to these words. Many of us have been taught to read the Bible through the eyes of white, middle-class males. Yet, can the text liberate those who are oppressed? To do so, it must be read with the eyes of the disenfranchised. This course will explore how the Bible can be used to bring about justice for those who suffer due to race, class and gender oppression.

**RLGN 4649 WOMANIST THEOETHICS (4 Credits)**

This course will focus on the canonical works of womanist theology and womanist ethics. Students will read the seminal texts of first wave womanist theologians and first wave womanist ethicists. Students will also read works by third wave womanists and evaluate how these texts build upon the canonical works to form what is known as the Womanist House of Wisdom. The course will seek to examine how pioneer womanist scholarship was interpreted in its historical context and how the discipline of womanist religious thought in theology and ethics was formed. Students will also explore womanist methodologies and how they can be operationalized by people outside of Black female embodiment. Finally, students will learn how womanist theoethics is used in womanist social justice praxis, pastoral care, and preached in congregational settings.

**RLGN 4650 Advanced Practical Theological Research (4 Credits)**

This collaborative seminar provides an opportunity for students to explore the process of practical theological research for their own dissertation projects and to work collaboratively to shape research that is impactful and compelling. Students will establish the theoretical framing of their project through deep engagement with a body of literature relevant to their topic, engage in rigorous contextual analysis of their research site/community, and begin the descriptive work necessary for their particular question, and in doing so refine their research question and appropriate self-reflexive research strategies necessary to their project.

**RLGN 4651 Social Issues, Social Ethics (4 Credits)**

The purpose of this course is to examine social issues through the lens of Christian Social Ethics. Students will learn about the discipline of Christian Social Ethics with focused learning on ethics from the margins and the ethics of responsibility. Students will learn how to analyze social issues through a Christian social ethical framework. A component of the course will focus on student leadership development with assignments that will develop students as leaders through the course's focus on skill development. The social issues examined in the course will vary each time the course is taught.

**RLGN 4701 Topics in the Study of Religion (0-4 Credits)****RLGN 4702 Topics in Biblical Studies (0-4 Credits)****RLGN 4703 Topics in Theological Studies (0-4 Credits)****RLGN 4761 Social Ethical Issues (4 Credits)**

Examination of the scope of Christian social ethics and the relationship of the analytic and diagnostic task to normative and prescriptive endeavor. May be repeated.

**RLGN 4762 Justice & Peace Struggles (2,4 Credits)**

Regular offerings include "Columbusday and the History of Christian Denial," "Justice in Native America," and "Church and the Colonial Residual: Pine Ridge, the Black Hills, Missionaries and Indian Justice.

**RLGN 4991 Independent Study (1-4 Credits)****RLGN 5000 Pedagogy and the Teaching of Religion (4 Credits)**

This course looks at pedagogical methods as they relate to the teaching of religion. Students design syllabi and materials appropriate for the teaching of religion in at least two different contexts. In addition, the course covers theoretical issues related to the teaching and learning process.

**RLGN 5010 Lived Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on religion as it is lived by persons and communities. The specific theme of the colloquium changes each time it is taught.

**RLGN 5020 Conceptual Approaches to Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on conceptual approaches to the study of Religion. The literature may focus on specific issues, concepts, and/or social and cultural phenomena. The specific theme of the colloquium changes each time it is taught.

**RLGN 5030 Religion in Text, Image, and Artifact Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on texts, images, and/or artifacts through which religion, culture and worldview can be studied. The specific theme of the colloquium changes each time it is taught.

**RLGN 5101 Methods for Interpreting Biblical Texts (4 Credits)**

This seminar addresses critical study of biblical texts, the history of interpretations and hermeneutics.

**RLGN 5102 Religious Identity in Antiquity (4 Credits)**

An exploration of the way individuals and communities understood their religious beliefs and behaviors during the Hellenistic and Roman periods. The focus is on varieties of Jews and Christians (including how they formed their identities in relation to each other), but consideration is also given to the Greco-Roman religious context.

**RLGN 5750 Professional Development (0 Credits)**

This course provides the "nuts and bolts" on not only surviving, but also thriving within the academy. Assuming that the student's goal is an eventual tenure-track position, the course demystifies the PhD route so that the student, through a working knowledge of the academy, can better position her/himself to succeed. Besides providing professional development, the course attempts to raise the level of involvement of PhD candidates in the profession, from presenting papers to publishing articles.

**RLGN 5751 Experiential Learning (0 Credits)**

This 0-credit course enables students to acquire valuable teaching and other professional experience as teaching assistants, instructors of record, researchers, or other positions on or off campus. In the case of a teaching position, it will normally only be taken after completing RLGN 5000 Pedagogy & Teaching Religion. Students should work with the JDP Program Manager at least one quarter before they plan to register in order to get this course in the class schedule when it will be needed.

**RLGN 5991 Independent Study (1-10 Credits)****RLGN 6000 Dissertation Proposal Seminar (4 Credits)**

This seminar focuses upon the range of research topics and methods in religious and theological studies by examining dissertations and dissertation proposals related to the Joint Ph.D. Program at Iliff and the University of Denver. Bibliographic and research methods and matters of style and format receives particular emphasis. Students present their own dissertation proposals for discussion.

**RLGN 6010 Comprehensive Review I: Perspectives in the Study of Religion (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in the study of religion. The bibliography is available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in theories and methods in the study of religion. This course is taken in the fall quarter of the student's third year.

**RLGN 6020 Comprehensive Review II: Area Theories and Methods (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in one of the current areas of JDP program strength: 1) Bible, ancient Judaism and early Christianity 2) Religion, Race and Ethnicity 3) Media, Art and Religion 4) Religion and its Publics 5) Religion and Human Experience or 6) Theories of Religion. Bibliographies are available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in the area. This review course and exam is taken in the fall quarter of the student's third year.

**RLGN 6030 Comprehensive Review III: Knowledge in a Professional Field (4 Credits)**

Students work individually or in small groups with their dissertation advisor and committee members or other faculty in the students' chosen field of specialization. The purpose is to synthesize coursework, fill in gaps, and expand knowledge needed as a professional in the specific field. The final exam is the comprehensive exam in the major field. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review IV, and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6040 Comprehensive Review IV: Knowledge in Minor Areas or Subfields (4 Credits)**

Students work individually or in small groups with faculty in the students' chosen subfield or minor area of study, or with the dissertation advisor on a deeper area of specialization within the professional field. The final exam is the comprehensive exam in the subfield or minor area. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review III and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6991 Independent Study (1-10 Credits)****RLGN 6995 Independent Research (0-10 Credits)**

Joint Doctoral Program students use these credits as they work on their dissertations, beginning upon completion of comprehensive exams. Normally 8 credits are completed by each student.

## Graduate School of Professional Psychology

The Graduate School of Professional Psychology (GSPP) offers five degrees, including the Doctor of Psychology in Clinical Psychology (PsyD), that all aim to prepare graduate students for professional, and especially clinical, practice. Focusing on applied professional work from a practitioner-scholar perspective, the Graduate School of Professional Psychology also offers master's-level programs in Sport and Performance Psychology, International Disaster Psychology: Trauma and Global Mental Health, Forensic Psychology, and Sport Coaching (online), along with certificate programs in Strength and Conditioning and Fitness Coaching (online) and Psychology of Coaching (online). Our goals are to train professionals in understanding human behavior through the integration of theory, research, and practice and to improve the human condition through competent and ethical service.

## Professional Psychology

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**Doctor of Psychology in Clinical Psychology (PsyD)**

The PsyD program at the University of Denver is housed in the Graduate School of Professional Psychology (GSPP). The mission of the PsyD program is to educate competent doctoral level practitioner-scholars who meet and exceed standards of the profession-wide competencies and discipline-specific knowledge to become Health Service Providers.

The PsyD program has four aims that prepare students to become Health Service Psychologists using the practitioner-scholar model. We seek to educate future Clinical Psychologists who will:

- 1) contribute to the common good by using communication and interpersonal skills and individual and cultural diversity competencies,
- 2) be grounded in the research, ethical and legal standards, professional values, attitudes, and behaviors competencies,
- 3) provide profession-wide services and work in the areas of assessment, intervention, supervision, consultation and interprofessional/interdisciplinary skills.
- 4) produce competent, entry-level graduates who can function in a variety of settings and grow with the profession and the health needs of local, national, and global communities.

**Program Accreditation**

The PsyD Program is accredited by the American Psychological Association. The program has been accredited since 1979, upholding a practitioner-scholar model of training.

**Master of Arts in Forensic Psychology**

The Master of Arts in Forensic Psychology (MAFP) was first offered at the GSPP in 1999 in response to the growing interest in the rapidly developing field of forensic psychology. The degree supplements fundamental master's level clinical psychology training with course work and practicum experiences in the area of psychology and law. The Master's Degree in Forensic Psychology concerns the application of psychological theory, knowledge, skills and competencies to the civil and criminal justice systems. It is designed to train students to become mental health professionals, able to work in a variety of clinical settings within the criminal and civil legal system, including but not limited to: adult, juvenile and child populations; victim assistance; police consultation; correctional institutions; intimate partner violence and child abuse programs; and trial consulting. The MAFP Program is unique in many respects. Our curriculum, consisting of 90 credits, is forensically and clinically based, with an emphasis on applied practice. Students complete two field placements (up to a year in duration), allowing for the exploration of different forensic interests and providing them with a solid clinical foundation. Students benefit from the expertise of core and adjunct faculty who are active practitioners and scholars in the field.

**Master of Arts in International Disaster Psychology: Trauma and Global Mental Health <sup>1</sup>**

The University of Denver's Graduate School of Professional Psychology is proud to offer our Master's Program in International Disaster Psychology: Trauma and Global Mental Health (MAIDP). This degree is designed for those who wish to provide effective mental health and psychosocial services to individuals and communities in the US and globally who are affected by traumatic events, acute and chronic civil conflict, natural disasters, and

health-related pandemics. Our program is recognized for 'Innovative Graduate Training' by both the American Psychological Association & the National Council of Schools and Programs of Professional Psychology, and is the first master's program of its kind in the nation.

Through academic coursework and practical experiences, students develop a solid foundation for knowledge and skills in the mental health field and unique and specific approaches in the field of international disaster psychology. Students receive essential opportunities to integrate knowledge with practice in contextually relevant and culturally competent ways. Internship experiences domestically and abroad, disaster simulation exercises, and classroom case studies support an integrated training experience helping students bring a "best practice" model to their work in a variety of psychosocial and mental health contexts internationally and in the U.S.

Instruction is provided in diverse areas including international disaster psychology, trauma intervention, disaster mental health, gender-based violence, crisis intervention, group dynamics, loss and grief, the effects of trauma on life-span development, psychotherapeutic models, program evaluation and research, global health, and cross-cultural foundations. Faculty expertise addresses the full span of mental health and psychosocial work that is necessary for effective work in this innovative field.

Our graduates work in a variety of professional settings providing direct services to populations affected by trauma, training and consulting with community, non-governmental and government agencies to promote psychosocial wellness of affected populations, developing emergency preparedness and response plans, and monitoring and evaluating psychosocial interventions. With comprehensive and specialized training in this emerging field of international disaster psychology, our students are prepared to make a difference in the world.

### **Master of Arts in Sport & Performance Psychology**

The University of Denver's Graduate School of Professional Psychology, with its history of pioneering innovative training in psychology, is proud to offer a Master of Arts degree in Sport and Performance Psychology (MASPP). This degree is intended for individuals in the sport, performing arts, business, high risk occupations, health and fitness, or mental health fields who want to develop their ability to improve the performance and lives of those with whom they work. Those applicants involved in coaching and teaching in sport and performance settings are encouraged to add to their skills and abilities through this training. Denver's passion for sports and a thriving performing arts scene make it a perfect place to master the practice of sport and performance psychology.

The field of sport and performance psychology is concerned with the psychological factors that influence human performance and the psychological effects of participation in performance domains. It involves assessment and intervention strategies that enhance an individual's or group's performance, personal growth, and enjoyment in their performance area.

GSPP's program is unique and pioneering in many respects. There are several areas in which this program truly stands out from other educational opportunities in the field of sport and performance psychology, including: our applied focus, the curriculum, practicum opportunities, and the faculty. The program provides the necessary training for an individual to become a competent, proficient sport and performance psychologist with the completion of a psychology doctoral program. The Master of Arts degree in Sport and Performance Psychology will help those who consult, coach, and work with others do their job more effectively and experience more rewarding outcomes.

### **Master of Arts in Sport Coaching (Online)**

The Sport Coaching program is housed in the Graduate School of Professional Psychology, which has a rich history of innovative professional preparation. Psychologists and sport psychologists were pioneers to study coach effectiveness and coach education. In recent years, coach education at a university setting has become more popular, and more important to produce quality coaches. The Sport Coaching program is the only master's level degree program in coaching offered in a school of psychology in the country. Our program builds upon the innovative preparation of the GSPP and the successful Master of Arts in Sport & Performance Psychology, but diverges in important ways.

The Sport Coaching curriculum was built from the ground up with student and coach success in mind. From idea to implementation, nearly two years went into planning and designing the curriculum, collaborating with leading experts in teaching, learning and student success, hiring quality instructors with experience in sport and coaching settings, and crafting our courses. Students may complete all of the degree requirements fully online. The Sport Coaching program, like all programs in GSPP, maintains the highest level of accreditation offered by The Higher Learning Commission of the North Central Association of Colleges and schools. In 2016, the Sport Coaching program was officially recognized by the National Strength and Conditioning Association (NSCA) as a Graduate Studies Applied program. The program was also designed around the standards put forth by the National Committee for Accreditation of Coach Education (NCACE). The Sport Coaching program has maintained official recognition by the National Strength and Conditioning Association (NSCA) as a Graduate Studies Applied program since 2016.

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<sup>1</sup>Degree on transcript for the *Master of Arts in International Disaster Psychology: Trauma and Global Mental Health* transcript will be worded as *MA in Global Trauma & Disaster Psych.*

## **Doctor of Psychology in Professional/Clinical Psychology**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the

baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants WITHOUT a psychology background (major or minor) must meet the department's psychology prerequisite prior to matriculation. The psychology prerequisite can be met either through psychology coursework or by obtaining a score of at least 660 or higher on the psychology subject GRE exam. Applicants should state how they plan to meet the psychology prerequisite in their application. For the psychology coursework prerequisite, applicants must complete four (4) psychology courses earning a 'B' or better in these classes from a regionally accredited institution. Applicants offered admission should be aware that all psychology classes must be completed before registration in September.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Forensic Psychology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants WITHOUT a psychology background (major or minor) must meet the department's psychology prerequisite prior to matriculation. The psychology prerequisite can be met either through psychology coursework or by obtaining a score of at least 660 or higher on the psychology subject GRE exam. Applicants should state how they plan to meet the psychology prerequisite in their application. For the psychology coursework prerequisite, applicants must complete four (4) psychology courses earning a 'B' or better in these classes from a regionally accredited institution. Applicants offered admission should be aware that all psychology classes must be completed before registration in September.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in International Disaster Psychology: Trauma and Global Mental Health

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the



baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants WITHOUT a psychology background (major or minor) must meet the department's psychology prerequisite prior to matriculation. The psychology prerequisite can be met either through psychology coursework or by obtaining a score of at least 660 or higher on the psychology subject GRE exam. Applicants should state how they plan to meet the psychology prerequisite in their application. For the psychology coursework prerequisite, applicants must complete four (4) psychology courses earning a 'B' or better in these classes from a regionally accredited institution. Applicants offered admission should be aware that all psychology classes must be completed before registration in September.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Sport and Performance Psychology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Sport Coaching (Online)

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Certificate in Strength and Conditioning and Fitness Coaching (Online)**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Specialized Graduate Certificate in Strength & Conditioning and Fitness Coaching (Online)**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Specialized Graduate Certificate in Psychology of Coaching (Online)**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Psychology in Clinical Psychology

### Doctor of Psychology in Clinical Psychology (PsyD)

The University of Denver is on a quarter system. Students attend classes as a cohort over fall, winter, spring and summer quarters for three years (minimum). The University of Denver and the American Psychological Association require that students enroll in course work for at least twelve quarters. Students are required to attend at least eight credit hours per quarter for twelve quarters unless pre-approved for part-time status.

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Core coursework requirements</b>		<b>110</b>
CPSY 4010	Introduction to Statistics	3
CPSY 5000	Rad Behav/Func Contextl Models	3
CPSY 5010	Cognitive & Affective Models	3
CPSY 5020	Psychoanalytic Models	3
CPSY 5030	Systems Models	3
CPSY 5040	History and Systems in Psych	2
CPSY 5050	Advanced Statistics	3
CPSY 5070	Research Methods	2
CPSY 5073	Qualitative Research Methods	2
CPSY 5075	Program Evaluation Technique	3
CPSY 5080	Diagnosis and Classification	2
CPSY 5130	Issues in Measurement	3
CPSY 5170	Life Cycle: Inf to Mid Childhd	3
CPSY 5180	Life Cycle: Adolescent - Adult	2
CPSY 5200	Life Cycle: Late Adulthood	3
CPSY 5230	Group Dynamics & Interventions	3
CPSY 5231	Social Psychology	3
CPSY 5270	Physiological Psychology I	3
CPSY 5290	Clinical Neuropsychology	3
CPSY 5310	Ethical Issues in Psychology	3
CPSY 5320	Professional Issues in Psych	2
CPSY 5340	Social Psychology of Racism and Oppression	3
CPSY 5360	Racial/Ethnic Identity Dvlpmnt	3
CPSY 5370	Lesbian, Gay, Bisexual and Transgender Issues	3
CPSY 5380	Culturally Competent Psychotherapy	3
CPSY 5562	Psychological Consultation	2
CPSY 5680	Cognitive Assessment	4
CPSY 5690	Introduction to the Rorschach	4
CPSY 5705	Self Report Assessment	3
CPSY 5740	Integrative Personality Assessment	2
CPSY 5750	Supervision	2

First-Year Seminar		8
2 credits/quarter for 4 quarters=8 credit hours total		
CPSY 5385	First-Year Seminar (First-Year Seminar)	2
Advanced Professional Seminar		16
Complete 2 credits/quarter for 8 quarters (16 credit hours total) from the following:		
CPSY 5386	Professional Seminar: Treatment of Children and Adolescents	2
CPSY 5388	Professional Seminar: Psychological Assessment	2
CPSY 5389	Professional Seminar: Behavior Therapy	2
CPSY 5390	Professional Seminar: Forensic Issues	2
CPSY 5391	Professional Seminar: Psychodynamic Therapy	2
CPSY 5392	Professional Seminar: Couple and Family	2
CPSY 5393	Professional Seminar: Acceptance and Commitment Therapy	2
CPSY 5394	Professional Seminar: Existential/HUMANISTIC Relational Therapy	2
CPSY 5404	Professional Seminar: Integrative Therapy	2
CPSY 5406	Professional Seminar: Health Psychology	2
CPSY 5407	Professional Seminar: Caregiver and Child Relationships From Pregnancy Through Early Childhood	2
CPSY 5408	Professional Seminar: Military Psychology	2
<b>Elective requirements</b>		<b>25</b>
Minimum of 25 credits from the following courses:		
CPSY 5108	Introduction to Acceptance and Commitment Therapy (ACT)	2
CPSY 5120	Introduction to Animal-Assisted Interventions	3
CPSY 5250	Existential and Humanistic Theory and Therapy	2
CPSY 5271	Physiological Lab I	1
CPSY 5420	Behav-Analytic Prin 1	2
CPSY 5421	Behavioral Analysis Princ La	1
CPSY 5422	Behav-Analytic Prin 2	2
CPSY 5423	Behav-Analytic Assess/Case Frm	2
CPSY 5424	Behavior-Analytic Intervention	2
CPSY 5466	Health Psychology	2
CPSY 5469	Sport and Performance Psychology Practicum in Collegiate Athletics II	1
CPSY 5480	Integrated Primary Care	2
CPSY 5500	Diagnosis & Treatment of Children	2
CPSY 5505	Diagnosis & Treatment of Adolescents	2
CPSY 5550	Couples Therapy	2
CPSY 5560	Family Therapy	2
CPSY 5591	Psychodynamic Psychotherapy	2
CPSY 5620	Intersubjective Systems Theory	2
CPSY 5685	Introduction to Pediatric Neuropsychological Assessment	2
CPSY 5686	Suicide Prevention, Intervention and Postvention	2
CPSY 5687	Contemporary Issues in Geropsychology	2
CPSY 5692	Advanced Rorschach Analysis	2
CPSY 5700	Advanced Personality Assessment	3
CPSY 5706	Self Report Assessment Lab	1
CPSY 5741	Therapeutic Assessment	2
CPSY 5745	Human Sexuality	2
CPSY 5755	Supervision Practicum I	1
CPSY 5756	Supervision Practicum II	1
CPSY 5757	Supervision Practicum III	1
CPSY 5758	Supervision Practicum IV	1
CPSY 5760	Professional Issues II	2
CPSY 5765	Cognitive Behavioral Therapy	2
CPSY 5831	Theory and Foundations of IECMH: Infant and Early Childhood Mental Health	2

CPSY 5832	Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback	2
CPSY 5833	Advanced Topics in IECMH: Infant and Early Childhood Mental Health	2
CPSY 5834	Perinatal-5 Mental Health: Training Intensive in Evidenced-Based Approaches	2
CPSY 5840	Psychopharmacology	2
CPSY 5846	Military Psychology and the Culture of Warfighting	2
CPSY 5848	Evidence-based Practice for Military-related Health Disparities	2
CPSY 5849	Behavioral Medicine and Interprofessional Healthcare in Military/Veterans	2
CPSY 5852	Foundations in Substance Use Disorder	2
CPSY 5853	Neurobiology of Attachment, Trauma and Addiction	2
CPSY 5854	Behavioral Addictions: Assessment and Treatment	2
CPSY 5855	Advanced Treatment of Substance Use and Addictive Disorders	2
CPSY 5865	Introduction to Psychosocial Oncology	3
CPSY 5866	Interprofessional Systems in Healthcare	2
CPSY 5880	Business Issues in Professional Psychology	2
CPSY 5825	Introduction to Latinx Psychology and the Latinx Experience	2
CPSY 5826	Latinx & Underserved Populations Advanced Practicum I-Aiming to Reduce Mental Health Disparities	3
CPSY 5827	Psychological Assessment with Latinx Populations	3
CPSY 5828	Latinx & Underserved Populations II-Advanced Practicum-Spanish Intensive	2
CPSY 5989	Doctoral Paper Development	1
<b>Total Credits</b>		<b>135</b>

Minimum number of credits required for the degree: 135

#### Specialty Focus Tool:

Each student must select and enroll in a minimum of 15 credit hours of elective course work in their specialty area, including courses taken at the GSP or other DU department/schools (classes taken at the College of Law, Iliff School of Theology and University College do not count towards the 135 credits). Written approval from your advisor must be attained for appropriate coursework transferred from other academic departments and placed in the student's file. Discuss classes taken in other departments with your advisor prior to taking the class, and have your advisor write a memo of approval for your file. Make sure the class is at the graduate level.

- The 15 credit hours cannot include required/core courses, except one advanced professional seminar.
- Students must take one advanced professional seminar appropriate to the specialty area.
- Independent study, which is relevant, may be included.
- Complementary clinical work, including a year of field placement in an appropriate setting, is recommended.
- Students are encouraged to undertake a doctoral paper that will serve as a scholarly contribution to the area of specialization.
- When completing the check-out process for internship, students and advisors should double check that courses were indeed completed. Student may need to update specialty focus form for their file.

Examples include behavior therapy, couples and family therapy, forensic psychology, psychological assessment, health psychology, Latinx psychology, military psychology, neuropsychology & rehabilitation psychology, substance use disorders, and infant and early childhood mental health.

#### Non-coursework Requirements

- Professional Psychology Clinic (PPC): All PsyD students become staff members of the PPC, a community-based training clinic. Students are expected to work with clients each year prior to the internship year. The student-therapists provide psychotherapy, play therapy, group therapy, and psychological assessments and testing. Students are supervised by licensed psychologists who use video recordings, audiotapes, and one-way mirrors to view clinical work. Clients represent diverse ethnic, racial, social, religious, and individual backgrounds and cultural identities. Clients are self-referred or referrals come from private and public sources throughout the community.
- Community Field Placement: Each year prior to the internship year, students are also required to be in a community field placement for a minimum of eight hours per week. In these placements, students are involved in supervised professional experiences in mental health centers, schools, college counseling centers, the justice system, hospitals, rehabilitation centers, private practices, residential treatment homes, and businesses in the Denver metropolitan area. There is a wide choice of placements, and available paid placements are often filled by second and third year students. Within the general field placement requirement, students are required to work a minimum of 40 contact hours with clients from at least

one culturally diverse group. Opportunities for such experience are available in a variety of the community field placement settings. The 40 contact hours are a total to be achieved during the time a student is enrolled in the program.

- Each student is required to pass a clinical competency exam prior to graduation from the program.
- Doctoral Paper: The doctoral paper requirement requires students to make an original contribution to psychological scholarship. Students may choose to do a qualitative or quantitative research project, or can choose other forms of scholarship, such as developing a case study or treatment protocol. Doctoral papers should be publication quality, and students are encouraged to submit their papers for publication.
- Internship: GSPP requires an American Psychological Association (APA) approved clinical internship which is either full time for 12 months or equivalent. PsyD students participate in the national APPIC Match and are given significant support in this process from the Director of Clinical Training. GSPP offers an exclusively affiliated consortium that is APA accredited. Students may apply to sites outside the consortium, either locally or nationally. Students must pass the internship in order to receive the PsyD degree.
- Assessment: GSPP requires a minimum of 4 assessments be completed before leaving for internship. To qualify, an assessment must be done by the student alone, integrate information from an interview and at least 2 psychological tests (cognitive and personality performance-based tests, self-reported based tests, etc.), and include a report that the student has written. Note that neuropsychological screening tests alone count as half an assessment. Up to half of the requirement can be met by doing neuropsychological screen batteries, which include a written report integrating the screening results with the results of other tests and interview data. The assessments can be completed in the PPC (through seminar, assessment small groups, or individual supervision) or field placements. All assessments must be conducted under appropriate supervision.

## Master of Arts in Professional/Clinical Psychology

### Master of Arts in Professional/Clinical Psychology

To be eligible, current PsyD students must have two years of residency and successful advancement to preliminary candidacy. Students must submit an application to graduate and meet with their advisor for candidacy sign-off by the deadline.

#### Degree Requirements

##### Coursework Requirements

- Completion of 90 quarter hours of coursework earned from GSPP at the University of Denver

##### Non-coursework Requirements

- Two years of field placement and seminar
- Clinical Competency Exam

*Students who come to GSPP with a psychology based MA, who receive blanket 45 transfer credits for the PsyD degree, are not eligible for the interim MA from GSPP.*

## Master of Arts in Forensic Psychology

### Master of Arts in Forensic Psychology

The University of Denver is on a quarter system and students complete the program as a cohort, attending fall, winter, and spring quarters of both years. Program requirements are designed to be completed in six academic quarters over two years. The University of Denver (DU) requires that a student enroll in coursework for at least six quarters.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
CPSY 4000	Issues in Forensic Psychology I	2
CPSY 4010	Introduction to Statistics	3
CPSY 4021	Intro to Clinical Interviewing, Psychopathology & Diagnosis, and Applied Case Conceptualization	5
CPSY 4031	Supervision & Consultation	1
CPSY 4040	Issues in Forensic Psychology II: Human Sexuality & Gender-Based Violence	3
CPSY 4050	Research Methods	3
CPSY 4060	Biological Bases of Criminal Behavior: Adult Psychopathology	3
CPSY 4070	Trauma & Crisis Intervention	3
CPSY 4080	Issues in Forensic Psychology III	3
CPSY 4081	Overview of Personality & Self-Report Assessment	2
CPSY 4100	Mental Health Law	3
CPSY 4110	Family Systems and Therapy	3
CPSY 4200	Practicum I: Professional Orientation	2

CPSY 4210	Practicum II: Introduction to Multicultural Issues	3
CPSY 4220	Practicum III: Lifestyle Development	3
CPSY 4230	Practicum IV: Theories of Personality Diagnosis	3
CPSY 4240	Practicum V: Theories of Counseling and Behavioral Health Approaches	2
CPSY 4250	Practicum VI: Professional Identity and Career Development	3
CPSY 4300	Evaluation and Treatment of Juveniles	3
CPSY 4310	Ethical and Legal Issues	3
CPSY 4323	Issues in Measurement & Cognitive Assessment	3
CPSY 4330	Cognitive Behavioral Theory and Interventions	3
CPSY 4340	Psychopathology, Evaluation & Treatment of the Adult Offender	3
CPSY 4350	Sociocultural Issues in Forensic Psychology	3
CPSY 4370	Substance Abuse	3
CPSY 4380	Group Interventions	3
CPSY 4430	Career Counseling	3
CPSY 4545	Lifespan Development and the Cultural Context	3

**Elective Requirements** **10**

Minimum of 5 Research and Assessment elective credits and 5 credits of additional electives

CPSY 4105 Psychology, Public Policy, and Advocacy

CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention

CPSY 4108 Special Topics in Forensic Psychology

CPSY 4335 Introduction to Trial Consulting

CPSY 4601 Psychology and Race in an International Setting: South Africa

Students are allowed to take elective courses in other GSPP programs. Students may also take electives from other traditional graduate departments at the university, such as counseling or social work. Students taking elective courses outside the department should check with their advisor to be sure that the course will count toward the degree requirements.

**Research/Assessment Courses Include:**

CPSY 4112 Neuropsychological Screening

CPSY 4113 Program Evaluation and Grant Writing

CPSY 4324 Issues in Measurement & Cognitive Assessment Lab Independent Study

CPSY 4400 Projective Assessment and Report Writing

CPSY 4410 Criminal Evaluations

CPSY 4420 Research in Forensic Psychology: Independent Study

CPSY 5050 Advanced Statistics

**Total Credits** **90**

Minimum number of credits required for the degree: 90

**Non-coursework Requirements**

- Field Placements: We require that students engage in direct service through their field placements, working with diverse populations and in diverse settings. A variety of field placement opportunities are available, including county probation, community health centers, correctional facilities, outpatient treatment agencies, medical examiner's office, victim assistance/advocacy agencies, and juvenile assessment centers. Students may also apply to complete a field placement through our institute, DenverFIRST (Forensic Institute for Research, Service, and Training). As an adjunct to their field placements, students are enrolled in practicum courses that provide added clinical support and foster development as professionals and practitioners. During your time in the MAFP Program:

- You must complete two academic yearlong field placements (one first year, one second year).
- You must complete a minimum of 700 hours of field placement work total. Of the 700 required total field placement hours you must earn during the MAFP Program.
- At least 280 hours must involve direct client contact

In terms of your academic yearlong field placements:

- One of your academic yearlong field placements must be clinical.
- You must complete at least 260 hours during each of your academic yearlong field placements.

- The remaining 180 hours of field placement work needed to get to 700 total hours requirement may be met with summer or secondary practica, in addition to hours earned during your academic yearlong field placement.
- Clinical Competency Exam: Students will be required to pass an oral clinical competency examination in the spring of their second year. The oral exam is clinical in nature, and evaluates students on their mastery of the theoretical and conceptual underpinnings of forensic practice, as well as the technical and applied aspects of forensic practice, as captured by our MAFP competencies.
- Personal Therapy: The Master's in Forensic Psychology program requires personal therapy for all students. Faculty believe that personal therapy is a vital component of clinical psychology training and growth, and that it is the professional responsibility of every clinician to identify, address, and work through personal issues that may have an impact on clinical interactions with clients. Students are required to complete a minimum of 3 sessions (45-50 minutes in length) with the same therapist by the end of their first year of the program. It is required that therapy be provided by a licensed psychologist, professional counselor, social worker, or other mental health worker under the supervision of a licensed professional. If you select a therapist not in this category, you must petition the Director of Forensic Studies for approval. Students will not be advanced to preliminary candidacy until the therapy requirement is met. Students must complete this requirement by the summer of their first year. The student must petition the Director for an exception if therapy is not completed in this time frame.
- MAFP Diversity, Equity, and Inclusion (DEI) and Social Justice (SJ) Requirement:
  - Successful demonstration of the core MAFP Program competencies as they relate to DEI and SJ throughout all aspects of the program, including classes and field placement.
  - Completion of all required training, e.g., Queer & Ally Training.
  - Successful completion of the MAFP Clinical Competency Examination.

#### Optional Research

- Students can also enroll in a one credit elective, CPSY 4420 Research in Forensic Psychology: Independent Study, and engage in ongoing or novel research. Students have been able to present at local and national conferences and have published with faculty in law and psychology journals.

## Master of Arts in International Disaster Psychology: Trauma and Global Mental Health

### Master of Arts in International Disaster Psychology: Trauma and Global Mental Health

Program requirements are designed to be completed in seven academic quarters over two years. The University of Denver is on a quarter system and students must attend fall, winter, spring, and summer quarters of their first year and fall, winter, and spring quarters of their second year.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Core requirements</b>		
CPSY 4010	Introduction to Statistics	3
CPSY 4020	Psychopathology and Diagnosis	3
CPSY 4050	Research Methods	3
CPSY 4090	Issues in Measurement	3
CPSY 4370	Substance Abuse	3
CPSY 4380	Group Interventions	3
CPSY 4430	Career Counseling	3
CPSY 4500	Foundations: Trauma and Global Psychology	2
CPSY 4501	Psychotherapeutic Models of Intervention	3
CPSY 4503	Clinical Interviewing	3
CPSY 4505	Multiculturalism and Diversity	3
CPSY 4509	Global Mental Health Systems	3
CPSY 4510	Intercultural Practice and Development	2
CPSY 4512	Disaster Mental Health	3
CPSY 4515	Ethics	3
CPSY 4530	Program Evaluation	3
CPSY 4535	Practicum: Professional Identity and Practice	2
CPSY 4536	Practicum: Working With Diverse Populations	2
CPSY 4537	Practicum: Interview, Assessment and Diagnosis	2
CPSY 4538	Practicum: Life-span Considerations in Practice	2
CPSY 4539	Practicum: Evidenced Based Practices in Psychology and Counseling	2
CPSY 4540	Practicum: Biopsychosocial Systems in Practice	2



CPSY 4542	Psychophysiology	3
CPSY 4544	Psychological Assessment in Multicultural Contexts	3
CPSY 4545	Lifespan Development and the Cultural Context	3
CPSY 4556	Trauma Interventions from Cross-cultural Perspectives	3
CPSY 4563	Family Therapy	3
CPSY 4567	Culture Lab: Cultural Humility & Global Mental Health Internship Preparation	1
CPSY 4570	Crisis Intervention & Suicide Prevention	3
CPSY 4590	Psychology of Loss and Grief	2
CPSY 4595	Global Mental Health Internship	6
CPSY 4606	Sexuality and Gender-based Violence	3
<b>Elective requirements - Minimum of 2 credit hours</b>		<b>2</b>
Students are allowed to take elective courses in other GSPP programs. Students may also take electives from other traditional graduate departments at the university, such as counseling or social work. Students taking elective courses outside the department should check with their advisor to be sure that the course will count toward the degree requirements.		
CPSY 4564	Advanced Spanish Language for Clinical Practice	
CPSY 4562	Public Policy and Advocacy	
<b>Total Credits</b>		<b>90</b>

Minimum number of credits required for the degree: 90

#### Non-coursework Requirements

- Community-Based Field Placement: During the fall, winter, and spring terms of both their first and second years, students are required to complete community field placements and supervision in the Denver area. A variety of field placement sites are available, including local non-governmental and state agencies providing direct mental health care, case management, policy and grant writing, disaster planning and preparedness, and disaster relief services. Agencies serve diverse populations and age groups, including refugee and low-SES individuals, many of whom have been affected by trauma and disaster. Students spend a minimum of ten hours a week at their placement.
- Trauma and Disaster Recovery Clinic (TDRC): During the fall, winter, and spring terms of their first and second years, students are required to carry a client (individual, couple, family, or group) in the TDRC. This clinical work is supervised in the small-group supervision seminar. Either in the first or second year of the program, students may request to participate in the small-group program evaluation seminar to fulfill this requirement.
- International Internship: During the summer between the first and second year of enrollment, students engage in an 8-week international internship, providing a rich opportunity to apply theory to practice in the global context. International internships are arranged by the program with non-governmental and governmental agencies whose missions focus on a variety of mental health and psychosocial issues relevant to the needs of individuals and communities affected by disaster and trauma. While the locations of our internships vary each summer, in recent years students have interned in Liberia, Malawi, Uganda, Kenya, India, Serbia, Northern Ireland, Cambodia, Sri Lanka, and Nepal.
- Each student is required to pass an oral competency exam prior to graduation from the program. This exam will be administered during the spring quarter of the second year of matriculation.

## Master of Arts in Sport & Performance Psychology

### Master of Arts in Sport & Performance Psychology

Program requirements are designed to be completed in six academic quarters over two years. The University of Denver (DU) requires that a student enroll in course work for at least six quarters. The University is on a quarter system and students complete the program as a cohort, attending fall, winter, and spring quarters of both years.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Core requirements</b>		
CPSY 4010	Introduction to Statistics	3
CPSY 4050	Research Methods	3
CPSY 4652	Theoretical Aspects of Sport and Performance Psychology	3
CPSY 4662	Foundation of Counseling Theories	3
CPSY 4669	Consulting Methods & Practices	3
CPSY 4671	Theories of Performance Excellence	3
CPSY 4672	Counseling Methods & Practices	3
CPSY 4674	Clinical Issues: Interviewing and Diagnosis	3

CPSY 4680	Sport and Performance Psychology Practicum <sup>1</sup>	9
CPSY 4681	Multicultural Issues	3
CPSY 4682	Ethical and Legal Issues	3
CPSY 4683	Group Interventions	3
CPSY 4684	Team and Organizational Dynamics	3
CPSY 4685	Human Growth & Development	3
CPSY 4686	Practicum in Sport and Performance Psychology: Professional Practice <sup>1</sup>	9
CPSY 4690	Sport and Performance Psychology Interventions	3
<b>Elective requirements</b>		<b>12</b>

Students are allowed to take elective courses in other GSPP programs. Students may also take electives from other traditional graduate departments at the university, such as counseling or social work. Students taking elective courses outside the department should check with their advisor to be sure that the course will count toward the degree requirements.

CPSY 4120	Psychology of Performing Arts
CPSY 4130	Organizational Leadership: Center for Performance Excellence
CPSY 4150	Psychology of Performance in Business
CPSY 4160	Psychology of High Risk Occupations
CPSY 4260	Psychophysiology and Biofeedback Lab
CPSY 4653	Sport in American Society
CPSY 4676	Assessment and Measurement
CPSY 4688	Seminar in Sport and Performance Psychology
CPSY 4689	Psychophysiology and Biofeedback
CPSY 4692	Entrepreneurship in Sport and Performance Psychology

#### Total Credits

72

<sup>1</sup> 3 credit course taken required to be taken 3 times.

Minimum number of credits required for degree: 72 hours

#### Non-coursework Requirements

- **Practicum:** It is important to put theory into practice; therefore, the practicum experience is critical to the development of a competent mental performance consultant. GSPP is committed to practical training and there are many exciting opportunities and experiences available in the Denver metro area and surrounding communities. Sites include but are not limited to public high school athletic departments, private high school academies, club sports programs, collegiate athletic departments, the DU Lamont School of Music, coaching, and exercise and health related industries. Other practical experiences in the program are available as formal internships during the year and in the summer. Sites around the nation that current/former students have obtained internships at include: the US Olympic and Paralympic Training Center, Vail Ski & Snowboard Academy, Winter Park Competition Center, Evert Tennis Academy, IMG Academies, and South Metro Fire Rescue.
- **Master's project:** The Master's Project requirement is designed to serve as a capstone achievement demonstrating students' comprehensive knowledge of SPP theories, concepts, applications, and professional and ethical guidelines. Consistent with our practitioner-scholar model and goal of training competent SPP consultants, the Master's Project highlights reflective practice. In conjunction with the field placements students are completing through CPEX and receiving supervision for through Practicum, students will engage in (at a minimum) weekly reflective journal writing incorporating the principles from reflective practice models. As part of their reflective practice, students will video (or audio when video is not an option) record their work as often as possible and review the recordings. Ongoing progress will be monitored through students' participation in Practicum discussions, and therefore it is required that students are regularly discussing their reflective practice during Practicum and small group discussions. The final Master's Project will be submitted as a *Portfolio* and reviewed by a MASPP faculty member. Passing the Master's Project will be dependent upon the thoroughness (e.g., minimum of weekly reflections, regular recording of sessions and review of recordings) and quality (e.g., depth of reflections, quality of writing) of the reflective practice.
- **Diversity Immersion Project:** This project is designed to be an immersive and consistent experience with diverse populations. The Diversity Immersion Project is self-referential, meaning that what one student considers a diverse population given their own background and experience may not be considered diverse to another student. Students are encouraged to stretch themselves outside their space of comfort and truly immerse themselves in a meaningful experience that expands their perspective. Students will submit reflections summarizing their immersion experience and applying it to themselves and their professional and personal growth within and beyond MASPP. These will be included in the final Master's Project Portfolio. Students will pass this project once all hours are completed each academic year and the depth and quality of reflections are deemed satisfactory by the master's project chair.

### Note on Licensure with the Master of Arts in Sport and Performance Psychology

The Master of Arts in Sport and Performance Psychology (MASPP) program requires 72 credits. Students enrolling in fall 2023 and onward pay for tuition per credit.

If students plan to apply for licensure as a Licensed Professional Counselor (LPC) in the state of Colorado, 90 credits must be obtained. This will increase the number of courses students will need to take and therefore overall tuition. Students interested in pursuing licensure would also need to find direct supervised clinical work while going through the program; this is in addition to the required practicum requirements through CPEX. It does require a significant amount of extra work in terms of clinical hours. Since the program does not provide clinical field placements (only provides mental performance placements), students would need to obtain these clinical field placements themselves.

Licensure at the MA level varies by state. Students must check with the state(s) in which they are looking to pursue licensure to see the exact courses required and what type of clinical hours would be needed.

The MASPP program (with the 72 credit hours and practicum work) can make alumni eligible for the Certified Mental Performance Consultant (CMPC) credential. That is given by a professional organization (Association for Applied Sport Psychology) and does not vary by state. It certifies students in practicing mental performance consulting; not counseling (although counseling training is part of the course requirements).

## Master of Arts in Sport Coaching

### Master of Arts in Sport Coaching

The Graduate School of Professional Psychology follows the quarter system. Courses in the program are offered fully online asynchronously (i.e., there is no specified course meeting time) during each of the four quarters (e.g., autumn, winter, spring, and summer), lasting ten weeks. We normally offer two required courses per quarter, along with two electives. Most courses are four credit hours, while electives are two credit hours.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Core requirements</b>		
CPSY 4700	Organization and Administration of Sport	4
CPSY 4705	Sociocultural Aspects of Sport Coaching	4
CPSY 4710	Motor Learning and Sport Pedagogy	4
CPSY 4715	Strength, Conditioning, and Injury Prevention Program Design	4
CPSY 4720	Psychology of Athletic Performance	4
CPSY 4725	Philosophy and Ethics of Sport Coaching	4
CPSY 4730	Biomechanics of Athletic Performance	4
CPSY 4735	Understanding Sport Research	4
CPSY 4751	Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research	1
CPSY 4752	Applied Sport Coaching 2: Theory, Literature, and Planning Applied Research	1
CPSY 4753	Applied Sport Coaching 3: Data Collection and Analysis	1
CPSY 4754	Applied Sport Coaching 4: Implementing Action Plans	1
CPSY 4755	Applied Sport Coaching 5: Writing and Communicating Research	1
CPSY 4756	Applied Sport Coaching 6: Knowledge Dissemination and Reflection	1
<b>Elective requirements</b> <sup>1</sup>		<b>8</b>
8 credits of the following courses:		
CPSY 4610	Exercise Physiology	
CPSY 4620	Kinesiology	
CPSY 4635	Athletic and Performance Nutrition	
CPSY 4712	Tactical Strength and Conditioning Coaching	
CPSY 4722	Social-Psychology of the Body, Health, and Performance	
CPSY 4723	Applied Sports Technology for Coaches	
CPSY 4991	Independent Study	
<b>Total Credits</b>		<b>46</b>

<sup>1</sup> We offer the following electives on a consistent basis: Athletic & Performance Nutrition, Exercise Physiology, Kinesiology, Sport Technology for Coaches, Social-Psychology of the Body, Health, and Performance, and Tactical Strength and Conditioning. Independent study and directed research may also be completed to meet the requirement for approved electives.

Full-time faculty advise all students on their coursework and degree plan. Students are encouraged to consider how to individualize their coursework to meet their personal desires and professional needs, while completing the degree in a timely manner.

Minimum number of credits required for the degree: 46

#### Non-Coursework Requirements

- Graduate level credits must be earned at the level of "C–" or better.

## Graduate Certificate in Strength & Conditioning & Fitness Coaching (Online)

### Graduate Certificate in Strength & Conditioning & Fitness Coaching (Online)

This Graduate certificate program in Strength and Conditioning and Fitness Coaching (S&C) meets students' needs to obtain specialized education and training in strength and conditioning coaching, training, performance, and fitness settings. Building upon the success of DU's Master of Arts in Sport Coaching program, this graduate certificate is offered online and provides a shorter, focused course of study specific to S&C. To meet the growing demand for qualified practitioners in S&C-Fitness settings, this graduate certificate meets the needs of students with varying undergraduate degrees, some likely with existing Masters degrees in non-sport/exercise related fields, and those looking to make a career change or supplement their existing knowledge and skills.

Required Curriculum (24 credits):

Code	Title	Credits
CPSY 4710	Motor Learning and Sport Pedagogy	4
CPSY 4715	Strength, Conditioning, and Injury Prevention Program Design	4
CPSY 4720	Psychology of Athletic Performance	4
CPSY 4730	Biomechanics of Athletic Performance	4
CPSY 4751	Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research (class is 1 credit hour & students must take this course twice for a total of 2 credit hours)	2
<b>Six credits of electives from below:</b>		<b>6</b>
CPSY 4610	Exercise Physiology	
CPSY 4620	Kinesiology	
CPSY 4635	Athletic and Performance Nutrition	
CPSY 4700	Organization and Administration of Sport	
CPSY 4705	Sociocultural Aspects of Sport Coaching	
CPSY 4712	Tactical Strength and Conditioning Coaching	
CPSY 4722	Social-Psychology of the Body, Health, and Performance	
CPSY 4725	Philosophy and Ethics of Sport Coaching	
CPSY 4991	Independent Study	
<b>Total Credits</b>		<b>24</b>

<sup>1</sup> CPSY 4751 Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research must be taken twice over the course of two separate quarters.

#### Non-Coursework Requirements

- Students must submit proof of CPR/First Aid certification, or complete the requirement within 3 months upon entering the program.
- Students must consult with mental skills consultant or S&C coach-mentor for one quarter, averaging about 1 hour per week for 10 weeks (consultant or mentor provided by the program).
- Students must maintain professional standards for strength and conditioning coaches such as those set forth by the NSCA Standards and Guidelines for Strength and Conditioning Professionals document.

## Specialized Graduate Certificate in Strength & Conditioning & Fitness Coaching (Online)

### Specialized Graduate Certificate in Strength & Conditioning & Fitness Coaching (Online)

Required Curriculum (16 credits):

Code	Title	Credits
CPSY 4710	Motor Learning and Sport Pedagogy	4
CPSY 4715	Strength, Conditioning, and Injury Prevention Program Design	4

CPSY 4730	Biomechanics of Athletic Performance	4
<b>Four credits of electives from below:</b>		<b>4</b>
CPSY 4610	Exercise Physiology	
CPSY 4620	Kinesiology	
CPSY 4635	Athletic and Performance Nutrition	
CPSY 4712	Tactical Strength and Conditioning Coaching	
CPSY 4720	Psychology of Athletic Performance	
CPSY 4722	Social-Psychology of the Body, Health, and Performance	
CPSY 4751	Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research (may be taken twice for up to 2 credits)	
<b>Total Credits</b>		<b>16</b>

### Non-Coursework Requirements

- Students must submit proof of CPR/First Aid certification, or complete the requirement within 3 months upon entering the program.
- Students must maintain professional standards for strength and conditioning coaches such as those set forth by the NSCA Standards and Guidelines for Strength and Conditioning Professionals document.
- Students must consult with mental skills consultant or S&C coach-mentor for one quarter, averaging about 1 hour per week for 10 weeks (consultant or mentor provided by the program).

## Specialized Graduate Certificate in the Psychology of Coaching (Online)

### Specialized Graduate Certificate in the Psychology of Coaching (Online)

Required Curriculum (16 credits):

Code	Title	Credits
<b>10 credits of courses from below:</b>		<b>10</b>
CPSY 4710	Motor Learning and Sport Pedagogy	
CPSY 4725	Philosophy and Ethics of Sport Coaching	
CPSY 4720	Psychology of Athletic Performance	
CPSY 4705	Sociocultural Aspects of Sport Coaching	
CPSY 4722	Social-Psychology of the Body, Health, and Performance	
<b>4-6 credits of electives from below:</b>		<b>6</b>
CPSY 4610	Exercise Physiology	
CPSY 4620	Kinesiology	
CPSY 4635	Athletic and Performance Nutrition	
CPSY 4700	Organization and Administration of Sport	
CPSY 4712	Tactical Strength and Conditioning Coaching	
CPSY 4715	Strength, Conditioning, and Injury Prevention Program Design	
CPSY 4991	Independent Study	
<b>Total Credits</b>		<b>16</b>

## PsyD Course Plan

*Quarterly Course Scheduling & Lockstep:* Course details are available by the date priority registration opens. For planning purposes, the lockstep schedule was enacted so students know what days they will be attending required courses. Students can expect classes to be scheduled anytime on these days, beginning as early as 8:00 am and ending as late as 9:00 pm. When scheduling, every effort is made to conform required courses to this schedule. Please be aware that due to unforeseen scheduling events, this schedule may change.

### PsyD Lockstep Days

1<sup>st</sup> Year: Monday, Tuesday, & Wednesday

2<sup>nd</sup> Year: Wednesday & Thursday

3<sup>rd</sup> Year: Wednesday

Electives: Any day of the week

**First Year**

Summer	Credits	Fall	Credits	Winter	Credits	Spring	Credits
CPSY 5030		3 CPSY 4010		3 CPSY 5010		3 CPSY 5000	3
CPSY 5040		2 CPSY 5020		3 CPSY 5050		3 CPSY 5170	3
CPSY 5180		2 CPSY 5080		2 CPSY 5310		3 CPSY 5270	3
CPSY 5320		2 CPSY 5130		3 CPSY 5385		2 CPSY 5385	2
CPSY 5385		2 CPSY 5385		2 CPSY 5705		3 CPSY 5680	4
		<b>11</b>		<b>13</b>		<b>14</b>	<b>15</b>

**Second Year**

Summer	Credits	Fall	Credits	Winter	Credits	Spring	Credits
CPSY 5230		3 CPSY 5290		3 CPSY 5070		2 CPSY 5073	2
CPSY 5231		3 CPSY 5360		3 CPSY 5340		3 CPSY 5200	3
CPSY 5380		3 CPSY 5690		4 CPSY 5740		2 CPSY 5370	3
Advanced Professionl Seminar		Advanced Professionl Seminar		Advanced Professionl Seminar		Advanced Professionl Seminar	
		<b>9</b>		<b>10</b>		<b>7</b>	<b>8</b>

**Third Year**

Summer	Credits	Fall	Credits	Winter	Credits	Spring	Credits
Advanced Professionl Seminar		CPSY 5075		3 CPSY 5562		2 CPSY 5750	2
		Advanced Professionl Seminar		Advanced Professionl Seminar		Advanced Professionl Seminar	
				<b>3</b>		<b>2</b>	<b>2</b>

**Total Credits: 94**

## MAFP Course Plan

*Quarterly Course Scheduling & Lockstep:* Course details are available by the date priority registration opens. For planning purposes, the lockstep schedule was enacted so students know what days they will be attending required courses. Students can expect classes to be scheduled anytime on these days, beginning as early as 8:00 am and ending as late as 9:00 pm. When scheduling, every effort is made to conform required courses to this schedule. Please be aware that due to unforeseen scheduling events, this schedule may change.

MAFP Lockstep Days1<sup>st</sup> Year: Monday & Tuesday2<sup>nd</sup> Year: Wednesday & Thursday

Electives: Any day of the week

**First Year**

Fall	Credits	Winter	Credits	Spring	Credits
CPSY 4000		2 CPSY 4040		3 CPSY 4031	1
CPSY 4010		3 CPSY 4050		3 CPSY 4070	3
CPSY 4021		5 CPSY 4060		3 CPSY 4080	3
CPSY 4110		3 CPSY 4210		1-6 CPSY 4220	3
CPSY 4200		2 CPSY 4380		3 CPSY 4323	3
		<b>15</b>		<b>13-18</b>	<b>13</b>

**Second Year**

Fall	Credits	Winter	Credits	Spring	Credits
CPSY 4230		3 CPSY 4081		2 CPSY 4100	3
CPSY 4300		3 CPSY 4240		2 CPSY 4250	3
CPSY 4310		3 CPSY 4340		3 CPSY 4545	3
CPSY 4330		3 CPSY 4350		3	

CPSY 4370	3		
	15	10	9

Total Credits: 75-80

Student must complete the following during the two years of the program:

- CPSY 4430 Career Counseling (3 credit hours)
- 5 Research & Assessment elective credits
- 5 credits of additional electives

## MAIDP Course Plan

*Quarterly Course Scheduling & Lockstep:* Course details are available by the date priority registration opens. For planning purposes, the lockstep schedule was enacted so students know what days they will be attending required courses. Students can expect classes to be scheduled anytime on these days, beginning as early as 8:00 am and ending as late as 9:00 pm. When scheduling, every effort is made to conform required courses to this schedule. Please be aware that due to unforeseen scheduling events, this schedule may change.

### MAIDP Lockstep Days

1<sup>st</sup> Year: Monday, Tuesday, & Thursday

2<sup>nd</sup> Year: Monday & Tuesday

Electives: Any day of the week

### First Year

Summer	Credits	Fall	Credits	Winter	Credits	Spring	Credits
CPSY 4595		6 CPSY 4050		3 CPSY 4010		3 CPSY 4501	3
		CPSY 4500		2 CPSY 4020		3 CPSY 4510	2
		CPSY 4515		3 CPSY 4503		3 CPSY 4530	3
		CPSY 4535		2 CPSY 4512		3 CPSY 4537	2
		CPSY 4545		3 CPSY 4536		2 CPSY 4556	3
						CPSY 4567	1
		6		13		14	14

### Second Year

	Fall	Credits	Winter	Credits	Spring	Credits
	CPSY 4380		3 CPSY 4090		3 CPSY 4370	3
	CPSY 4505		3 CPSY 4539		2 CPSY 4540	2
	CPSY 4509		3 CPSY 4544		3 CPSY 4542	3
	CPSY 4538		2 CPSY 4570		3 CPSY 4563	3
			CPSY 4590		2 CPSY 4606	3
			11		13	14

Total Credits: 85

Student must complete the following during the two years of the program:

- CPSY 4430 Career Counseling (3 credit hours)
- 2 credits of additional electives

## MASPP Course Plan

### First Year

Fall	Credits	Winter	Credits	Spring	Credits
CPSY 4652		3 CPSY 4672		3 CPSY 4010	3
CPSY 4662		3 CPSY 4680		3 CPSY 4669	3
CPSY 4671		3 CPSY 4682		3 CPSY 4674	3
CPSY 4680		3 CPSY 4690		3 CPSY 4680	3
		12		12	12

### Second Year

Fall	Credits	Winter	Credits	Spring	Credits
CPSY 4681		3 CPSY 4685		3 CPSY 4050	3

CPSY 4683	3	CPSY 4686	3	CPSY 4686	3
CPSY 4684	3				
CPSY 4686	3				
	12		6		6

Total Credits: 60

### **CPSY 4000 Issues in Forensic Psychology I (2 Credits)**

This course is designed to incubate a new professional identity as an early career graduate student in forensic psychology. From the development of an expanded professional network to the careful cultivation of a professional persona, this class supports the transition from armchair psychologist to graduate student. Our guests will cover factual information about the structure and function of the American legal and legislative systems, assessment technologies including polygraph testing and investigations and related content including substance misuse, human trafficking, victim rights, media representations and more.

### **CPSY 4010 Introduction to Statistics (3 Credits)**

General statistical principles and techniques and their application to psychological and psycho-legal issues. Students will develop computer analytic skills to assist in answering professionally relevant questions.

### **CPSY 4020 Psychopathology and Diagnosis (3 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

### **CPSY 4021 Intro to Clinical Interviewing, Psychopathology & Diagnosis, and Applied Case Conceptualization (5 Credits)**

The practice of therapy is at once an art, and a science. The process of becoming a therapist is both a process of learning and of experiencing. This course provides an overview of foundational interviewing, case conceptualization, and psychotherapy theory and practice, along with a thorough grounding in psychopathology and diagnosis. Categorical classification will be explored using the DSM and ICD frameworks, with a focus on major diagnostic categories. Students will recognize the strengths and limitations of formal diagnosis as a tool in clinical practice, as well as the importance of dimensional case conceptualization and seeing the person behind the label. Emphasis will be placed on understanding mental wellbeing in context, taking into account cultural relevancy and the evolution of diagnoses over time. In this hybrid course format, students will be challenged to integrate diagnosis, case conceptualization, treatment planning, and intervention through didactic learning as well as experiential exercises within the classroom and through quarter-long, small group projects.

### **CPSY 4031 Supervision & Consultation (1 Credit)**

This course is designed as an introduction to theory and practice of clinical supervision and consultation within forensic contexts. Fundamental issues will be examined, including: models of supervision and consultation roles, the supervision relationship, basics of consultation, the impact of personal factors on supervision and consultation, supervision and consultation techniques and practices, evaluation, and legal/ethical issues in supervision and consultation. Students will begin to develop competence to support their roles in future supervisory and consulting relationships.

### **CPSY 4040 Issues in Forensic Psychology II: Human Sexuality & Gender-Based Violence (3 Credits)**

This course takes a historical and contemporary psychological view on a wide variety of sexual behaviors; examines theory and research on biological, developmental, cultural, and psychological aspects of human sexuality and sexual behaviors; reviews political and social issues involved in current sexual norms and practices; and covers current topics related to gender-based violence and sexual offending.

### **CPSY 4050 Research Methods (3 Credits)**

Examination of the research process, including the formulation of questions and utilization of various methodologies to answer hypotheses.

### **CPSY 4060 Biological Bases of Criminal Behavior: Adult Psychopathology (3 Credits)**

In this course, students will develop an understanding of the biopsychosocial vulnerabilities to crime. This course will emphasize biological models but also the psychological, social, and environmental causes and correlates of violent and criminal behavior. Violence and criminal behavior will be viewed as an evolving construct that may begin in childhood and endure through adolescence and into adulthood. Contemporary issues including terrorism, racial profiling, and gender debates will also be highlighted. Students will be provided with the tools necessary to determine future directions for policy, prevention, and treatment to address the causes and outcomes of crime and violence.

### **CPSY 4070 Trauma & Crisis Intervention (3 Credits)**

This course is designed to provide students with an overview of the key issues associated with trauma and crisis intervention, including how to conceptualize trauma and different approaches to treatment. Additionally, the course will address forensic and other special issues associated with the field of trauma.

### **CPSY 4080 Issues in Forensic Psychology III (3 Credits)**

The intersection of criminal justice and mental health usually occurs at a variety of publicly-funded systems: police, jail, state mental health, probation, and others. How do these systems and agencies work, and how effectively do they handle persons with both criminogenic and mental health needs? This course will survey each component of the public forensic mental health system, paying particular attention to innovative programs that work and to potential employment settings for our graduates.

### **CPSY 4081 Overview of Personality & Self-Report Assessment (2 Credits)**

The purpose of this course is to provide a foundation for approaching objective personality assessment in forensic practice. It will cover the underpinnings of objective assessment. It will also provide a broad survey of self-report measures, including the Minnesota Multiphasic Personality Inventory (MMPI#2), the most widely used personality inventory in the United States, the MMPI#A (adolescent version), the MMPI#2#RF, and other commonly-used instruments. Emphasis will be placed on understanding evidence-based, effective, and ethical objective personality assessment across various forensic contexts and populations.



**CPSY 4090 Issues in Measurement (3 Credits)**

Critical assessment of various psychological tests, with an emphasis on validity, reliability and issues of standardization.

**CPSY 4100 Mental Health Law (3 Credits)**

The goal of this introductory Mental Health Law course is to provide students with a general understanding of the laws impacting the field of mental health, including those involving professional responsibility and ethics; competency issues; court-ordered evaluations and testimony; family law issues; the rights of differently-abled and historically marginalized persons; and defenses based on mental state. Course Objectives include assisting students in locating and understanding how relevant statutes and cases may apply to the mental health practitioner; recognizing potential legal and ethical dilemmas and when to seek consultation; and applying the principles of mental health law to offer the highest standard of care in their clinical practices.

**CPSY 4105 Psychology, Public Policy, and Advocacy (2 Credits)**

This course is designed to provide students in clinical training with an overview of the political advocacy process in the United States, its potential impact on the practice of mental health, current issues in mental health policy, and opportunities for involvement in public policy, advocacy, and social justice discourse.

**CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention (2 Credits)**

This graduate-level course will introduce the student to the concepts of animal abuse at the individual, clinical, and societal levels. The course covers animal welfare and cruelty issues; the assessment of abused animals; the populations (individuals and groups of all ages) and settings where animal abuse is most prevalent; the evaluation, sentencing, and treatment of perpetrators of violence toward animals; and the link between cruelty to animals and humans. Students will have the opportunity to tailor some assignments to their specific interest areas. The instructor will invite guest lecturers, such as judges and probation officers, with expertise in topics such as sentencing, misdemeanors vs. felonies related to animal abuse, etc.

**CPSY 4108 Special Topics in Forensic Psychology (1-2 Credits)**

This course is designed to address specialized topics in forensic psychology that are not adequately covered in existing required and elective courses. Topics are likely to center on professional development, such as professional identity, presentation, and communication. Topics may also be more specialized, depending on the expertise and availability of potential instructors or special topics of interest within MAFP. In the past, courses have been offered on police psychology and violence risk assessment, as well as the application of forensic investigative principles to cold case review. Additional topics might include psychology and race, immigration and refugee populations, neuropsychology in corrections, juvenile justice issues, outpatient competency restoration, and other topics at the discretion of MAFP faculty.

**CPSY 4110 Family Systems and Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory. Students will have an overview of historical and contemporary approaches to family therapy, including Bowenian, Structural, Strategic, Experiential, Psychoanalytic, and Multicultural. Students will practice rethinking interpersonal conflicts and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4112 Neuropsychological Screening (2 Credits)**

This course is designed for students who are interested in adding cognitive screening or brief neuropsychological screening tests to their practice. The course will briefly review the incidence of traumatic brain injury in criminal justice and the differences between comprehensive neuropsychological assessment batteries, brief neuropsychological screening batteries, and cognitive screening tests. The indications and the benefits of each test will be covered and students will learn test interpretation and report writing for a brief neuropsychological screening battery.

**CPSY 4113 Program Evaluation and Grant Writing (3 Credits)**

Those working with the criminal justice system, like other professionals in human services fields, need to provide effective programs and services that are suited to clients and their context. This course introduces students to evaluation and provides an overview of how forensic psychologists can use this discipline to benefit their clients, practice, and programs. The course will explore evaluation's relationship to research, evaluation theories and typologies, and the many evaluation approaches that have evolved, with a focus on evaluation in human service organizations. We also will discuss recommendations for finding applicable grants, crafting a successful grant application using evaluation results and tools such as logic models, fulfilling grant-mandated requirements, and using evaluation results to complete grant reports and improve programs.

**CPSY 4120 Psychology of Performing Arts (3 Credits)**

Students gain an understanding of the psychological factors involved in the performing arts, including theatre, acting, dancing, music, and circus arts. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4130 Organizational Leadership: Center for Performance Excellence (3 Credits)**

This course is designed to familiarize CPEX Officers with approaches to effective leadership while engaging in leadership roles within the Center for Performance Excellence (CPEX). Students are exposed to successful leadership strategies from the business world and have the opportunity to implement these strategies into their roles as leaders within CPEX. This course is intended for CPEX Officers only.

**CPSY 4150 Psychology of Performance in Business (3 Credits)**

Students gain an understanding of the psychological factors involved in the business world. Factors are examined at the individual, team, and organizational level. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4160 Psychology of High Risk Occupations (3 Credits)**

In this course, students gain an understanding of the psychological factors involved in high risk occupations. High risk occupations include individuals whose profession directly involves saving lives or placing their own life at risk. Students learn about appropriate psychological interventions for these populations to enhance performance and resilience in the high stress situations required by their jobs. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4200 Practicum I: Professional Orientation (2 Credits)**

In this first quarter, of a three quarter practicum series, we will discuss issues that have bearing on your work with forensic populations, the central features of which include adapting to the culture of professional psychology by exploring relationships and by engaging in conflict resolution. By the end of the quarter, you will be well versed in the ethical guidelines, standards, and dilemmas facing you as forensic trainees. Also, you will be knowledgeable about issues related to stress and burnout in this field, including topics such as suicide and physical assault risks, and working within a system. Importantly, you will develop the skills needed to best utilize feedback and provide constructive feedback to others.

**CPSY 4210 Practicum II: Introduction to Multicultural Issues (3 Credits)**

In this quarter, we will continue our discussion of the interface between psychology and the law. Emphasis will be on cultural/diversity issues that impact our clinical and forensic practice. By the end of this quarter you should be familiar with terms such as cultural competency, cultural humility, and diversity and be able to integrate these into your theoretical framework as well as apply the concepts to your forensic work.

**CPSY 4220 Practicum III: Lifestyle Development (3 Credits)**

This course examines professional development through the lens of the foundational and functional competencies of the MAFP program. Students will explore their professional and clinical growth through self-reflective practice, as well as considering their own present and future professional identity. The course will continue discussion of the interface between psychology and the law and career paths within forensic psychology. Students will continue to focus on increasing clinical skills, with a particular focus on consultation skills, case conceptualization, and report-writing skills through vignettes and discussing issues related to their field placement sites. Didactic emphasis will be on forensic assessment, such that by the end of the quarter students will have been exposed to a variety of forensic assessment techniques and instruments and have an increased understanding of the role of psychological assessment in forensic contexts.

**CPSY 4230 Practicum IV: Theories of Personality Diagnosis (3 Credits)**

This class explores diagnosis beyond organizing external symptoms to a consideration of internal processes, where the internal processes are themselves framed by clinical theories of personality. These include systems theory, performance theory, behaviorism, cognitive-behavior theory, and psychoanalysis. The class also covers the currently dominant research-based theory, the five-factor model, emphasizing its relevance to diagnosis.

**CPSY 4240 Practicum V: Theories of Counseling and Behavioral Health Approaches (2 Credits)**

The majority of class will be spent discussing real cases from your current practicum sites. Discussions will be rooted in psychological theory and orientations, covering both theory and specific therapeutic techniques. Case discussion will be positive, constructive, and ethical. Also, the course will explore specific topics related to clinical work or life after MAFP, including a focused exercise on examining your thoughts and feelings regarding life as an early career professional.

**CPSY 4250 Practicum VI: Professional Identity and Career Development (3 Credits)**

This course is designed to be the capstone experience of the forensic training program, allowing students an opportunity to reflect on and synthesize their developmental path toward early career professional. Course goals include enhancing understanding of theory and practice in the field of psychology and, specifically, the forensic arena; applying knowledge gained throughout the course of the program to practical clinical situations, ethical dilemmas, and "real world" dynamics; understanding the importance of professionalism, collaboration, and integrity in the pursuit of a career in this field; and integrating clinical and didactic experiences during the course of training.

**CPSY 4260 Psychophysiology and Biofeedback Lab (2 Credits)**

This course is designed to be both an introduction to psychophysiology and biofeedback and to its applications, particularly to sport and performance. The principles of psychophysiology, the biofeedback instruments used, the areas of application, the techniques commonly used in conjunction with biofeedback, the diverse field of biofeedback and applied psychophysiology, and the latest uses for optimal self-regulation are covered. The course involves use of biofeedback instrumentation as well as classroom participation and readings and a self-regulation project.

**CPSY 4300 Evaluation and Treatment of Juveniles (3 Credits)**

This course examines the history and philosophy of the American juvenile justice system and the impact of present interventions and societal reforms on the juvenile system. The course provides an overview of the legal framework in which the juvenile justice system operates will highlight the differences in adult and juvenile law.

**CPSY 4310 Ethical and Legal Issues (3 Credits)**

Grounded in the American Psychological Association (APA) Ethical Standards, the American Counseling Association (ACA) Ethics Code, and the APA Specialty Guidelines for Forensic Psychology, this course is designed to examine the ethical principles of psychology and the ethical dilemmas faced by mental health professionals in forensic practice. This course will help provide a solid foundation for learning how to categorize ethical problems, understanding the principles and standards that apply to various situations/ethical problems, and developing a decision-making structure for handling ethical dilemmas.

**CPSY 4323 Issues in Measurement & Cognitive Assessment (3 Credits)**

In this course, students will apply their critical thinking and analytical skills to psychological and forensic assessment, with an emphasis on validity, reliability and issues of standardization. Lectures will cover the historical bases of assessment and measure design and will also highlight contemporary approaches to testing. The course will provide exposure to recent social criticisms and ethical concerns surrounding psychological testing. Students will also learn to administer, score, and interpret the WAIS. Students will have exposure to other assessment measures (WISC, WIAT, WRAT) and approaches to diagnosis cognitive and learning disabilities. Students will understand diagnostic validity, how to identify interpretive material, and how to think ideographically about nomothetic data. Through discussions of legal cases, students learn numerous forensic issues to which cognitive assessment is applicable, including competence to waive Miranda rights, and ability to enter a contract. Corequisite: CPSY 4323.

**CPSY 4324 Issues in Measurement & Cognitive Assessment Lab Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to learn about the administration of and issues related to intelligence testing. Students learn to administer, score, and interpret the WAIS and have exposure to other intelligence and achievement test instruments. The course is required, in conjunction with Issues in Measurement & Cognitive Assessment CPSY 4323, and will primarily consist of weekly lab meetings.

**CPSY 4330 Cognitive Behavioral Theory and Interventions (3 Credits)**

Considered the “gold standard” of treatment in many forensic contexts, Cognitive Behavioral Therapy (CBT) covers a broad skill set applicable in a variety of treatment settings. This course addresses the principal theories, techniques, and research relating to CBT, focusing on assessment, case conceptualization and intervention approaches within a forensic setting. An emphasis is in understanding CBT theory, applying the theory to cases, and utilizing the techniques with a variety of problems-in-living.

**CPSY 4335 Introduction to Trial Consulting (3 Credits)**

The art of trial consulting is the skill to meld multiple theories, methodologies, and concepts into a working and research-based strategy. This skill is very reminiscent to the art and practice of therapy. As with any practice, be it law, psychology or trial consulting, a solid base is necessary. This course is an introduction into the theory and application of trial consulting techniques in the criminal and civil arena. This overview addresses the key elements in the trial consulting including and introduction into the psycho-legal perspective, the application of research methodologies utilized by trial consultants, and specific interdisciplinary topics within trial consulting. These specific topics include concepts like the theory of persuasion, jury selection, expert testimony, and neuropsychology.

**CPSY 4340 Psychopathology, Evaluation & Treatment of the Adult Offender (3 Credits)**

Psychological theories related to etiology, development and prediction of crime and criminogenic potential. We will review foundational models of criminology, focusing on both risk-need-responsivity as well as strengths-based models. The course is a service learning course in which active practice with assessment tools, motivational interviewing, and feedback is expected.

**CPSY 4350 Sociocultural Issues in Forensic Psychology (3 Credits)**

To the practice of forensic psychology, each of us brings our individual experiences, beliefs, and views on life. We bring our highest selves: our passion, our hard work, our integrity, and our most noble dreams. We also, invariably, bring our worst selves: our “blind spots,” anxieties, misconceptions, and prejudice. As practitioners in a field trusted to explore the limits of human potential and human frailty, we recognize that the costs of ignorance in the arena of cultural awareness are unacceptably high. Rarely, however, do we have the opportunity to take a step back and explore the dynamics of privilege and oppression within society, within our profession, and within ourselves. The goal of this course is to begin the process of reflection and grow in our ability to tolerate ambiguity around issues of profound importance to our clinical practices and personal lives; to question preexisting understandings about how life “is” or “is not”; and to consider with humility, respect, and an open mind perspectives different from our own.

**CPSY 4370 Substance Abuse (3 Credits)**

The objectives of this course are to provide an introduction to the assessment, diagnosis, and treatment of substance abuse and related disorders; to become familiar with the dynamics and etiology of substance abuse; to identify psychometric tools used in the evaluation of substance abuse; to develop working knowledge of the resultant psychological and physiological effects of different substances; and to review evidence-based treatment methods and their application to populations. This course is framed in terms of exploring the different models and therapeutic approaches for understanding substance abuse and misuse.

**CPSY 4380 Group Interventions (3 Credits)**

Interpersonal dynamics of small groups and larger organizational settings; understanding of group processes (such as group formulations and development, group conflict, and group resistance); skills enabling positive group intervention.

**CPSY 4400 Projective Assessment and Report Writing (2 Credits)**

This class covers idiographic (versus nomothetic) assessment techniques that understand responses in functional relation to their occasioning environments, emphasizing clinical interviewing, early memories, and the Thematic Apperception Test. These are integrated with nomothetic test results to understand referral questions. The class also covers assessment report writing.

**CPSY 4410 Criminal Evaluations (2 Credits)**

This course will provide an overview of criminal assessment topics, with an emphasis on the literature, theory, procedure, and tools, including legal competencies, criminal responsibility, violence risk, and malingering.

**CPSY 4420 Research in Forensic Psychology: Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to complete research either by joining faculty research projects or pursuing their own research project. The course is an independent study and will primarily consist of weekly mentorship by a research advisor.

**CPSY 4430 Career Counseling (3 Credits)**

This course is designed to teach the theoretical framework of career counseling, and introduce the basic counseling tools used in the career counseling process. The course presents major theories of career development, introduce sources of occupational information, and introduce principles of assessment in career counseling. The impact of diversity and difference on career development and choices, as well as the career counseling process, is also explored. Topics include: the role of interests, skills, values and personality in the career development process; social, cultural and family influences on the career development process; and career development across the lifespan.

**CPSY 4500 Foundations: Trauma and Global Psychology (2 Credits)**

This course is designed to introduce students to core concepts in the fields of trauma psychology & global mental health including: mental health and psychosocial consequences of disaster, cultural considerations in diagnosis and treatment, best practice intervention frameworks and associated guidelines, and basic principles and ethical issues in the delivery of mental health related humanitarian assistance. Through integration of perspectives from various disciplines (e.g. clinical and social psychology, public health, medical anthropology, humanitarian studies), and with a focus on current challenges and opportunities in the relatively new field of Trauma Psychology & Global Mental Health, students will become familiar with mental health and psychosocial issues in international complex emergencies, including possible international career paths for MA psychology graduates.

**CPSY 4501 Psychotherapeutic Models of Intervention (3 Credits)**

Major psychological models of intervention are the focus of this course. The major theoretical models of personality development, psychopathology and theories of intervention are explored including psychodynamic, family systems, behaviorism, cognitive-behavioral approaches and others.

**CPSY 4503 Clinical Interviewing (3 Credits)**

Theoretical and practical issues related to clinical interviewing in international and national disaster settings.

**CPSY 4505 Multiculturalism and Diversity (3 Credits)**

This course continues introducing students to the central concepts of multicultural counseling competencies and multicultural consciousness. The three aspects of cultural competency are addressed in this course: awareness, knowledge, and skills (Sue & Sue, 2016). Additionally, we will examine a range of diverse populations by race, ethnicity, gender, sexual orientation, and physical differences is included in order to examine the cultural context of accurate assessment and appropriate interventions in counseling diverse clients. Students will examine the role, function, and effects of oppression in society as it relates to social, economic, and environmental justice. Assumptions underlying theory and research methodologies from which basic constructs of human behavior are drawn will be examined to understand how power and other dynamics manage and sustain oppression at the individual and institutional levels. Students will learn about the importance of examining power and privilege in the counseling space and/or creating space for each other to explore their own cultures and the biases and internalized messages about those who are different from themselves.

**CPSY 4509 Global Mental Health Systems (3 Credits)**

This course will focus on the dynamics of mental health systems in developing countries.

**CPSY 4510 Intercultural Practice and Development (2 Credits)**

This course is designed to prepare students for work with a variety of vulnerable populations in cross-cultural settings. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4512 Disaster Mental Health (3 Credits)**

This course will explore disaster response systems and their mental health components.

**CPSY 4515 Ethics (3 Credits)**

The course is designed to educate students about the ethical guidelines in psychology applicable to the field of IDP. Students will learn the APA Ethics Code as well as other more specialized ethics guidelines applicable to the field of IDP. Students will be expected to identify, address and resolve potential ethical conflicts. Potential future trends in the development of ethics in the area of IDP will be addressed.

**CPSY 4530 Program Evaluation (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs. Organization evaluation of international organizations will be discussed. Psychosocial interventions will be highlighted.

**CPSY 4535 Practicum: Professional Identity and Practice (2 Credits)**

This academic and practicum course in professional identity and practice focuses on introducing students to professional practice of psychology. The focus of this seminar is on developing a professional identity as a clinician and understanding the use of supervision. Various topics will be emphasized in this course that include professional issues, career development and ethical and legal issues. Self-reflective practice will be emphasized and encouraged.

**CPSY 4536 Practicum: Working With Diverse Populations (2 Credits)**

The academic and practicum course focuses on working with diverse populations globally. Students will reflect on the aspects of their identities and those of their client and how they influence psychotherapy. Cultural considerations will be considered in the areas of interviewing, case conceptualization, development of treatment goals and clinical practice generally. Topics related to cultural humility, intersectionality and identity, stigma and oppression, use of interpretation and various transnational populations will be emphasized.

**CPSY 4537 Practicum: Interview, Assessment and Diagnosis (2 Credits)**

The focus of this course is academic and practicum experiences related to interviewing, assessment, and diagnosis in practice. Guest speakers, readings, and panels will focus on special considerations for clinical interviewing and assessment with immigrant, refugee, and marginalized populations in the United States.

**CPSY 4538 Practicum: Life-span Considerations in Practice (2 Credits)**

This academic and practicum course in Life-span Considerations in Practice considers various life-span issues of importance when working with individuals and their families in practice. Important experiences of childhood, adolescence, early adulthood, adulthood and late adulthood and their relevance to and presentation in psychotherapy are considered.

**CPSY 4539 Practicum: Evidenced Based Practices in Psychology and Counseling (2 Credits)**

The purpose of this practicum is to provide opportunities for didactic and experiential learning in evidence-based practice in psychology, and integrated mental health (IMH). This practicum will also serve as group supervision of clinical work being conducted in the TDRC. Practicum is a quarterly required course in the MAIDP program. It is on a two-year cycle focusing on developing therapeutic clinical skills. Practicum work in field-placement sites in the Denver community as well as supervision of cases in the Trauma and Disaster Recovery Clinic occur in this practicum.

**CPSY 4540 Practicum: Biopsychosocial Systems in Practice (2 Credits)**

This academic and practicum course in Biopsychosocial Systems in Practice considers ways in which cultural, political, environmental, social, physical and developmental factors influence human experience including mental health. The practicum explores how these multi-systemic and interacting factors come to bear on clients' experiences and presentations and how this informs our work.

**CPSY 4542 Psychophysiology (3 Credits)**

This course is designed to expose students to the field of physiology and highlight it's reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g. substance abuse, mental illness, and biological rhythms).

**CPSY 4544 Psychological Assessment in Multicultural Contexts (3 Credits)**

This course focuses on the building blocks of psychological assessment and interviewing across cultural contexts, with a focus on identifying culturally valid and therapeutically useful assessment techniques. This course focuses on assessment techniques useful for rapport building, case formulation and treatment planning, risk assessment, and diagnostic evaluation. Methods for summarizing and communicating assessment results with allied professionals and providing assessment feedback to clients and families will also be reviewed. Special emphasis will be placed on developing skills necessary for immigration evaluations, such as asylum, hardship, VAWA, and U-Visa evaluations. Throughout the course, principles of multicultural assessment will be combined with key lessons from therapeutic assessment so that students develop a keen understanding of how assessment can be empowering to clients and families on an individual level, and can further principles of social justice on an ideological level.

**CPSY 4545 Lifespan Development and the Cultural Context (3 Credits)**

This course is designed to examine the various stages of human development, with a special focus on the influence of culture. Students will become familiar with normative developmental processes, methods of studying development, and various theoretical foundations of developmental science. Through the use of lecture, readings, class discussion, and observation, students will be challenged to consider their own development and think critically about the development of others. Students will apply basic information about development to current issues in the field and consider the influence of cultural context on relevant areas of development across the lifespan.

**CPSY 4550 Seminar: Therapeutic Interventions (3 Credits)**

Small group seminar is a small group class designed to provide students a discussion forum to share and integrate their experiences in the IDP Master's Program. Students are expected to address and share their field placement experiences with other students in their seminar. The seminar will also provide instruction on the implementation of theory in IDP to practice in multiple settings. Faculty will provide supervision for the students' field placements.

**CPSY 4556 Trauma Interventions from Cross-cultural Perspectives (3 Credits)**

This course, taught by a different visiting professor each year, will take an in-depth look at trauma and the development of mental health systems and interventions internationally.

**CPSY 4562 Public Policy and Advocacy (2 Credits)**

This course focuses on mental health policy and advocacy in the United States and in countries around the world. Students will learn about the World Health Organization policies on mental health and substance abuse and issues of mental-health stigma globally.

**CPSY 4563 Family Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman's performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4564 Advanced Spanish Language for Clinical Practice (2 Credits)**

The purpose of this course is to help students with intermediate to advanced competency in Spanish to develop their clinical linguistic skills in order to better meet the mental health needs of the Latinx population in the United States, and, in the case of those doing international work, in Latin America. Students will be required to take a Spanish proficiency exam, prior to taking the course. The course will focus on developing Spanish abilities in the following areas: 1) building rapport and demonstrating basic helping skills, 2) explaining the purpose and process of therapy/evaluation, 3) conducting diagnostic interviews and intakes, 4) providing psychoeducation about different diagnoses and mental health problems, 5) conducting crisis assessments, and 6) providing skills-based treatments.

**CPSY 4567 Culture Lab: Cultural Humility & Global Mental Health Internship Preparation (1 Credit)**

This course is designed to prepare IDP students for work with a variety of organizations and vulnerable populations in cross-cultural settings, both in-person and virtually. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4570 Crisis Intervention & Suicide Prevention (3 Credits)**

Mental Health professionals are frequently called upon to intervene in various crisis situations, either at the point of crisis event or in the aftermath. The course includes an emphasis on both domestic and global frameworks and is designed to provide a stimulating environment in which students critically examine theoretical models, recent research, good practice standards, and contemporary debates regarding crisis and suicide intervention strategies. This course teaches a model and techniques for assessment, initial intervention and follow-up with individuals in high stress situations requiring immediate crisis intervention (both domestically and globally). Additional topics include: assessment and intervention in cases of risk of harm to self, non-suicidal self-injury (NSSI) violence in the schools, severe and persistent mental illness (SPMI), working with chronically suicidal clients, the emerging field of Critical Suicidology, M-1 Holds, suicide terrorism and other forensic issues and public health and prevention models. The class will explore ethical issues surrounding intervening in crisis situations. We will also attend to how issues of marginalization and oppression, as well as strengths and resiliency factors, affect crisis intervention with people of color, LGBTQIA+ individuals, indigenous communities, women and others who experience social, economic and political disenfranchisement. Designed to assist students in developing critical thinking skills, necessary for crisis intervention related assessment, program design, implementation, and evaluation this class features case studies and mock risk assessments so that students feel ready to conduct these skills in the real world. At the end of this course students should have knowledge of how to intervene in various types of crises based on empirically supported frameworks and recent developments in the field.

**CPSY 4590 Psychology of Loss and Grief (2 Credits)**

A review of the theory of loss and grief. The course reviews cultural understandings of loss and grief as seen following disaster and conflict. Treatment modalities of loss and grief are also presented.

**CPSY 4595 Global Mental Health Internship (6 Credits)**

Students will spend one quarter in various international locations working in full time internships with international nonprofit organizations applying the principles and knowledge obtained during their study in the IDP program. Students will work under faculty and professional supervision.

**CPSY 4601 Psychology and Race in an International Setting: South Africa (5 Credits)**

Psychology and Race in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on race and psychology in RSA – salient issues, challenges, resources, and successes in post-Apartheid South Africa. Race both shapes and reflects change. Students will learn about how various racially-based historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondly, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

**CPSY 4606 Sexuality and Gender-based Violence (3 Credits)**

This course will explore human sexuality across the life span as well as and gender-based violence (GBV) in both domestic and international settings. Through engagement with historical artifacts, academic research, case studies, documentary films, and interviews with survivors, students will gain an in depth understanding of the dynamics of violence as it relates to gender identity and expression, sexual orientation, race, class, religion, and culture through the interconnectedness of oppression and critical cultural considerations. We will examine the socioecological and psychological impact of violence, including gender socialization, societal/cultural messages and norms about violence, and the pervasive impact of trauma for survivors of identity-based violence. Students will work collaboratively to interrogate barriers to change, identify effective prevention and response strategies, and develop skills to respond compassionately and intervene in culturally appropriate ways.

**CPSY 4610 Exercise Physiology (2 Credits)**

This course offers an advanced study of selected areas in physiology of sport and exercise. The applied perspective emphasizes understanding the principles in designing effective conditioning programs for performance, fitness, and health. Empirically valid principles of training for muscular fitness (e.g., strength, power, speed) and energy fitness (i.e., aerobic and anaerobic) are explored. Additionally, environmental influences (e.g., altitude), lifestyle choices (e.g., nutrition), and selected developmental considerations (e.g., as related to gender differences) are discussed. Applications to sport and performance psychology consulting in sport, performing arts, and high-risk professions complement the course content.

**CPSY 4615 The Elite Athlete Brain (3 Credits)**

The primary goal of this course is to provide students with an understanding of the expert's brain from sport and performance literature. The course will review landmark and recent publications examining expert-novice contrasts, and those of athlete-non athlete comparisons. Students will review literature on training interventions to accelerate the development of expertise and learn to evaluate the validity of scientific claims of related consumer products. Students will gain a basic understanding of where state of science in understanding sport related concussions, including diagnostic tools, recovery, and prevention.

**CPSY 4620 Kinesiology (2 Credits)**

This course is an in-depth exploration of selected areas of kinesiology as a discipline and a profession focusing on human movement. Based on interdisciplinary theoretical and empirical perspectives, the explored areas include: (a) functional anatomy as related to adaptations to training; (b) biomechanics; (c) neurophysiological processes involved in motor learning and motor control; and (d) other relevant biophysical processes (as related to talent selection and development, physiological adaptations to training, etc.). In addition, this course surveys career opportunities in academic study and clinical practice in various areas of sport, fitness, exercise, and physical education.

**CPSY 4635 Athletic and Performance Nutrition (2 Credits)**

Graduate level course educating student-coaches and administrators and performance specialists to use research and best practices in performance nutrition to achieve athletic and performance enhancement, and general wellbeing. The course will help facilitate students' ability to influence sporting and general environments to use nutrition as a means to enhance performance, with a secondary examination of preparing students to understand and manage individual differences, needs, and motivations for food choices. Course content will include modeling nutrition, encouraging a sense of family at team meals, leveraging media to internalize nutrition behaviors, and impacting availability of positive nutrition choices.

**CPSY 4652 Theoretical Aspects of Sport and Performance Psychology (3 Credits)**

This course is an in-depth exploration of selected aspects of the theories of sport psychology along with applications of these theories to other performance domains. An advanced understanding of the field of sport and performance psychology is pursued in relation to psychosocial aspects involved in both the preparation and performance processes among adults, youth, and children who represent all skill levels. The explored areas include: (a) motivation, confidence, and anxiety in sport and performance, (b) selected topics in social psychology and psychobiology, (c) psychological skills training, and (d) special topics (e.g., personality, flow, injuries, burnout).

**CPSY 4653 Sport in American Society (4 Credits)**

This course examines sport as a social construct within American society. Both aspects of this relationship will be explored: (1) The influence of social context on sport, and (2) The influence of sport on society. The course will emphasize sport as an agent for social change. Topics for exploration will include the intersection of sport and: gender, race/ethnicity/culture, socioeconomic status, media, violence, deviance, religion, and politics.

**CPSY 4657 Motivational Interviewing (2 Credits)**

This is an advanced course reviewing the theories and research findings related to motivational interviewing with the goal to apply them to performance (athletic, non-athletic) and exercise contexts. Topics include motivation for behavior change, transtheoretical model of behavior change, self-determination theory as applied to behavior modification, and the relationship between and the influences of emotion and motivation on counseling and sport and performance consultation. This course will place an emphasis on relating current leading theories and research evidence to consulting work. Equally in importance, there will be in-class hands-on activities (e.g., role playing), experiences (e.g., self-reflective tasks) and assignments (e.g., role playing tasks) that will add to the student competence in motivational interviewing.

**CPSY 4662 Foundation of Counseling Theories (3 Credits)**

This course will review major contemporary counseling models, theories, procedures, and the helping relationship. Advanced study of techniques and research findings. Survey of principles underlying individual, family systems, and multicultural approaches to counseling.

**CPSY 4669 Consulting Methods & Practices (3 Credits)**

This course is an advanced exploration of theories, research findings, and skills related to the practice of consultation in performance settings. Specific topics include: (a) the consultant roles; (b) the major theoretical approaches to consultation (e.g., mental health, systemic); (c) the processes and stages of consultation (e.g., developing interpersonal relationships; design, implementation, and evaluation of service delivery); (d) ethical and multicultural issues; and (e) students' personal strengths and concerns in the role of a consultant (e.g., values interpersonal style, and consultant variables that impact the effectiveness of their role as an agent of behavior change).

**CPSY 4671 Theories of Performance Excellence (3 Credits)**

This course is designed to familiarize students with theories of performance excellence developed by leading practitioners. Each week, students are exposed to a different practitioner's approach, which often includes an opportunity to observe the practitioner's style through video. Emphasis is placed on the role of theory in practice, theory-based conceptualizations utilizing a case study format, and comparing and contrasting the different theories.

**CPSY 4672 Counseling Methods & Practices (3 Credits)**

This course is an introduction to counseling microskills and techniques needed in helping relationships, with attention to building the therapeutic alliance. Emphasis placed on learning skills in small group format. Laboratory experience in demonstrating skills and the ability to form an effective counseling relationship is required. Pre-practicum experience to prepare students to work with clients.

**CPSY 4674 Clinical Issues: Interviewing and Diagnosis (3 Credits)**

This course examines adult psychopathology as classified in the DSM. Special emphasis will be placed on the intersection of performance with more traditional psychopathology. Students learn about etiology, symptomology, epidemiology, and treatment issues. Possible causes and contributory factors are examined, as well as theoretical and multicultural considerations. Prerequisites: Theoretical Aspects of SPP, Applied SPP, and Ethical Issues in SPP.

**CPSY 4676 Assessment and Measurement (3 Credits)**

This course covers the selection, use, and proper interpretation of common sport and performance psychology assessments. Basic principles of educational and psychological measurement, including test construction, validity, and reliability are addressed. The assessments taught include those used for individual assessment, individual selection, and organizational assessment (360 degree feedback, surveys, etc.). Prerequisites: CPSY 4652, CPSY 4690, and CPSY 4682.

**CPSY 4680 Sport and Performance Psychology Practicum (3 Credits)**

This course will familiarize students with professional issues relevant to the practice of sport and performance psychology. Students will be presenting and analyzing their current applied experiences as coaches and leaders in sport and performance settings in the community. This is a participation-intensive course and the students will receive feedback and suggestions from both the instructor and peers in a group supervision format. Importantly, the ongoing feedback and readings will provide an opportunity for students to understand and apply theories and practice systems of behavior change in sport and performance psychology in the context of their own clients/cases. Students will learn the roles and responsibilities inherent in professional and ethical consultation, with a special emphasis given to the dilemmas of serving as an embedded consultant.

**CPSY 4681 Multicultural Issues (3 Credits)**

This course covers the research and theories of counseling the culturally different client. Students are expected to develop multicultural skills, including culturally-based conceptualization, assessment, and selection of culturally appropriate intervention strategies. This course will examine these issues in general, with a special emphasis on those in sport and performance cultures. This is both an experimental and seminar-based course, aimed at developing student's personal awareness, knowledge, and skills.

**CPSY 4682 Ethical and Legal Issues (3 Credits)**

This course introduces the students to the ethical principles, codes, and standards related to the profession of sport and performance psychology. This includes an overview of the regulation of the practice of psychology, the relationships between ethical codes and legal statutes, and the development of a personal model for ethical decision-making.

**CPSY 4683 Group Interventions (3 Credits)**

This course is a survey of group counseling methods and techniques from a theoretical and applied perspective. The course will include practical application of group counseling interventions. Prerequisites: demonstrated knowledge of ethical principles and departmental consent.

**CPSY 4684 Team and Organizational Dynamics (3 Credits)**

This course examines the principles, theories, and research of human functioning in performance related teams and organizations. It explores the social and psychological factors influencing behavior in organizations, along with individual differences, dyadic relations and small group behavior. Students learn about the dynamics of team and organizational diagnosis, feedback and learning, intervention, and planned change.

**CPSY 4685 Human Growth & Development (3 Credits)**

This course is a comprehensive analysis of theories and research relating to human psychological development and learning across the lifespan. It explores the cognitive, affective, academic, physiological, moral, and social/cultural/racial domains. An emphasis is placed on a) the theoretical models underlying character and moral development, and b) adolescent and college student development theories.

**CPSY 4686 Practicum in Sport and Performance Psychology: Professional Practice (3 Credits)**

This course provides an examination of the critical components of successful and ethical professional practice and career building in sport and performance psychology in conjunction with intensive provision of sport and performance psychology services. The entire body of sport and performance psychology theoretical and applied knowledge as well as the skills that the students have acquired will be utilized. Additionally, rigorous self-reflective activities and ethical decision-making will increase the student professional and personal growth as directly related to effectiveness in the sport and performance psychology practice. Emphasis will be placed on diversifying and integrating theoretical knowledge and applied strategies and skills while simultaneously engaging in supervised independent work in real life sport and performance settings.

**CPSY 4688 Seminar in Sport and Performance Psychology (3 Credits)**

Advanced seminars offered by sport and performance psychology faculty on topics relevant to the practice and science of sport and performance psychology area.

**CPSY 4689 Psychophysiology and Biofeedback (2 Credits)**

This course explores the underlying mechanisms and psychophysical determinants of behavior in sport and performance settings. Students learn the use of biofeedback in achieving voluntary self-regulation and control of stress related behaviors.

**CPSY 4690 Sport and Performance Psychology Interventions (3 Credits)**

This course is designed to familiarize students with the application of sport and performance psychology interventions. Students experience the building of a sport and performance psychology program. This program includes the cardinal skills of relaxation, concentration, imagery, self-talk, and mental routine; followed by broader topics such as goal setting, motivation, confidence, cohesion, engagement, and mastery. The instructor briefly reviews relevant theory and research followed by demonstrations of techniques and strategies, after which students learn by doing. Specific attention is given to blending the science of peak performance with the art of applying science.

**CPSY 4692 Entrepreneurship in Sport and Performance Psychology (3 Credits)**

The primary goal of this course is to provide students with an overview of skills necessary to succeed in the entrepreneurial profession of sport and performance psychology. The course is flexibly designed to accommodate the students' desired career paths. Topics covered may include: sales and marketing, developing a practice, job search and interviewing skills, and understanding the job market.



**CPSY 4700 Organization and Administration of Sport (4 Credits)**

Graduate level course to educate students on the organization and administration of sport and sport coaching. Course content includes emergency action planning, facility management, human resource management, evaluation and development, legal responsibilities, record keeping, finance, and public relations. Students will learn how to lead organizations and coaching staffs to develop fair and safe participation.

**CPSY 4705 Sociocultural Aspects of Sport Coaching (4 Credits)**

Graduate level course to educate students on the sociocultural and social-psychological aspects of sport coaching and athletic performance. Students will understand how to analyze and apply social, sociological and social-psychological theory to sport coaching and athletic performance. Consideration will be given to developing a critical understanding of sport coaches' knowledge development, and how to implement multiple, effective and ethical strategies to enhance coach and athletic performance.

**CPSY 4710 Motor Learning and Sport Pedagogy (4 Credits)**

Graduate level course to educate students on the science and practice of how athletes learn motor skills and how coaches can facilitate skill acquisition. Course content includes the scientific and theoretical frameworks of motor learning, with a secondary examination of motor control and development. Applied course content will focus on how coaches can use learning strategies such as demonstration, instruction, feedback, and practice planning to improve athletic performance.

**CPSY 4712 Tactical Strength and Conditioning Coaching (2 Credits)**

The purpose of this course is to educate students on the scientific, theoretical and practical aspects of tactical strength and conditioning. Students will learn how to design tactical strength and conditioning programs to enhance performance and reduce and lessen the severity of injury. This course is also intended to help students begin to prepare to pass the National Strength and Conditioning Association's (NSCA) Tactical Strength and Conditioning Facilitator (TSAC-F) certification, and related professional development opportunities.

**CPSY 4715 Strength, Conditioning, and Injury Prevention Program Design (4 Credits)**

Graduate level course to educate students on the scientific, theoretical and practical foundations of strength, conditioning and injury prevention. Students will learn how to design strength and conditioning programs to enhance athletic performance and reduce and lessen the severity of injury. This course is also intended to help students become familiar with the National Strength and Conditioning Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS) exam, and position statements from several national governing bodies on athlete safety and physical performance.

**CPSY 4720 Psychology of Athletic Performance (4 Credits)**

Graduate level course to educate students on the psychological aspects of athletic performance, and secondarily coach performance. Course content includes the theoretical and practical application of established mental skills (e.g., motivation, efficacy, arousal, anxiety, focus, self-awareness, goal-setting, imagery, team cohesion). Concepts will be applied to the evaluation and creation of practice and training plans to enhance athletic performance.

**CPSY 4722 Social-Psychology of the Body, Health, and Performance (2 Credits)**

The purpose of this course is to understand the ways in which people in society understand the body in sport, physical activity and health and wellness. Or in more simple terms, answer the question: why society thinks about the sporting, healthy and physically active body in the ways that it does? In order to acquire this understanding we will explore the complex and powerful historical, social and cultural forces that have shaped the assumptions underpinning the sporting, physically active and healthy body. No prerequisites exist for this course.

**CPSY 4723 Applied Sports Technology for Coaches (2 Credits)**

This elective graduate level course is designed to educate students on the uses, effects, and ethics of technologies on athletic performance. Students will learn about the breadth of research and uses of technologies in attempts to enhance athletic performance. Course content includes surveying the sports technology field, technology ethics, positive and negative effects of technology, evaluating knowledge claims (i.e., reliability, validity, measurement issues), and common uses of technology to enhance performance (e.g., team communication, athlete monitoring and tracking, instruction and feedback, apps).

**CPSY 4725 Philosophy and Ethics of Sport Coaching (4 Credits)**

Graduate level course to educate students on the philosophical, social, and ethical foundations of sport and sport coaching. Course content includes the history and formation of sport and sport coaching, social issues (e.g., race, class, gender, inclusivity, etc.), how sport is used for (un)desirable ends and the public good, the coach's role in demonstrating and encouraging ethical behavior, and promoting a healthy and safe environment for numerous stakeholders. Leadership theory (e.g., transformational and servant leadership, emotional intelligence, athlete-centered coaching) is also touched upon and discussed in relation to the ethics and norms of sport, and the relationship between educational institutions and sport/athletics. There are no prerequisites for this course.

**CPSY 4730 Biomechanics of Athletic Performance (4 Credits)**

Graduate level course to educate students on the biomechanics of athletic performance. Students will learn quantitative and qualitative methods of biomechanics to analyze and enhance athletic performance and prevent injury. Course content includes knowledge of the musculoskeletal system, force development and how additional factors such as body composition and joint structures influence athletic performance and injuries.

**CPSY 4735 Understanding Sport Research (4 Credits)**

Graduate level course to educate students on understanding and doing sport research. The primary focus of this course is on facilitating student's understanding of research methods commonly used in sport research. Secondarily, the course will examine how research is actually done, including reviewing the literature and writing and referencing scholarly work. Course content will cover topics such as paradigms and philosophy of science, epistemology and the creation of knowledge, and numerous research designs, methodologies and methods. Content will also include understanding statistics and qualitative methods.

**CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching (1 Credit)**

The purpose of the Practicum in Strength, Conditioning, and Fitness Coaching course is to help students gain the knowledge, skills and attitudes to become a quality coach and a reflective practitioner through experiential learning. Students will be provided with a variety of strategies and methods to solve real-world strength, conditioning, and fitness coaching problems in real life settings. Students will draw upon other coursework, research, and practical insights to exercise professional judgement. Students must complete at least 50 hours of coaching throughout the quarter.

**CPSY 4751 Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research (1 Credit)**

Applied Sport Coaching 1 introduces students to reflective practice and how to become a reflective practitioner. Students will draw upon a variety of discourses and practices to understand the significance of framing and naming problems and implementing potential solutions within their own context. To help become a skilled scholar-coach, students must complete at least 50 hours of coaching or coaching related duties throughout the quarter. The course culminates with an introduction to action research, and other forms of applied research, and shifts the student from their own reflective practice to a wider, rigorous social research approach to addressing sport or coaching problems.

**CPSY 4752 Applied Sport Coaching 2: Theory, Literature, and Planning Applied Research (1 Credit)**

Applied Sport Coaching 2 introduces students to key issues and challenges of the action research process and additional forms of applied research. Students consider the meaning and social construction of science, research, and enduring concerns such as ethics, power, and benefit and harm. Students consider the role theory takes in action and applied research, identify a focus of the research, review relevant literature, and develop relationships with key stakeholders. Students may also submit institutional review board approval and develop additional materials or tools for their research.

**CPSY 4753 Applied Sport Coaching 3: Data Collection and Analysis (1 Credit)**

Applied Sport Coaching 3 exposes students to issues and methods pertaining to data collection and analysis. Also, students reconcile issues related to the research process and make decisions that focus the scope of the research. Students further their relationships with key stakeholders and, if not already, obtain institutional review board approval prior to data collection. With stakeholders, students solidify the framing of the problem to be addressed and use data collection and analysis methods to understand the problem.

**CPSY 4754 Applied Sport Coaching 4: Implementing Action Plans (1 Credit)**

In Applied Sport Coaching 4, students plan, implement, and reflect on their action, or applied, research. Students' time is "in the field" working through the messy complexities of practice in relation to theory and method. Students learn to manage obstacles that arise and deepen their understanding of what is going on in practice and why. As needed, students revisit theory, literature and method to develop new insights on the path of implementing a rigorous sustainable solution to their identified research problem.

**CPSY 4755 Applied Sport Coaching 5: Writing and Communicating Research (1 Credit)**

Writing up research, as well as creating other ways to communicate the action research to stakeholders and partners, is a significant challenge. In Applied Sport Research 5, students learn issues related to journal style guidelines, including key issues such as audience, tone, writing style, and submission guidelines and instructions for authors. Also, students learn how to communicate in a variety of ways to lay audiences and community partners and stakeholders, which is essential to providing benefit to partners.

**CPSY 4756 Applied Sport Coaching 6: Knowledge Dissemination and Reflection (1 Credit)**

Applied Sport Coaching 6 is the culmination of two key milestones. First, this course facilitates students' dissemination of their action, or applied, research studies. Students finish their written manuscript and submit it for publication. Students also reflect on the entirety of the research process and reflective practice. Through the submission process, students develop an understanding of what it takes to become a scholar-coach, they contribute to the advancement of science in sport, and they have their work challenged by the peer review process. Second, this course is the culminating experience for students in the Masters of Arts in Sport Coaching degree program. Students reflect on their growth while in the program and consider next steps on the journey as lifelong learners and scholar-coaches.

**CPSY 4991 Independent Study (1-4 Credits)****CPSY 4995 Independent Research (1-17 Credits)****CPSY 5000 Rad Behav/Func Contextl Models (3 Credits)**

This course is designed to provide a historical, philosophical, and conceptual background to better understand and appreciate Behaviorist views of "being-in-the-world". The course lays the foundation for the sophisticated application of the science of behaviorist theories and methods for the assessment of clinical problems and the art of doing psychotherapy. The course will invite a little discomfort, disturb some preconceptions, and compel students to address some difficult questions and thorny issues. Among the goals of this course are to see students commit to being more than a psychologist technician, to encourage them to develop a guiding philosophical core in their practice as a psychologist; to assist them in clarifying or deepening whatever philosophical worldview they may hold; and that they will have achieved an informed understanding of radical behaviorism/functional contextualism - whether or not they choose to further pursue these models.

**CPSY 5010 Cognitive & Affective Models (3 Credits)**

This is the first in a three part sequence that includes Psychophysiology and Clinical Neuropsychology and is designed to introduce students to the current research in cognitive neuroscience and consciousness. This first course focuses on sensation/perception, learning, memory, emotion, language and other higher cognitive functions. Lectures will emphasize current technologies and historical inquiry and the unique contributions made by psychosocial and cultural variables.

**CPSY 5020 Psychoanalytic Models (3 Credits)**

Psychoanalytic theories, including Freud's topographic and structural theories, ego psychology, object relations theory and modern relational theories, including self-psychology and intersubjectivity.

**CPSY 5030 Systems Models (3 Credits)**

Basic concepts of general systems theory and their applications in psychology, focusing on family systems, groups and organizations.

**CPSY 5040 History and Systems in Psych (2 Credits)**

Basic psychological concepts surveyed from a historical point of view, tracing development of psychological bases of professional practice.

**CPSY 5050 Advanced Statistics (3 Credits)**

This course is designed to increase students understanding of advanced analytical techniques in statistics, particularly as they pertain to psychology. We will take an applied approach, i.e., the course material will emphasize the feasibility, application, and utilization of these analyses rather than the theories upon which they are based.

**CPSY 5070 Research Methods (2 Credits)**

Sequential course that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitude and thinking skills necessary for function as a local clinical scientist; research design tools, methods and strategies for answering different types of questions.

**CPSY 5073 Qualitative Research Methods (2 Credits)**

Qualitative research involves obtaining in-depth information about the behaviors and beliefs of people in naturally occurring social settings. This course introduces students to the philosophical underpinnings, history, and key elements of five qualitative approaches: narrative research, phenomenology, grounded theory, ethnography, and case study. We compare theoretical frameworks and methodologies, experience the use of data, and discuss writing strategies. In addition, we read articles that are exemplars of each approach.

**CPSY 5075 Program Evaluation Technique (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs.

**CPSY 5080 Diagnosis and Classification (2 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

**CPSY 5108 Introduction to Acceptance and Commitment Therapy (ACT) (2 Credits)**

Acceptance and Commitment Therapy (ACT) belongs to the movement in clinical psychological science that sees acceptance and openness to experience as an essential addition to change-focused psychotherapeutic treatment strategies. Although consciously based on behavior-analytic thinking, ACT is a hybrid in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. The paradox upon which ACT is founded is that only radical acceptance of what cannot be changed empowers people to recognize and change the things that they can. The ACT approach is about embracing necessary suffering in order to make more committed, life-affirming choices and live in accordance with personal values. ACT emphasizes that in a very deep sense all human beings are in the same boat. The technical and theoretical bases of ACT are through normal didactics, but the heart and art of the approach occurs through experiential exercises, group process, and from observation and modeling. Prerequisite: CPSY 5000.

**CPSY 5120 Introduction to Animal-Assisted Interventions (3 Credits)**

This course serves as an introduction to animal-assisted interventions (AAI) as they are commonly used by mental health care professionals. It is designed to provide students with an overview of the foundations of AAI, the variety of ways in which this modality is used, international perspectives on AAI, various perspectives on ethics and animal welfare, and researchers' current understanding of the role of the human-animal bond in facilitating AAI treatment efficacy. General topics to be addressed include the characteristics of the species used in AAI, the basic principles of AAI, the use of AAI with a variety of populations, and animal abuse issues. A number of guest lecturers will share their knowledge and experiences with students throughout the quarter.

**CPSY 5130 Issues in Measurement (3 Credits)**

Validity, reliability and standardization issues in psychological testing; statistical properties of commonly used tests.

**CPSY 5170 Life Cycle: Inf to Mid Childhd (3 Credits)**

Understanding normal development of children (0-12 years), integrating theory, research and a phenomenological perspective.

**CPSY 5180 Life Cycle: Adolescent - Adult (2 Credits)**

Understanding normal adolescent development (13-18 years), integrating theory, research and a phenomenological perspective. Major theories, life events, crisis and the adult life phases. There will be an emphasis on the diversity of adult experiences.

**CPSY 5200 Life Cycle: Late Adulthood (3 Credits)**

Theories of aging; social, psychological and biological changes; assessment and intervention methods, emphasizing issues impacting older adults. (65 years and above).

**CPSY 5230 Group Dynamics & Interventions (3 Credits)**

Provides psychologists in training with multiple learning experiences highlighting that groups and organizations are intensely psychological environments in which most psychologists function professionally and personally and have the potential to impact positively.

**CPSY 5231 Social Psychology (3 Credits)**

This course explores how social psychologists approach psychology, concentrating on key concepts, research findings, and critical thinking strategies that students can integrate into their own clinical work.

**CPSY 5250 Existential and Humanistic Theory and Therapy (2 Credits)**

Historical roots and basic assumption of existential and humanistic views. Students encouraged to integrate materials with their personal values and assumptions about human nature and their interaction with clients.

**CPSY 5270 Physiological Psychology I (3 Credits)**

Terminology and principles of and research in physiological psychology. Where possible, application made to content and practice of clinical psychology.

**CPSY 5271 Physiological Lab I (1 Credit)**

Optional. Assistance with material covered in CPSY 4170.

**CPSY 5290 Clinical Neuropsychology (3 Credits)**

Historical, conceptual and clinical foundation for, as well as current developments related to, the field of clinical neuropsychology. Includes exposure to: developmental neuropsychology and neuroanatomy; higher cognitive functions; neuropsychologically informed interviews and standard neuropsychological test batteries; neuropsychological profiles associated with a variety of acquired disorders (both classical neuropsychological and psychological in nature); ethnic, cultural, age and gender considerations; and current status of a variety of professional/ethical issues. Prerequisite: CPSY 5270.

**CPSY 5310 Ethical Issues in Psychology (3 Credits)**

In-depth consideration of ethical standards applicable to the science and practice of psychology; pertinent laws and legal standards governing the practice of psychology; areas in which legal and ethical standards suggests contradictory actions on the part of the clinical psychologist.

**CPSY 5320 Professional Issues in Psych (2 Credits)**

Issues, concerns and controversies impacting current practice of professional psychology at the state and national levels; preparation for future alternative systems of service delivery. Emphasis is on professional life after the PsyD. Required for first year students.

**CPSY 5340 Psychology of Racism and Other Oppression (3 Credits)**

This course focuses on the impacts of multiple forms of oppression targeting diverse communities with a focus on racism. Historical and intergenerational components of oppressive systems will be reviewed. The course will offer an overview of the ways in which oppression is supported and maintained across macro-, meso-, and individual dimensions, and students will be challenged to consider approaches for interrupting oppression in their professional roles. Intersectional forms of oppression and their effects will be examined. Cognitive, behavioral, and psychological manifestations of oppressive ideologies expressed by therapist and client will be examined with a focus on reducing the harms of oppression in psychological practice. This course is part of the multicultural course sequence.

**CPSY 5360 Intersectional Identity Development (3 Credits)**

This course introduces conceptual frameworks of development across multiple domains of identity and their intersections. Diverse models of identity development will be reviewed with an emphasis on the ideological, cultural, and developmental factors influencing identity formation. The interplay of social power with identity will be explored. This course is part of the multicultural course sequence.

**CPSY 5370 Clinical Practice with LGBTQ+ Populations (3 Credits)**

This course will focus on the specific experiences of lesbian, gay, bisexual, transgender, queer (LGBTQ+) peoples and additional communities experiencing oppression based on their sexual orientation and/or gender identity. Concepts honoring the diversity of these communities will be discussed. Intersectional and developmental perspectives of the biological, psychological, relational, cultural, and social issues encountered across the lifespan will be integrated throughout the course. Systems of power and oppression that target LGBTQ+ communities on macro-, meso-, and individual levels will be reviewed, and the impact of these oppressions on psychological health will be discussed. The course will highlight affirmative psychotherapy approaches that support resiliency and incorporate culturally responsive practices. The course will recognize the ethical considerations of working with LGBTQ+ communities in alignment with current profession-wide guidelines. This course is part of the multicultural course sequence.

**CPSY 5380 Culturally Competent Psychotherapy (3 Credits)**

As the final class in the year-long multicultural course sequence, this class will integrate the theoretical content of the preceding classes and focus on their psychotherapeutic implications. This course will address psychotherapy with the following groups - African Americans, Asian Americans, Latinos, Native Americans, and the LGBT community.

**CPSY 5385 First-Year Seminar (2 Credits)**

This is a clinical and didactic seminar on beginning psychotherapy. The focus will be on case formulation and developing a therapeutic relationship with the client. Content covered will include foundations of evidence-based practice, common factors, documentation standards, standards of practice, emergency/crisis policies and procedures, and foundational applied ethics.

**CPSY 5388 Professional Seminar: Psychological Assessment (2 Credits)**

This seminar will focus on clinical material related to aspects of psychological assessment. It demands more of a time commitment than most other seminars because assessment requires longer sessions with clients to administer tests, time to score and interpret tests, and report writing. Students should not sign up for this seminar if the main reason is to fulfill the GSPP four assessment cases requirement. Students should only rank this seminar if they are passionate about assessment. There will be opportunities to complete ADHD evaluations, learning disability assessments, personality batteries and collaborative therapeutic assessments for children and adults. Students are required to complete a minimum of 4 cases during the course of the year (one per quarter). We will not be providing forensic testing or neuropsychological testing services, although we will discuss some neuropsychological issues as they arise. Students will have the chance to present their cases and consult with the seminar. Requirements for enrollment in the seminar include: prior completion of Cognitive Assessment and Self-Report Assessment, as well as completion of or at least concurrent enrollment in the Introduction to Rorschach class. The seminar co-leaders provide supervision and enrich the experience. Supervision of assigned small subgroups typically takes place either before or after seminar or on Fridays.

**CPSY 5390 Professional Seminar: Forensic Issues (2 Credits)**

This seminar will introduce students to the various areas and ways in which psychology interacts with the legal and criminal justice systems. Students will develop their capacity to perform evaluations relating to psychological questions, dilemmas, and disputes that are most frequently requested of forensic psychologists. The focus of the seminar will be on assisting students in clarifying their role as an evaluator and consultant to attorneys, judges, and criminal justice personnel; exploring the ethical responsibilities therein; learning to compose reports for a legal rather than a clinical audience; and preparing to testify as an expert witness. Students will formulate and deliver case presentations, participate in a "mock" testimony experience, and submit reports. Students in past seminars have conducted child custody evaluations, mental status at the time of offense evaluations, Social Security disability evaluations, asylum, T-visa, and U-visa evaluations, animal abuse, competency, and juvenile placement evaluations. These evaluations allow students the opportunity to conduct full battery psychological assessments and learn how to apply findings to a legal context. In addition, we have been getting more court-mandated therapy clients. Thus, students will get assessment experience as well as individual therapy experience with adults and children. Assessment experience is required. Students are required to complete a combination of 4 assessments/therapy clients during the year. Please note that the forensic seminar requires a substantial time commitment because assessments require longer sessions with clients to administer tests, time to score and interpret tests, and report writing.

**CPSY 5391 Professional Seminar: Psychodynamic Therapy (2 Credits)**

This seminar focuses on psychodynamic psychotherapy - that is, individual adult psychotherapy with the aim of bringing about meaningful and lasting psychological concepts as they apply to your patients, with a practical, "hands on" focus - for example, what to do and say when your patient shuts down, threatens suicide, act out, comes on to you, misses appointments, gets worse, throws up in your office, and all the other troubling and fascinating things people do from time to time in psychotherapy. Prior or current personal psychotherapy is highly desirable and strongly recommended. Students should be prepared to discuss their clinical work candidly - and help foster an environment of mutual trust, compassion, and respect, in which candid discussion can take place.

**CPSY 5392 Professional Seminar: Couple and Family (2 Credits)**

This seminar allows students more in-depth training in working with systems including couples and families. Students should take Couples Therapy and Family Therapy either before or concurrent with the seminar. Special topics covered include divorce, step families parenting, sex therapy, multicultural issues, and ethics, as well as more general couple and family therapy work.

**CPSY 5393 Professional Seminar: Acceptance and Commitment Therapy (2 Credits)**

Acceptance and Commitment Therapy (ACT) is a pragmatically based, relatively new and highly experiential form of therapy whose overarching goals are to a) assist clients (and therapists) in accepting what cannot be changed (i.e., the form or frequency of certain private events), while b) helping them fully commit to behaving in accordance with idiosyncratic values. Although consciously based on behavior-analytic thinking, ACT is a hybrid therapy in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. In the seminar, students will learn the technical and theoretical bases of ACT through group process, individual and small group supervision, as well as from observation and modeling. Prerequisite: Behavioral Models course.

**CPSY 5394 Professional Seminar: Cognitive-Behavior Relational Therapy (2 Credits)**

This is a year-long seminar on integrating cognitive-behavior (CBT) and relational therapy. Trainees learn the theory and practice of CBT and relational therapy through readings, didactic presentations, discussion, and especially case presentations of their clients and themselves. Small-group supervision is also required.

**CPSY 5404 Professional Seminar: Integrative Therapy (2 Credits)**

This advanced seminar examines various integrative models of psychotherapy, and students will have the opportunity to develop their own therapeutic "voice" by integrating the major theories already learned at the GSPP. While the seminar will be theoretical, one goal is to help students prepare for practice in the real world by exploring the common factors of therapy, and how to work collaboratively in a client-directed fashion. Clients may include adults, adolescents, and children with a wide variety of presenting concerns, in individual, couples, family, or group therapy. Competency areas covered include professionalism, reflective practice, scientific knowledge and methods, relationships, individual and cultural diversity, ethical/legal standards and policy, assessment, and intervention. In addition to supervision on psychotherapy, there may be an option for students to be supervised on their supervision of a first-year student in the PPC.

**CPSY 5406 Professional Seminar: Health Psychology (2 Credits)**

This advanced seminar focuses on the ways that clients' physical health concerns affect psychosocial and emotional well-being. We focus on the relationship between the mind and the body and take a holistic and contextual approach to understanding work with clients, keeping in mind relational and cultural variables throughout the seminar. Clients in the PPC that have been in this seminar have had cancer, multiple sclerosis, diabetes, heart failure, chronic pain, autoimmune diseases, etc. As relevant to our work with clients, we discuss pain management, mindfulness, differential diagnosis of depression and anxiety, sleep hygiene, psychosocial oncology, grief and loss, and other empirically supported treatments for issues that clients present. The overarching theoretical framework of the course is relationship-focused, client-centered, and strengths-based. We draw on rehabilitation psychology and medical psychology, and explore diversity issues in a variety of ways, including examining disability as a multicultural issue. We use readings from interpersonal psychotherapy, feminist and multicultural therapy, positive-psychology, meaning-centered psychotherapy, humanistic/existential therapy, client-centered therapy and post-traumatic growth to guide discussions. Particular attention is paid to helping clients enhance their strengths and find meaning in their lives during times of transition. Since many health settings are focused on a short-term model of treatment, students in seminar have the option of taking on shorter-term cases and we explore the use of time-limited psychotherapy in a health setting. It is expected that most students take on new cases in this seminar.

**CPSY 5407 Professional Seminar: Caregiver and Child Relationships From Pregnancy Through Early Childhood (2 Credits)**

This seminar involves the evaluation and treatment of infants, young children, and their caregivers in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant to perinatal, infant, and early childhood assessment and treatment are discussed. Prerequisite: CPSY 5385.

**CPSY 5408 Professional Seminar: Military Psychology (2 Credits)**

This clinical seminar teaches military cultural competency, which is infused throughout topics during the year. There is also a focus on learning the evidence-based treatments taught and utilized within the Department of Defense and the Department of Veteran Affairs as the purpose of this field placement and seminar is to prepare students to serve this population and to work within these large systems of care for their predoctoral internships, postdoctoral fellowships and beyond. A specific focus on the prevention of vicarious trauma, compassion fatigue and burnout is infused throughout the year-long seminar. Throughout case presentations, students are encouraged to discuss how various intersecting aspects of culture and identity contribute to the case and their own interventions as therapists.

**CPSY 5420 Behav-Analytic Prin 1 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles underlying major systems and models of behaviorism. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic tradition. Course I specifically targets contingency-shaping selection processes based upon Pavlovian and operant conditioning paradigms. Recommended prerequisite: CPSY 5000.

**CPSY 5421 Behavioral Analysis Princ La (1 Credit)****CPSY 5422 Behav-Analytic Prin 2 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles relevant to cultural-linguistic practices. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. Course 2 specifically addresses verbal relational contingency selection processes based upon cultural and its verbal community. Prerequisite: CPSY 5420.

**CPSY 5423 Behav-Analytic Assess/Case Frm (2 Credits)**

This course covers the philosophical foundations, assumptions, and principles relevant to behavioral assessment and case formulation tactics. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets an empirical data-driven approach to idiographic assessment for purposes of developing conceptual analyses from the contextual-functional analytic perspective. Prerequisites: CPSY 5420, CPSY 5422.

**CPSY 5424 Behavior-Analytic Intervention (2 Credits)**

This course provides an overview of issues, principles and methods basic to clinical practice and intervention. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets a range of commonly used methods of intervention (e.g., counter-conditioning and exposure-based treatments, guided action strategies, acceptance-commitment approaches, Eastern interventions). Issues relevant to the structuring of therapy sessions, the therapeutic relationship, behavioral nonadherence, empirical research, and other topics of therapeutic interest will be reviewed. This course will incorporate the use of experiential exercises, modeled demonstration, and behavior rehearsal methods for training purposes. Prerequisites: CPSY 5420, CPSY 5422, CPSY 5423.

**CPSY 5466 Health Psychology (2 Credits)**

This course is designed to provide students with a broad overview of the salient empirical and theoretical aspects of health psychology and behavioral medicine. The course will emphasize the role that psychological variables play in the development, exacerbation, treatment and prognosis of both acute and chronic illness. We will also highlight sociopolitical and cultural discourse surrounding end-of-life decision making, healthcare accessibility and the phenomenology of a disabled population.

**CPSY 5480 Integrated Primary Care (2 Credits)**

This course is designed to provide an introduction to the field of Integrated Primary Care (IPC). Primary health care physicians currently serve as the de-facto mental health care providers for approximately 50-80% of the patients they serve. Psychologists are desperately needed to support primary care, yet traditional clinical training does not adequately prepare them to work in this field. Students in this course can expect to acquire a solid knowledge in IPC that will enable them to function effectively in the primary care culture. A clinical exposure component are required so students can experience the pace and problem range seen in the primary care office. Class size is limited. Students not enrolled in the PsyD program must petition the instructor for approval to register.

**CPSY 5500 Diagnosis & Treatment of Children (2 Credits)**

The focus of this course will be on the evaluation and treatment of children. Considerations concerning the particulars of the evaluation process will be discussed. An integrative approach to child treatment will be presented with a "child-in-family" approach. Play therapy approaches and techniques will be described and contrasted. Behavioral approaches will be discussed. Work with populations common in child work will be discussed, such as children in high-conflict divorce families, learning disabilities, ADHD, mood disorders and situations of physical/sexual abuse.

**CPSY 5505 Diagnosis & Treatment of Adolescents (2 Credits)**

This course focuses on counseling and psychotherapy with adolescents from a variety of approaches, including developmental, integrative, psychodynamic, person-centered, reality, rational emotive, cognitive behavioral and systemic. Topics will include the ethical and legal issues involved in psychological interventions, culturally responsive counseling, and orchestrating productive family sessions with challenging adolescents.

**CPSY 5550 Couples Therapy (2 Credits)**

Theory, techniques and research relating to couples therapy, including theoretical perspectives: behavioral couples therapy, emotionally-focused couples therapy and object relations couples therapy. The course also addresses specific problem areas, including domestic violence, infidelity, depression, anxiety, substance abuse and personality disorders. Prerequisite: CPSY 5030.

**CPSY 5560 Family Therapy (2 Credits)**

Theory, techniques and research relating to family therapy, including several theoretical perspectives: behavioral, experiential, psychodynamic, multigenerational approaches. Special topics covered include working with community resources, addressing developmental issues of children, working with medical and school systems, utilizing cultural factors in planning programs and interventions and adults in family therapy. Prerequisite: CPSY 5030.

**CPSY 5562 Psychological Consultation (2 Credits)**

This course provides an overview of the practice of psychological consultation. Theories and models of consultation in various settings including businesses, organizations, health care, and schools are covered. The process and stages of consultation from entry to termination are analyzed. This class differentiates consultation from other types of psychological interventions. Important legal, ethical and multicultural issues in consultation are addressed throughout the course. Students develop their own model for conducting consultation and refine that model through work with local organizations. Students increase their awareness of their strengths and weaknesses in the practice of consultation. Methods of instruction include lecture, discussion, experiential exercises, and interactions with local organizations and professional consultants.

**CPSY 5591 Psychodynamic Psychotherapy (2 Credits)**

Theoretical understanding and treatment of adults within a developmental, ego analytic framework. Second quarter - the neuroses. Prerequisite: CPSY 5020.

**CPSY 5620 Intersubjective Systems Theory (2 Credits)**

This course focuses on psychotherapy from the perspectives of intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, empathic listening, attuning to the other's affective experience and putting the other's subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

**CPSY 5680 Cognitive Assessment (4 Credits)**

Theoretical, professional, and clinical issues involving intelligence and its measurement; assessment of cognitive functioning and clinical interpretation of test results, focusing on the WAIS-III (and child equivalents).

**CPSY 5685 Introduction to Pediatric Neuropsychological Assessment (2 Credits)**

Pediatric neuropsychology integrates many basic sciences including behavioral Neurology, developmental psychology, neuroanatomy, psychopathology, and psychological assessment. The role of pediatric neuropsychologist is to provide comprehensive assessment, consultation, and intervention in the context of a developing child. The course will review important concepts, theories, and empirical research in the field of pediatric neuropsychology. Students will learn the basic rationale in conducting a pediatric neuropsychological evaluation, including a brief review of many common pediatric assessment measures. In addition, many common pediatric disorders will be reviewed from a neuropsychological perspective including: Dyslexia, Attention Deficit hyperactivity Disorder, Pervasive Development Disorders, Traumatic Brain Injury, Seizure Disorders, and Mental Retardation. Upon completion of the course the student will have a greater appreciation of a neuropsychological conceptual framework and have a better understanding of specific pediatric disorders.

**CPSY 5686 Suicide Prevention, Intervention and Postvention (2 Credits)**

Suicide is a serious public health issue and challenge for the nation, Colorado, and our local communities. While most clinicians are focused on the assessment and treatment of people at high risk for suicide, a more comprehensive approach is needed to prevent people from becoming suicidal in the first place. This course covers best practices in suicide prevention, intervention, and "postvention" (suicide crisis response) and will explore the particular issues of several vulnerable populations.

**CPSY 5690 Introduction to the Rorschach (4 Credits)**

The purpose of this course is to provide a solid foundation for using the Rorschach Inkblot Method. The Rorschach serves a central role in personality assessment. It has a long history in psychology and is the topic of an abundance of empirical research—as well as many uninformed misconceptions. It meets Supreme Court Daubert validity standards and is admissible in court. It is a very powerful technique but is very complex, requiring extensive knowledge to effectively administer, score, and interpret.

**CPSY 5692 Advanced Rorschach Analysis (2 Credits)**

This course is an exploration of advanced topics in Rorschach interpretation. Topics will include: conceptual understanding of the Comprehensive System; content and sequence analysis; differential diagnosis; integrating alternative systems of interpretation with the Comprehensive System; development and use of special scales; appropriate use of computerized interpretation; and integration of Rorschach analysis with personality theory. Prerequisites include course work in Rorschach administration, scoring and basic interpretation; and in personality theory. Students will be expected to score, analyze, and present Rorschach protocols.

**CPSY 5700 Advanced Personality Assessment (2 Credits)**

This class is for students who wish to learn the skills necessary to conduct comprehensive psychological assessments in a competent, ethical, antiracist and culturally informed manner. This course will focus on learning how to integrate multiple personality measures into a cohesive understanding of one's personality. Students will be taught how to write a traditional integrated personality report and several weeks will be spent on Collaborative/Therapeutic Assessment (C/TA). Students will be exposed to several personality tests including the Minnesota Multiphasic Personality Inventory – 3 (MMPI-3), Rorschach Performance Assessment System (R-PAS), Early Memories Procedure, Wartegg Drawing Completion Test (Crisi Wartegg System), Thematic Apperception Test (TAT), Trauma Symptom Inventory – 2 (TSI-2) and the Thurston Cradock Test of Shame (TCTS), among others. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5705 Self Report Assessment (3 Credits)**

Construction and application of objective instruments, emphasizing the MMPI and MCMI. Students are required to submit test reports. Prerequisite: CPSY 5130.

**CPSY 5706 Self Report Assessment Lab (1 Credit)**

Optional. For students anticipating a need for extra help with report writing.

**CPSY 5740 Integrative Personality Assessment (2 Credits)**

This course is the culmination of the assessment sequence, and integrates techniques, approaches and concepts covered in issues in Measurement, Cognitive Assessment, Objective Personality Assessment, and Rorschach. Aspects of the other core courses in the curriculum will also be brought to bear on the question of how to obtain and how to interpret information within various theoretical models for the purposes of answering referral questions and planning interventions. Projective testing will be introduced as a source of behavior samples for which the occasioning environment is known to the psychologist. There will be focus on distinguishing interpretable from irrelevant information, and on integrating interpretable information into meaningful patterns. The goal of using assessment to answer referral question and plan treatments will generate a special focus on report writing.

**CPSY 5741 Therapeutic Assessment (3 Credits)**

This course will explore Collaborative/Therapeutic Assessment, which is an approach to psychological assessment that can have extraordinary therapeutic effects with clients. We will focus on the Therapeutic Assessment model developed by Stephen Finn. We will read broadly in the area: from the genesis of collaborative assessment fueled by Fischer to the empirical foundations and structure of Therapeutic Assessment provided by Finn to novel applications of the approach highlighted by Handler, Tharinger, and others. This important paradigm shift in assessment is applicable to personality, cognitive, and neuropsychological assessment as well as any professional endeavor that aims to help clients understand themselves in life-changing ways. The course is designed for those with a solid foundation in assessment who wish to develop greater facility in helping their clients. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5745 Human Sexuality (2 Credits)**

The psychology of human sexuality is a survey of historical and contemporary psychological views on a wide variety of sexual behaviors; theory and research bearing on the relationship between life span, psychological development, psychological functioning, interpersonal processes, and sexual behaviors; political and social issues involved in current sexual norms and practices. Specific implications for clinical psychology will be discussed.

**CPSY 5750 Supervision (2 Credits)**

This course is designed to familiarize students with theories of supervision; provide practical, guided experience in peer supervision/consultation; help students understand and critically discuss the supervisory process; aid in gaining awareness of how multicultural issues may affect supervision; and familiarize students with ethical and legal issues in supervision.

**CPSY 5760 Professional Issues II (2 Credits)**

This class provides an organized and comprehensive approach to pre-doctoral psychology internship selection, emphasizing an understanding of "fit." Topics covered include choosing sites; writing cover letters, CVs, and AAPI essays; preparing application materials; interviewing techniques; rank ordering sites; and dealing with emotions related to the process. The course syllabus includes important readings from the current literature. Lectures are balanced with guest appearances by DU Writing Center staff and others. Opportunities are given for role play among the students.

**CPSY 5765 Cognitive Behavioral Therapy (2 Credits)**

This course focuses on clinical applications of cognitive-behavioral theory. Major theorists in the area are reviewed, including Ellis, Beck, Lazarus, and Meichenbaum. Research utilizing cognitive-behavioral therapy as an evidence-based practice are reviewed. In addition, key cognitive behavioral techniques are demonstrated and practiced.

**CPSY 5831 Theory and Foundations of IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This course will provide an in-depth historical, theoretical, and empirical foundation for students interested in engaging in ongoing research and practice in Infant Early Childhood Mental Health (IECMH). Formative readings from the IECMH literature, including groundbreaking articles and textbooks will be reviewed and discussed. We will examine methods of applied IECMH work, including promotion of well-being and the spectrum of prevention, early intervention, assessment, and treatment with young children and their caregivers. The multidisciplinary nature of IECMH will be explored, along with a focus on how psychologists and infant mental health specialists fit into these teams in various contexts. We will also examine different "ports of entry" or means into treating caregivers, young children, and their relationships from an IECMH framework. Empirical studies establishing the efficacy, effectiveness, and cultural sensitivity (or lack thereof) of various assessments, therapeutic approaches, and practices in the IECMH field will be examined. We will spend the most time examining critical theories of social development including attachment and temperament and will consider their applicability to IECMH work, cultural responsive across several cultures, strengths, and limitations. Throughout the course, will explore the IECMH Diversity tenets created by leaders in the field and will apply the tenets in discussions and coursework.

**CPSY 5832 Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback (2 Credits)**

Intensive training will be offered in the process of assessing a caregiver and child relationship in a manner designed to inform dyadic treatment planning. All students will be trained in conducting a multi-modal, relationship-based assessment with a caregiver and child under the age of six. Assessment tools used will include the Infant Toddler Mental Status Exam (ITMSE), the Crowell Procedure and the Working Model of the Child Interview (WMCi). Students will also be introduced to the Interpersonal Inventory and paper and pencil means of assessing the individuals and their relationship. Students will be introduced to diagnosis in IECMH using the Diagnostic & Statistical Manual of Mental Disorders – fifth edition (DSM-V) and the Diagnostic Classification of Mental Health & Developmental Disorders of Infancy and Early Childhood (DC:0-5) classification systems, as well as crossover considerations between the two systems. Students will conduct a thorough and multi-modal assessment of a caregiver-child relationship and will integrate the information learned into a professional report. Students will practice treatment planning as well as providing feedback to the dyad.



**CPSY 5833 Advanced Topics in IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This advanced topics course will continue fostering the student's understanding of Infant and Early Childhood Mental Health (IECMH) practice. Throughout the course, in-class discussion centers on developing clinical relationships with families and on how these relationships can support growth and change in both child and caregiver. Of particular importance is the student's continued exploration of use of self, and integrating IECMH practice principles into their field placement and CUB Clinic work. Topics include infant regulatory concerns, attachment difficulties, caregiver mental illness and impact on the child and relationship, parenting self-efficacy, child maltreatment and trauma, and application of IECMH treatment practices in the community. Prerequisite: CPSY 5831 or equivalent with instructor's permission.

**CPSY 5834 Perinatal-5 Mental Health: Training Intensive in Evidenced-Based Approaches (2 Credits)**

This intensive therapeutic course will continue fostering the student's understanding of Perinatal-Five mental health practice via working knowledge of a psychotherapeutic model used during this time period. In alternating years we will focus on Interpersonal Psychotherapy (IPT) or Parent Child Interaction Therapy (PCIT), two evidenced based approaches, with a focus on use with clients in perinatal through five populations. Students will gain knowledge of IPT or PCIT approaches to assessment and practice via readings, discussions, video, role plays, and case presentations. Of particular emphasis is the student's continued exploration of use of self and integrating P-5 mental health practice principles when learning about and practicing IPT or PCIT.

**CPSY 5840 Psychopharmacology (2 Credits)**

This course focuses on the various medications prescribed by psychiatrists to alter consciousness, modify behavior, and/or alleviate symptoms in the treatment of mental disorders including depression, bipolar disorder, anxiety, eating disorders, and psychoses. Topics such as sleep, pain and addiction will be covered, as well as drug interactions, psychotropic drugs in pregnancy, the treatment of children, geriatrics, and the psychologist-psychiatrist relationship.

**CPSY 5846 Military Psychology and the Culture of Warfighting (2 Credits)**

This course is intended to provide an introduction to military and veteran culture as well as military psychology and behavioral health. This course is designed as the first of a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with military members, veterans, and the families of servicemembers. The principal focus will be on training students to utilize culturally competent attitudes and knowledge as clinicians when providing services to servicemembers of the military branches, veterans of the military, and the families of servicemembers. American historical context, military history, and military structure will be covered in this course. Additionally, multiple types of behavioral health services within the United States government will be covered including the Department of Defense, the Public Health Service, and the Department of Veterans Affairs. A survey of world affairs as they currently stand, the U.S. national defense strategy, and current military posture will be covered. Salient health care issues within the military and veteran population will be covered. Legal and ethical issues that are pertinent and complex within military psychology and combat will be examined.

**CPSY 5847 Psychology and Physiology of Isolated, Confined, and Extreme Environments (2 Credits)**

This course is intended to survey and examine human psychological and physiological performance in extreme, austere, and challenging environments and the secondary effects of these environments after deployment. This course is designed as the second in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. This course will examine issues, literature, and critical arguments surrounding team makeup and cohesion in austere environments as well as physiological and cognitive/behavioral effects of operating within these environments. Operational behavioral health will be covered in addition to the physical and psychological after-effects of these deployments. Psychological casualties, forensic issues, and post-deployment transition will also be covered. Prerequisite: CPSY 5846.

**CPSY 5848 Evidence-based Practice for Military-related Health Disparities (2 Credits)**

This course is intended to survey and examine current evidence-based assessment tools utilized to diagnose certain psychiatric and neurological conditions within military servicemembers and Military Veterans. The course will also focus on the understanding and utility of the best available evidence for the treatment of these psychiatric conditions. Prevalence rates, comorbid conditions, differential diagnosis, and complicating treatment factors within these particular psychiatric conditions will be the primary focus of the course. This course is designed as the third in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity.

**CPSY 5849 Behavioral Medicine and Interprofessional Healthcare in Military/Veterans (2 Credits)**

This course is intended to build upon academic and clinical knowledge gained throughout the entirety of the Graduate School of Professional Psychology curriculum and integrate this knowledge with the understanding of clinical and operational psychology within Military and Veteran settings gained through courses in the Sturm Specialty in Military Psychology. This course is focused on the acquisition of knowledge of the unique aspects of Military behavioral medicine and its role within the medical center environment. A second focus of the course is on interprofessional work within healthcare settings and how behavioral science professionals play a role on interprofessional teams within family medicine, primary care, and medical/surgical units within the medical center environment. Additionally, special considerations for behavioral medicine and interprofessional work with Military and Veteran populations will be covered. This course is designed as the fourth in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. Enforced Prerequisites: CPSY 5846.

**CPSY 5852 Foundations in Substance Use Disorder (2 Credits)**

The course examines the major theories addressing substance use disorder and addiction. Students will explore these disorders as understood from a variety of theoretical frameworks (including psychoanalytic, behavioral, humanistic and social learning theory), as well as findings from neuroscience. The course emphasizes a developmental perspective in the understanding of these issues. Further, the course will emphasize current treatment models based on empirically based information and research. Students will gain skills in using their generalist training to conceptualize, diagnose, and treat these difficult disorders.

**CPSY 5853 Neurobiology of Attachment, Trauma and Addiction (2 Credits)**

The course will examine research and practice findings from the fields of neuropsychology and biology with regard to substance use disorders. Major findings and theories related to brain and nervous system functioning as they relate to substance use will be discussed, and used to further inform treatment considerations and clinical conceptualization. Additionally, students will be engaged in a more in-depth review of treatment modalities available. Students will build on their knowledge of empirically supported treatments in the first course. Students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course.

**CPSY 5854 Behavioral Addictions: Assessment and Treatment (2 Credits)**

The course will examine research and practice findings regarding behavioral addictions such as sex, pornography, gambling, food, and others. Discussion of brain and nervous system functioning as they relate to behavioral addiction will be discussed, and used to further inform treatment considerations and clinical conceptualization. Prerequisites: students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course, and completion of CPSY 5853 Neurobiology of Addiction and Advanced Treatment is strongly recommended.

**CPSY 5855 Advanced Treatment of Substance Use and Addictive Disorders (2 Credits)**

This course will provide students a more nuanced and advanced look at the current treatments for substance use and other addictive disorders. Topics will include medically assisted treatment models, therapeutic communities, and the use of FDA-approved psychoactive substances to treat addictions and underlying disorders.

**CPSY 5865 Introduction to Psychosocial Oncology (3 Credits)**

In this course, students will be introduced to the field of Psychosocial Oncology. This course will include an overview of the physiological processes involved in cancer prevention, etiology, and treatment. Students will develop a better knowledge of the different types of cancer, staging, and treatment options. A brief history of the field of psychosocial oncology will also be presented. The psychological sequelae of cancer diagnosis, treatment, metastases and recurrence, and survivorship will be included in this course. Special topics will also include working with caregivers and family members of cancer patients, sexuality and cancer, and working with patients and families at the end of life. Common psychotherapeutic interventions and assessments for oncology settings will be explored. In addition, the variety of roles of a psychologist in oncology settings will be discussed. Themes that will be included throughout the course are ethical and reflective practice, working with cancer patients from a multicultural perspective, and reducing compassion fatigue.

**CPSY 5880 Business Issues in Professional Psychology (2 Credits)**

This course introduces students to business principles as they apply to professional psychology. Students think through various business practice decisions, such as starting, managing, marketing, and diversifying a psychology practice and consider the related legal, ethical, and financial issues.

**CPSY 5989 Doctoral Paper Development (1 Credit)**

This course is designed to facilitate the development and writing of the doctoral paper. Students are expected to adhere to the GSPP Doctoral Paper Guidelines and the APA style guidelines. A major feature of the class is student-to-student sharing and critiquing of doctoral project ideas and plans. Students are expected to take advantage of this opportunity to hone their writing skills and develop their doctoral paper proposal. Students have complete the proposal phase of their project further develop their research methodology.

**CPSY 5991 Independent Study (1-17 Credits)****CPSY 5993 Advanced Field Placement Experience (1-8 Credits)**

All PsyD students are required to work as a Psychology Trainee in an outside agency each year prior to the internship year. The minimum total is 384 hours per year. Students are expected to arrange with a field placement to receive psychological clinical training, which could include the following types of experiences: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.

**CPSY 5994 PsyD Internship (4,8 Credits)**

The Graduate School of Professional Psychology (GSPP) requires that all students attend a yearlong or two half-time years of clinical internship. Internship is the clinical experience after the student has completed all courses, the clinical competency examination, and at least three years of residency at GSPP. Students typically apply through APPIC and are offered formal internships. Occasionally students create internships, but they must be approved formally through GSPP prior to the start of the internship. The basic experiences may include training in: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc. To register, student must have departmental approval. Students can register half-time for 4 credit hours or full-time for 8 credit hours.

**CPSY 5995 Independent Research (1-17 Credits)****Courses****CPSY 4000 Issues in Forensic Psychology I (2 Credits)**

This course is designed to incubate a new professional identity as an early career graduate student in forensic psychology. From the development of an expanded professional network to the careful cultivation of a professional persona, this class supports the transition from armchair psychologist to graduate student. Our guests will cover factual information about the structure and function of the American legal and legislative systems, assessment technologies including polygraph testing and investigations and related content including substance misuse, human trafficking, victim rights, media representations and more.

**CPSY 4010 Introduction to Statistics (3 Credits)**

General statistical principles and techniques and their application to psychological and psycho-legal issues. Students will develop computer analytic skills to assist in answering professionally relevant questions.

**CPSY 4020 Psychopathology and Diagnosis (3 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

**CPSY 4021 Intro to Clinical Interviewing, Psychopathology & Diagnosis, and Applied Case Conceptualization (5 Credits)**

The practice of therapy is at once an art, and a science. The process of becoming a therapist is both a process of learning and of experiencing. This course provides an overview of foundational interviewing, case conceptualization, and psychotherapy theory and practice, along with a thorough grounding in psychopathology and diagnosis. Categorical classification will be explored using the DSM and ICD frameworks, with a focus on major diagnostic categories. Students will recognize the strengths and limitations of formal diagnosis as a tool in clinical practice, as well as the importance of dimensional case conceptualization and seeing the person behind the label. Emphasis will be placed on understanding mental wellbeing in context, taking into account cultural relevancy and the evolution of diagnoses over time. In this hybrid course format, students will be challenged to integrate diagnosis, case conceptualization, treatment planning, and intervention through didactic learning as well as experiential exercises within the classroom and through quarter-long, small group projects.

**CPSY 4031 Supervision & Consultation (1 Credit)**

This course is designed as an introduction to theory and practice of clinical supervision and consultation within forensic contexts. Fundamental issues will be examined, including: models of supervision and consultation roles, the supervision relationship, basics of consultation, the impact of personal factors on supervision and consultation, supervision and consultation techniques and practices, evaluation, and legal/ethical issues in supervision and consultation. Students will begin to develop competence to support their roles in future supervisory and consulting relationships.

**CPSY 4040 Issues in Forensic Psychology II: Human Sexuality & Gender-Based Violence (3 Credits)**

This course takes a historical and contemporary psychological view on a wide variety of sexual behaviors; examines theory and research on biological, developmental, cultural, and psychological aspects of human sexuality and sexual behaviors; reviews political and social issues involved in current sexual norms and practices; and covers current topics related to gender-based violence and sexual offending.

**CPSY 4050 Research Methods (3 Credits)**

Examination of the research process, including the formulation of questions and utilization of various methodologies to answer hypotheses.

**CPSY 4060 Biological Bases of Criminal Behavior: Adult Psychopathology (3 Credits)**

In this course, students will develop an understanding of the biopsychosocial vulnerabilities to crime. This course will emphasize biological models but also the psychological, social, and environmental causes and correlates of violent and criminal behavior. Violence and criminal behavior will be viewed as an evolving construct that may begin in childhood and endure through adolescence and into adulthood. Contemporary issues including terrorism, racial profiling, and gender debates will also be highlighted. Students will be provided with the tools necessary to determine future directions for policy, prevention, and treatment to address the causes and outcomes of crime and violence.

**CPSY 4070 Trauma & Crisis Intervention (3 Credits)**

This course is designed to provide students with an overview of the key issues associated with trauma and crisis intervention, including how to conceptualize trauma and different approaches to treatment. Additionally, the course will address forensic and other special issues associated with the field of trauma.

**CPSY 4080 Issues in Forensic Psychology III (3 Credits)**

The intersection of criminal justice and mental health usually occurs at a variety of publicly-funded systems: police, jail, state mental health, probation, and others. How do these systems and agencies work, and how effectively do they handle persons with both criminogenic and mental health needs? This course will survey each component of the public forensic mental health system, paying particular attention to innovative programs that work and to potential employment settings for our graduates.

**CPSY 4081 Overview of Personality & Self-Report Assessment (2 Credits)**

The purpose of this course is to provide a foundation for approaching objective personality assessment in forensic practice. It will cover the underpinnings of objective assessment. It will also provide a broad survey of self-report measures, including the Minnesota Multiphasic Personality Inventory (MMPI#2), the most widely used personality inventory in the United States, the MMPI#A (adolescent version), the MMPI#2#RF, and other commonly-used instruments. Emphasis will be placed on understanding evidence-based, effective, and ethical objective personality assessment across various forensic contexts and populations.

**CPSY 4090 Issues in Measurement (3 Credits)**

Critical assessment of various psychological tests, with an emphasis on validity, reliability and issues of standardization.

**CPSY 4100 Mental Health Law (3 Credits)**

The goal of this introductory Mental Health Law course is to provide students with a general understanding of the laws impacting the field of mental health, including those involving professional responsibility and ethics; competency issues; court-ordered evaluations and testimony; family law issues; the rights of differently-abled and historically marginalized persons; and defenses based on mental state. Course Objectives include assisting students in locating and understanding how relevant statutes and cases may apply to the mental health practitioner; recognizing potential legal and ethical dilemmas and when to seek consultation; and applying the principles of mental health law to offer the highest standard of care in their clinical practices.

**CPSY 4105 Psychology, Public Policy, and Advocacy (2 Credits)**

This course is designed to provide students in clinical training with an overview of the political advocacy process in the United States, its potential impact on the practice of mental health, current issues in mental health policy, and opportunities for involvement in public policy, advocacy, and social justice discourse.

**CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention (2 Credits)**

This graduate-level course will introduce the student to the concepts of animal abuse at the individual, clinical, and societal levels. The course covers animal welfare and cruelty issues; the assessment of abused animals; the populations (individuals and groups of all ages) and settings where animal abuse is most prevalent; the evaluation, sentencing, and treatment of perpetrators of violence toward animals; and the link between cruelty to animals and humans. Students will have the opportunity to tailor some assignments to their specific interest areas. The instructor will invite guest lecturers, such as judges and probation officers, with expertise in topics such as sentencing, misdemeanors vs. felonies related to animal abuse, etc.

**CPSY 4108 Special Topics in Forensic Psychology (1-2 Credits)**

This course is designed to address specialized topics in forensic psychology that are not adequately covered in existing required and elective courses. Topics are likely to center on professional development, such as professional identity, presentation, and communication. Topics may also be more specialized, depending on the expertise and availability of potential instructors or special topics of interest within MAFP. In the past, courses have been offered on police psychology and violence risk assessment, as well as the application of forensic investigative principles to cold case review. Additional topics might include psychology and race, immigration and refugee populations, neuropsychology in corrections, juvenile justice issues, outpatient competency restoration, and other topics at the discretion of MAFP faculty.

**CPSY 4110 Family Systems and Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory. Students will have an overview of historical and contemporary approaches to family therapy, including Bowenian, Structural, Strategic, Experiential, Psychoanalytic, and Multicultural. Students will practice rethinking interpersonal conflicts and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4112 Neuropsychological Screening (2 Credits)**

This course is designed for students who are interested in adding cognitive screening or brief neuropsychological screening tests to their practice. The course will briefly review the incidence of traumatic brain injury in criminal justice and the differences between comprehensive neuropsychological assessment batteries, brief neuropsychological screening batteries, and cognitive screening tests. The indications and the benefits of each test will be covered and students will learn test interpretation and report writing for a brief neuropsychological screening battery.

**CPSY 4113 Program Evaluation and Grant Writing (3 Credits)**

Those working with the criminal justice system, like other professionals in human services fields, need to provide effective programs and services that are suited to clients and their context. This course introduces students to evaluation and provides an overview of how forensic psychologists can use this discipline to benefit their clients, practice, and programs. The course will explore evaluation's relationship to research, evaluation theories and typologies, and the many evaluation approaches that have evolved, with a focus on evaluation in human service organizations. We also will discuss recommendations for finding applicable grants, crafting a successful grant application using evaluation results and tools such as logic models, fulfilling grant-mandated requirements, and using evaluation results to complete grant reports and improve programs.

**CPSY 4120 Psychology of Performing Arts (3 Credits)**

Students gain an understanding of the psychological factors involved in the performing arts, including theatre, acting, dancing, music, and circus arts. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4130 Organizational Leadership: Center for Performance Excellence (3 Credits)**

This course is designed to familiarize CPEX Officers with approaches to effective leadership while engaging in leadership roles within the Center for Performance Excellence (CPEX). Students are exposed to successful leadership strategies from the business world and have the opportunity to implement these strategies into their roles as leaders within CPEX. This course is intended for CPEX Officers only.

**CPSY 4150 Psychology of Performance in Business (3 Credits)**

Students gain an understanding of the psychological factors involved in the business world. Factors are examined at the individual, team, and organizational level. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4160 Psychology of High Risk Occupations (3 Credits)**

In this course, students gain an understanding of the psychological factors involved in high risk occupations. High risk occupations include individuals whose profession directly involves saving lives or placing their own life at risk. Students learn about appropriate psychological interventions for these populations to enhance performance and resilience in the high stress situations required by their jobs. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4200 Practicum I: Professional Orientation (2 Credits)**

In this first quarter, of a three quarter practicum series, we will discuss issues that have bearing on your work with forensic populations, the central features of which include adapting to the culture of professional psychology by exploring relationships and by engaging in conflict resolution. By the end of the quarter, you will be well versed in the ethical guidelines, standards, and dilemmas facing you as forensic trainees. Also, you will be knowledgeable about issues related to stress and burnout in this field, including topics such as suicide and physical assault risks, and working within a system. Importantly, you will develop the skills needed to best utilize feedback and provide constructive feedback to others.

**CPSY 4210 Practicum II: Introduction to Multicultural Issues (3 Credits)**

In this quarter, we will continue our discussion of the interface between psychology and the law. Emphasis will be on cultural/diversity issues that impact our clinical and forensic practice. By the end of this quarter you should be familiar with terms such as cultural competency, cultural humility, and diversity and be able to integrate these into your theoretical framework as well as apply the concepts to your forensic work.

**CPSY 4220 Practicum III: Lifestyle Development (3 Credits)**

This course examines professional development through the lens of the foundational and functional competencies of the MAFP program. Students will explore their professional and clinical growth through self-reflective practice, as well as considering their own present and future professional identity. The course will continue discussion of the interface between psychology and the law and career paths within forensic psychology. Students will continue to focus on increasing clinical skills, with a particular focus on consultation skills, case conceptualization, and report-writing skills through vignettes and discussing issues related to their field placement sites. Didactic emphasis will be on forensic assessment, such that by the end of the quarter students will have been exposed to a variety of forensic assessment techniques and instruments and have an increased understanding of the role of psychological assessment in forensic contexts.

**CPSY 4230 Practicum IV: Theories of Personality Diagnosis (3 Credits)**

This class explores diagnosis beyond organizing external symptoms to a consideration of internal processes, where the internal processes are themselves framed by clinical theories of personality. These include systems theory, performance theory, behaviorism, cognitive-behavior theory, and psychoanalysis. The class also covers the currently dominant research-based theory, the five-factor model, emphasizing its relevance to diagnosis.

**CPSY 4240 Practicum V: Theories of Counseling and Behavioral Health Approaches (2 Credits)**

The majority of class will be spent discussing real cases from your current practicum sites. Discussions will be rooted in psychological theory and orientations, covering both theory and specific therapeutic techniques. Case discussion will be positive, constructive, and ethical. Also, the course will explore specific topics related to clinical work or life after MAFP, including a focused exercise on examining your thoughts and feelings regarding life as an early career professional.

**CPSY 4250 Practicum VI: Professional Identity and Career Development (3 Credits)**

This course is designed to be the capstone experience of the forensic training program, allowing students an opportunity to reflect on and synthesize their developmental path toward early career professional. Course goals include enhancing understanding of theory and practice in the field of psychology and, specifically, the forensic arena; applying knowledge gained throughout the course of the program to practical clinical situations, ethical dilemmas, and "real world" dynamics; understanding the importance of professionalism, collaboration, and integrity in the pursuit of a career in this field; and integrating clinical and didactic experiences during the course of training.

**CPSY 4260 Psychophysiology and Biofeedback Lab (2 Credits)**

This course is designed to be both an introduction to psychophysiology and biofeedback and to its applications, particularly to sport and performance. The principles of psychophysiology, the biofeedback instruments used, the areas of application, the techniques commonly used in conjunction with biofeedback, the diverse field of biofeedback and applied psychophysiology, and the latest uses for optimal self-regulation are covered. The course involves use of biofeedback instrumentation as well as classroom participation and readings and a self-regulation project.

**CPSY 4300 Evaluation and Treatment of Juveniles (3 Credits)**

This course examines the history and philosophy of the American juvenile justice system and the impact of present interventions and societal reforms on the juvenile system. The course provides an overview of the legal framework in which the juvenile justice system operates will highlight the differences in adult and juvenile law.

**CPSY 4310 Ethical and Legal Issues (3 Credits)**

Grounded in the American Psychological Association (APA) Ethical Standards, the American Counseling Association (ACA) Ethics Code, and the APA Specialty Guidelines for Forensic Psychology, this course is designed to examine the ethical principles of psychology and the ethical dilemmas faced by mental health professionals in forensic practice. This course will help provide a solid foundation for learning how to categorize ethical problems, understanding the principles and standards that apply to various situations/ethical problems, and developing a decision-making structure for handling ethical dilemmas.

**CPSY 4323 Issues in Measurement & Cognitive Assessment (3 Credits)**

In this course, students will apply their critical thinking and analytical skills to psychological and forensic assessment, with an emphasis on validity, reliability and issues of standardization. Lectures will cover the historical bases of assessment and measure design and will also highlight contemporary approaches to testing. The course will provide exposure to recent social criticisms and ethical concerns surrounding psychological testing. Students will also learn to administer, score, and interpret the WAIS. Students will have exposure to other assessment measures (WISC, WIAT, WRAT) and approaches to diagnosis cognitive and learning disabilities. Students will understand diagnostic validity, how to identify interpretive material, and how to think ideographically about nomothetic data. Through discussions of legal cases, students learn numerous forensic issues to which cognitive assessment is applicable, including competence to waive Miranda rights, and ability to enter a contract. Corequisite: CPSY 4323.

**CPSY 4324 Issues in Measurement & Cognitive Assessment Lab Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to learn about the administration of and issues related to intelligence testing. Students learn to administer, score, and interpret the WAIS and have exposure to other intelligence and achievement test instruments. The course is required, in conjunction with Issues in Measurement & Cognitive Assessment CPSY 4323, and will primarily consist of weekly lab meetings.

**CPSY 4330 Cognitive Behavioral Theory and Interventions (3 Credits)**

Considered the “gold standard” of treatment in many forensic contexts, Cognitive Behavioral Therapy (CBT) covers a broad skill set applicable in a variety of treatment settings. This course addresses the principal theories, techniques, and research relating to CBT, focusing on assessment, case conceptualization and intervention approaches within a forensic setting. An emphasis is in understanding CBT theory, applying the theory to cases, and utilizing the techniques with a variety of problems-in-living.

**CPSY 4335 Introduction to Trial Consulting (3 Credits)**

The art of trial consulting is the skill to meld multiple theories, methodologies, and concepts into a working and research-based strategy. This skill is very reminiscent to the art and practice of therapy. As with any practice, be it law, psychology or trial consulting, a solid base is necessary. This course is an introduction into the theory and application of trial consulting techniques in the criminal and civil arena. This overview addresses the key elements in the trial consulting including and introduction into the psycho-legal perspective, the application of research methodologies utilized by trial consultants, and specific interdisciplinary topics within trial consulting. These specific topics include concepts like the theory of persuasion, jury selection, expert testimony, and neuropsychology.

**CPSY 4340 Psychopathology, Evaluation & Treatment of the Adult Offender (3 Credits)**

Psychological theories related to etiology, development and prediction of crime and criminogenic potential. We will review foundational models of criminology, focusing on both risk-need-responsivity as well as strengths-based models. The course is a service learning course in which active practice with assessment tools, motivational interviewing, and feedback is expected.

**CPSY 4350 Sociocultural Issues in Forensic Psychology (3 Credits)**

To the practice of forensic psychology, each of us brings our individual experiences, beliefs, and views on life. We bring our highest selves: our passion, our hard work, our integrity, and our most noble dreams. We also, invariably, bring our worst selves: our “blind spots,” anxieties, misconceptions, and prejudice. As practitioners in a field trusted to explore the limits of human potential and human frailty, we recognize that the costs of ignorance in the arena of cultural awareness are unacceptably high. Rarely, however, do we have the opportunity to take a step back and explore the dynamics of privilege and oppression within society, within our profession, and within ourselves. The goal of this course is to begin the process of reflection and grow in our ability to tolerate ambiguity around issues of profound importance to our clinical practices and personal lives; to question preexisting understandings about how life “is” or “is not”; and to consider with humility, respect, and an open mind perspectives different from our own.

**CPSY 4370 Substance Abuse (3 Credits)**

The objectives of this course are to provide an introduction to the assessment, diagnosis, and treatment of substance abuse and related disorders; to become familiar with the dynamics and etiology of substance abuse; to identify psychometric tools used in the evaluation of substance abuse; to develop working knowledge of the resultant psychological and physiological effects of different substances; and to review evidence-based treatment methods and their application to populations. This course is framed in terms of exploring the different models and therapeutic approaches for understanding substance abuse and misuse.

**CPSY 4380 Group Interventions (3 Credits)**

Interpersonal dynamics of small groups and larger organizational settings; understanding of group processes (such as group formulations and development, group conflict, and group resistance); skills enabling positive group intervention.

**CPSY 4400 Projective Assessment and Report Writing (2 Credits)**

This class covers idiographic (versus nomothetic) assessment techniques that understand responses in functional relation to their occasioning environments, emphasizing clinical interviewing, early memories, and the Thematic Apperception Test. These are integrated with nomothetic test results to understand referral questions. The class also covers assessment report writing.

**CPSY 4410 Criminal Evaluations (2 Credits)**

This course will provide an overview of criminal assessment topics, with an emphasis on the literature, theory, procedure, and tools, including legal competencies, criminal responsibility, violence risk, and malingering.

**CPSY 4420 Research in Forensic Psychology: Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to complete research either by joining faculty research projects or pursuing their own research project. The course is an independent study and will primarily consist of weekly mentorship by a research advisor.

**CPSY 4430 Career Counseling (3 Credits)**

This course is designed to teach the theoretical framework of career counseling, and introduce the basic counseling tools used in the career counseling process. The course presents major theories of career development, introduce sources of occupational information, and introduce principles of assessment in career counseling. The impact of diversity and difference on career development and choices, as well as the career counseling process, is also explored. Topics include: the role of interests, skills, values and personality in the career development process; social, cultural and family influences on the career development process; and career development across the lifespan.

**CPSY 4500 Foundations: Trauma and Global Psychology (2 Credits)**

This course is designed to introduce students to core concepts in the fields of trauma psychology & global mental health including: mental health and psychosocial consequences of disaster, cultural considerations in diagnosis and treatment, best practice intervention frameworks and associated guidelines, and basic principles and ethical issues in the delivery of mental health related humanitarian assistance. Through integration of perspectives from various disciplines (e.g. clinical and social psychology, public health, medical anthropology, humanitarian studies), and with a focus on current challenges and opportunities in the relatively new field of Trauma Psychology & Global Mental Health, students will become familiar with mental health and psychosocial issues in international complex emergencies, including possible international career paths for MA psychology graduates.

**CPSY 4501 Psychotherapeutic Models of Intervention (3 Credits)**

Major psychological models of intervention are the focus of this course. The major theoretical models of personality development, psychopathology and theories of intervention are explored including psychodynamic, family systems, behaviorism, cognitive-behavioral approaches and others.

**CPSY 4503 Clinical Interviewing (3 Credits)**

Theoretical and practical issues related to clinical interviewing in international and national disaster settings.

**CPSY 4505 Multiculturalism and Diversity (3 Credits)**

This course continues introducing students to the central concepts of multicultural counseling competencies and multicultural consciousness. The three aspects of cultural competency are addressed in this course: awareness, knowledge, and skills (Sue & Sue, 2016). Additionally, we will examine a range of diverse populations by race, ethnicity, gender, sexual orientation, and physical differences is included in order to examine the cultural context of accurate assessment and appropriate interventions in counseling diverse clients. Students will examine the role, function, and effects of oppression in society as it relates to social, economic, and environmental justice. Assumptions underlying theory and research methodologies from which basic constructs of human behavior are drawn will be examined to understand how power and other dynamics manage and sustain oppression at the individual and institutional levels. Students will learn about the importance of examining power and privilege in the counseling space and/or creating space for each other to explore their own cultures and the biases and internalized messages about those who are different from themselves.

**CPSY 4509 Global Mental Health Systems (3 Credits)**

This course will focus on the dynamics of mental health systems in developing countries.

**CPSY 4510 Intercultural Practice and Development (2 Credits)**

This course is designed to prepare students for work with a variety of vulnerable populations in cross-cultural settings. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4512 Disaster Mental Health (3 Credits)**

This course will explore disaster response systems and their mental health components.

**CPSY 4515 Ethics (3 Credits)**

The course is designed to educate students about the ethical guidelines in psychology applicable to the field of IDP. Students will learn the APA Ethics Code as well as other more specialized ethics guidelines applicable to the field of IDP. Students will be expected to identify, address and resolve potential ethical conflicts. Potential future trends in the development of ethics in the area of IDP will be addressed.

**CPSY 4530 Program Evaluation (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs. Organization evaluation of international organizations will be discussed. Psychosocial interventions will be highlighted.

**CPSY 4535 Practicum: Professional Identity and Practice (2 Credits)**

This academic and practicum course in professional identity and practice focuses on introducing students to professional practice of psychology. The focus of this seminar is on developing a professional identity as a clinician and understanding the use of supervision. Various topics will be emphasized in this course that include professional issues, career development and ethical and legal issues. Self-reflective practice will be emphasized and encouraged.

**CPSY 4536 Practicum: Working With Diverse Populations (2 Credits)**

The academic and practicum course focuses on working with diverse populations globally. Students will reflect on the aspects of their identities and those of their client and how they influence psychotherapy. Cultural considerations will be considered in the areas of interviewing, case conceptualization, development of treatment goals and clinical practice generally. Topics related to cultural humility, intersectionality and identity, stigma and oppression, use of interpretation and various transnational populations will be emphasized.

**CPSY 4537 Practicum: Interview, Assessment and Diagnosis (2 Credits)**

The focus of this course is academic and practicum experiences related to interviewing, assessment, and diagnosis in practice. Guest speakers, readings, and panels will focus on special considerations for clinical interviewing and assessment with immigrant, refugee, and marginalized populations in the United States.

**CPSY 4538 Practicum: Life-span Considerations in Practice (2 Credits)**

This academic and practicum course in Life-span Considerations in Practice considers various life-span issues of importance when working with individuals and their families in practice. Important experiences of childhood, adolescence, early adulthood, adulthood and late adulthood and their relevance to and presentation in psychotherapy are considered.

**CPSY 4539 Practicum: Evidenced Based Practices in Psychology and Counseling (2 Credits)**

The purpose of this practicum is to provide opportunities for didactic and experiential learning in evidence-based practice in psychology, and integrated mental health (IMH). This practicum will also serve as group supervision of clinical work being conducted in the TDRC. Practicum is a quarterly required course in the MAIDP program. It is on a two-year cycle focusing on developing therapeutic clinical skills. Practicum work in field-placement sites in the Denver community as well as supervision of cases in the Trauma and Disaster Recovery Clinic occur in this practicum.

**CPSY 4540 Practicum: Biopsychosocial Systems in Practice (2 Credits)**

This academic and practicum course in Biopsychosocial Systems in Practice considers ways in which cultural, political, environmental, social, physical and developmental factors influence human experience including mental health. The practicum explores how these multi-systemic and interacting factors come to bear on clients' experiences and presentations and how this informs our work.

**CPSY 4542 Psychophysiology (3 Credits)**

This course is designed to expose students to the field of physiology and highlight it's reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g. substance abuse, mental illness, and biological rhythms).

**CPSY 4544 Psychological Assessment in Multicultural Contexts (3 Credits)**

This course focuses on the building blocks of psychological assessment and interviewing across cultural contexts, with a focus on identifying culturally valid and therapeutically useful assessment techniques. This course focuses on assessment techniques useful for rapport building, case formulation and treatment planning, risk assessment, and diagnostic evaluation. Methods for summarizing and communicating assessment results with allied professionals and providing assessment feedback to clients and families will also be reviewed. Special emphasis will be placed on developing skills necessary for immigration evaluations, such as asylum, hardship, VAWA, and U-Visa evaluations. Throughout the course, principles of multicultural assessment will be combined with key lessons from therapeutic assessment so that students develop a keen understanding of how assessment can be empowering to clients and families on an individual level, and can further principles of social justice on an ideological level.

**CPSY 4545 Lifespan Development and the Cultural Context (3 Credits)**

This course is designed to examine the various stages of human development, with a special focus on the influence of culture. Students will become familiar with normative developmental processes, methods of studying development, and various theoretical foundations of developmental science. Through the use of lecture, readings, class discussion, and observation, students will be challenged to consider their own development and think critically about the development of others. Students will apply basic information about development to current issues in the field and consider the influence of cultural context on relevant areas of development across the lifespan.

**CPSY 4550 Seminar: Therapeutic Interventions (3 Credits)**

Small group seminar is a small group class designed to provide students a discussion forum to share and integrate their experiences in the IDP Master's Program. Students are expected to address and share their field placement experiences with other students in their seminar. The seminar will also provide instruction on the implementation of theory in IDP to practice in multiple settings. Faculty will provide supervision for the students' field placements.

**CPSY 4556 Trauma Interventions from Cross-cultural Perspectives (3 Credits)**

This course, taught by a different visiting professor each year, will take an in-depth look at trauma and the development of mental health systems and interventions internationally.

**CPSY 4562 Public Policy and Advocacy (2 Credits)**

This course focuses on mental health policy and advocacy in the United States and in countries around the world. Students will learn about the World Health Organization policies on mental health and substance abuse and issues of mental-health stigma globally.

**CPSY 4563 Family Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman's performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4564 Advanced Spanish Language for Clinical Practice (2 Credits)**

The purpose of this course is to help students with intermediate to advanced competency in Spanish to develop their clinical linguistic skills in order to better meet the mental health needs of the Latinx population in the United States, and, in the case of those doing international work, in Latin America. Students will be required to take a Spanish proficiency exam, prior to taking the course. The course will focus on developing Spanish abilities in the following areas: 1) building rapport and demonstrating basic helping skills, 2) explaining the purpose and process of therapy/evaluation, 3) conducting diagnostic interviews and intakes, 4) providing psychoeducation about different diagnoses and mental health problems, 5) conducting crisis assessments, and 6) providing skills-based treatments.



**CPSY 4567 Culture Lab: Cultural Humility & Global Mental Health Internship Preparation (1 Credit)**

This course is designed to prepare IDP students for work with a variety of organizations and vulnerable populations in cross-cultural settings, both in-person and virtually. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4570 Crisis Intervention & Suicide Prevention (3 Credits)**

Mental Health professionals are frequently called upon to intervene in various crisis situations, either at the point of crisis event or in the aftermath. The course includes an emphasis on both domestic and global frameworks and is designed to provide a stimulating environment in which students critically examine theoretical models, recent research, good practice standards, and contemporary debates regarding crisis and suicide intervention strategies. This course teaches a model and techniques for assessment, initial intervention and follow-up with individuals in high stress situations requiring immediate crisis intervention (both domestically and globally). Additional topics include: assessment and intervention in cases of risk of harm to self, non-suicidal self-injury (NSSI) violence in the schools, severe and persistent mental illness (SPMI), working with chronically suicidal clients, the emerging field of Critical Suicidology, M-1 Holds, suicide terrorism and other forensic issues and public health and prevention models. The class will explore ethical issues surrounding intervening in crisis situations. We will also attend to how issues of marginalization and oppression, as well as strengths and resiliency factors, affect crisis intervention with people of color, LGBTQIA+ individuals, indigenous communities, women and others who experience social, economic and political disenfranchisement. Designed to assist students in developing critical thinking skills, necessary for crisis intervention related assessment, program design, implementation, and evaluation this class features case studies and mock risk assessments so that students feel ready to conduct these skills in the real world. At the end of this course students should have knowledge of how to intervene in various types of crises based on empirically supported frameworks and recent developments in the field.

**CPSY 4590 Psychology of Loss and Grief (2 Credits)**

A review of the theory of loss and grief. The course reviews cultural understandings of loss and grief as seen following disaster and conflict. Treatment modalities of loss and grief are also presented.

**CPSY 4595 Global Mental Health Internship (6 Credits)**

Students will spend one quarter in various international locations working in full time internships with international nonprofit organizations applying the principles and knowledge obtained during their study in the IDP program. Students will work under faculty and professional supervision.

**CPSY 4601 Psychology and Race in an International Setting: South Africa (5 Credits)**

Psychology and Race in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on race and psychology in RSA – salient issues, challenges, resources, and successes in post-Apartheid South Africa. Race both shapes and reflects change. Students will learn about how various racially-based historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondly, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

**CPSY 4606 Sexuality and Gender-based Violence (3 Credits)**

This course will explore human sexuality across the life span as well as and gender-based violence (GBV) in both domestic and international settings. Through engagement with historical artifacts, academic research, case studies, documentary films, and interviews with survivors, students will gain an in depth understanding of the dynamics of violence as it relates to gender identity and expression, sexual orientation, race, class, religion, and culture through the interconnectedness of oppression and critical cultural considerations. We will examine the socioecological and psychological impact of violence, including gender socialization, societal/cultural messages and norms about violence, and the pervasive impact of trauma for survivors of identity-based violence. Students will work collaboratively to interrogate barriers to change, identify effective prevention and response strategies, and develop skills to respond compassionately and intervene in culturally appropriate ways.

**CPSY 4610 Exercise Physiology (2 Credits)**

This course offers an advanced study of selected areas in physiology of sport and exercise. The applied perspective emphasizes understanding the principles in designing effective conditioning programs for performance, fitness, and health. Empirically valid principles of training for muscular fitness (e.g., strength, power, speed) and energy fitness (i.e., aerobic and anaerobic) are explored. Additionally, environmental influences (e.g., altitude), lifestyle choices (e.g., nutrition), and selected developmental considerations (e.g., as related to gender differences) are discussed. Applications to sport and performance psychology consulting in sport, performing arts, and high-risk professions complement the course content.

**CPSY 4615 The Elite Athlete Brain (3 Credits)**

The primary goal of this course is to provide students with an understanding of the expert's brain from sport and performance literature. The course will review landmark and recent publications examining expert-novice contrasts, and those of athlete-non athlete comparisons. Students will review literature on training interventions to accelerate the development of expertise and learn to evaluate the validity of scientific claims of related consumer products. Students will gain a basic understanding of where state of science in understanding sport related concussions, including diagnostic tools, recovery, and prevention.

**CPSY 4620 Kinesiology (2 Credits)**

This course is an in-depth exploration of selected areas of kinesiology as a discipline and a profession focusing on human movement. Based on interdisciplinary theoretical and empirical perspectives, the explored areas include: (a) functional anatomy as related to adaptations to training; (b) biomechanics; (c) neurophysiological processes involved in motor learning and motor control; and (d) other relevant biophysical processes (as related to talent selection and development, physiological adaptations to training, etc.). In addition, this course surveys career opportunities in academic study and clinical practice in various areas of sport, fitness, exercise, and physical education.

**CPSY 4635 Athletic and Performance Nutrition (2 Credits)**

Graduate level course educating student-coaches and administrators and performance specialists to use research and best practices in performance nutrition to achieve athletic and performance enhancement, and general wellbeing. The course will help facilitate students' ability to influence sporting and general environments to use nutrition as a means to enhance performance, with a secondary examination of preparing students to understand and manage individual differences, needs, and motivations for food choices. Course content will include modeling nutrition, encouraging a sense of family at team meals, leveraging media to internalize nutrition behaviors, and impacting availability of positive nutrition choices.

**CPSY 4652 Theoretical Aspects of Sport and Performance Psychology (3 Credits)**

This course is an in-depth exploration of selected aspects of the theories of sport psychology along with applications of these theories to other performance domains. An advanced understanding of the field of sport and performance psychology is pursued in relation to psychosocial aspects involved in both the preparation and performance processes among adults, youth, and children who represent all skill levels. The explored areas include: (a) motivation, confidence, and anxiety in sport and performance, (b) selected topics in social psychology and psychobiology, (c) psychological skills training, and (d) special topics (e.g., personality, flow, injuries, burnout).

**CPSY 4653 Sport in American Society (4 Credits)**

This course examines sport as a social construct within American society. Both aspects of this relationship will be explored: (1) The influence of social context on sport, and (2) The influence of sport on society. The course will emphasize sport as an agent for social change. Topics for exploration will include the intersection of sport and: gender, race/ethnicity/culture, socioeconomic status, media, violence, deviance, religion, and politics.

**CPSY 4657 Motivational Interviewing (2 Credits)**

This is an advanced course reviewing the theories and research findings related to motivational interviewing with the goal to apply them to performance (athletic, non-athletic) and exercise contexts. Topics include motivation for behavior change, transtheoretical model of behavior change, self-determination theory as applied to behavior modification, and the relationship between and the influences of emotion and motivation on counseling and sport and performance consultation. This course will place an emphasis on relating current leading theories and research evidence to consulting work. Equally in importance, there will be in-class hands-on activities (e.g., role playing), experiences (e.g., self-reflective tasks) and assignments (e.g., role playing tasks) that will add to the student competence in motivational interviewing.

**CPSY 4662 Foundation of Counseling Theories (3 Credits)**

This course will review major contemporary counseling models, theories, procedures, and the helping relationship. Advanced study of techniques and research findings. Survey of principles underlying individual, family systems, and multicultural approaches to counseling.

**CPSY 4669 Consulting Methods & Practices (3 Credits)**

This course is an advanced exploration of theories, research findings, and skills related to the practice of consultation in performance settings. Specific topics include: (a) the consultant roles; (b) the major theoretical approaches to consultation (e.g., mental health, systemic); (c) the processes and stages of consultation (e.g., developing interpersonal relationships; design, implementation, and evaluation of service delivery); (d) ethical and multicultural issues; and (e) students' personal strengths and concerns in the role of a consultant (e.g., values interpersonal style, and consultant variables that impact the effectiveness of their role as an agent of behavior change).

**CPSY 4671 Theories of Performance Excellence (3 Credits)**

This course is designed to familiarize students with theories of performance excellence developed by leading practitioners. Each week, students are exposed to a different practitioner's approach, which often includes an opportunity to observe the practitioner's style through video. Emphasis is placed on the role of theory in practice, theory-based conceptualizations utilizing a case study format, and comparing and contrasting the different theories.

**CPSY 4672 Counseling Methods & Practices (3 Credits)**

This course is an introduction to counseling microskills and techniques needed in helping relationships, with attention to building the therapeutic alliance. Emphasis placed on learning skills in small group format. Laboratory experience in demonstrating skills and the ability to form an effective counseling relationship is required. Pre-practicum experience to prepare students to work with clients.

**CPSY 4674 Clinical Issues: Interviewing and Diagnosis (3 Credits)**

This course examines adult psychopathology as classified in the DSM. Special emphasis will be placed on the intersection of performance with more traditional psychopathology. Students learn about etiology, symptomology, epidemiology, and treatment issues. Possible causes and contributory factors are examined, as well as theoretical and multicultural considerations. Prerequisites: Theoretical Aspects of SPP, Applied SPP, and Ethical Issues in SPP.

**CPSY 4676 Assessment and Measurement (3 Credits)**

This course covers the selection, use, and proper interpretation of common sport and performance psychology assessments. Basic principles of educational and psychological measurement, including test construction, validity, and reliability are addressed. The assessments taught include those used for individual assessment, individual selection, and organizational assessment (360 degree feedback, surveys, etc.). Prerequisites: CPSY 4652, CPSY 4690, and CPSY 4682.

**CPSY 4680 Sport and Performance Psychology Practicum (3 Credits)**

This course will familiarize students with professional issues relevant to the practice of sport and performance psychology. Students will be presenting and analyzing their current applied experiences as coaches and leaders in sport and performance settings in the community. This is a participation-intensive course and the students will receive feedback and suggestions from both the instructor and peers in a group supervision format. Importantly, the ongoing feedback and readings will provide an opportunity for students to understand and apply theories and practice systems of behavior change in sport and performance psychology in the context of their own clients/cases. Students will learn the roles and responsibilities inherent in professional and ethical consultation, with a special emphasis given to the dilemmas of serving as an embedded consultant.

**CPSY 4681 Multicultural Issues (3 Credits)**

This course covers the research and theories of counseling the culturally different client. Students are expected to develop multicultural skills, including culturally-based conceptualization, assessment, and selection of culturally appropriate intervention strategies. This course will examine these issues in general, with a special emphasis on those in sport and performance cultures. This is both an experimental and seminar-based course, aimed at developing student's personal awareness, knowledge, and skills.

**CPSY 4682 Ethical and Legal Issues (3 Credits)**

This course introduces the students to the ethical principles, codes, and standards related to the profession of sport and performance psychology. This includes an overview of the regulation of the practice of psychology, the relationships between ethical codes and legal statutes, and the development of a personal model for ethical decision-making.

**CPSY 4683 Group Interventions (3 Credits)**

This course is a survey of group counseling methods and techniques from a theoretical and applied perspective. The course will include practical application of group counseling interventions. Prerequisites: demonstrated knowledge of ethical principles and departmental consent.

**CPSY 4684 Team and Organizational Dynamics (3 Credits)**

This course examines the principles, theories, and research of human functioning in performance related teams and organizations. It explores the social and psychological factors influencing behavior in organizations, along with individual differences, dyadic relations and small group behavior. Students learn about the dynamics of team and organizational diagnosis, feedback and learning, intervention, and planned change.

**CPSY 4685 Human Growth & Development (3 Credits)**

This course is a comprehensive analysis of theories and research relating to human psychological development and learning across the lifespan. It explores the cognitive, affective, academic, physiological, moral, and social/cultural/racial domains. An emphasis is placed on a) the theoretical models underlying character and moral development, and b) adolescent and college student development theories.

**CPSY 4686 Practicum in Sport and Performance Psychology: Professional Practice (3 Credits)**

This course provides an examination of the critical components of successful and ethical professional practice and career building in sport and performance psychology in conjunction with intensive provision of sport and performance psychology services. The entire body of sport and performance psychology theoretical and applied knowledge as well as the skills that the students have acquired will be utilized. Additionally, rigorous self-reflective activities and ethical decision-making will increase the student professional and personal growth as directly related to effectiveness in the sport and performance psychology practice. Emphasis will be placed on diversifying and integrating theoretical knowledge and applied strategies and skills while simultaneously engaging in supervised independent work in real life sport and performance settings.

**CPSY 4688 Seminar in Sport and Performance Psychology (3 Credits)**

Advanced seminars offered by sport and performance psychology faculty on topics relevant to the practice and science of sport and performance psychology area.

**CPSY 4689 Psychophysiology and Biofeedback (2 Credits)**

This course explores the underlying mechanisms and psychophysical determinants of behavior in sport and performance settings. Students learn the use of biofeedback in achieving voluntary self-regulation and control of stress related behaviors.

**CPSY 4690 Sport and Performance Psychology Interventions (3 Credits)**

This course is designed to familiarize students with the application of sport and performance psychology interventions. Students experience the building of a sport and performance psychology program. This program includes the cardinal skills of relaxation, concentration, imagery, self-talk, and mental routine; followed by broader topics such as goal setting, motivation, confidence, cohesion, engagement, and mastery. The instructor briefly reviews relevant theory and research followed by demonstrations of techniques and strategies, after which students learn by doing. Specific attention is given to blending the science of peak performance with the art of applying science.

**CPSY 4692 Entrepreneurship in Sport and Performance Psychology (3 Credits)**

The primary goal of this course is to provide students with an overview of skills necessary to succeed in the entrepreneurial profession of sport and performance psychology. The course is flexibly designed to accommodate the students' desired career paths. Topics covered may include: sales and marketing, developing a practice, job search and interviewing skills, and understanding the job market.

**CPSY 4700 Organization and Administration of Sport (4 Credits)**

Graduate level course to educate students on the organization and administration of sport and sport coaching. Course content includes emergency action planning, facility management, human resource management, evaluation and development, legal responsibilities, record keeping, finance, and public relations. Students will learn how to lead organizations and coaching staffs to develop fair and safe participation.

**CPSY 4705 Sociocultural Aspects of Sport Coaching (4 Credits)**

Graduate level course to educate students on the sociocultural and social-psychological aspects of sport coaching and athletic performance. Students will understand how to analyze and apply social, sociological and social-psychological theory to sport coaching and athletic performance. Consideration will be given to developing a critical understanding of sport coaches' knowledge development, and how to implement multiple, effective and ethical strategies to enhance coach and athletic performance.

**CPSY 4710 Motor Learning and Sport Pedagogy (4 Credits)**

Graduate level course to educate students on the science and practice of how athletes learn motor skills and how coaches can facilitate skill acquisition. Course content includes the scientific and theoretical frameworks of motor learning, with a secondary examination of motor control and development. Applied course content will focus on how coaches can use learning strategies such as demonstration, instruction, feedback, and practice planning to improve athletic performance.

**CPSY 4712 Tactical Strength and Conditioning Coaching (2 Credits)**

The purpose of this course is to educate students on the scientific, theoretical and practical aspects of tactical strength and conditioning. Students will learn how to design tactical strength and conditioning programs to enhance performance and reduce and lessen the severity of injury. This course is also intended to help students begin to prepare to pass the National Strength and Conditioning Association's (NSCA) Tactical Strength and Conditioning Facilitator (TSAC-F) certification, and related professional development opportunities.

**CPSY 4715 Strength, Conditioning, and Injury Prevention Program Design (4 Credits)**

Graduate level course to educate students on the scientific, theoretical and practical foundations of strength, conditioning and injury prevention. Students will learn how to design strength and conditioning programs to enhance athletic performance and reduce and lessen the severity of injury. This course is also intended to help students become familiar with the National Strength and Conditioning Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS) exam, and position statements from several national governing bodies on athlete safety and physical performance.

**CPSY 4720 Psychology of Athletic Performance (4 Credits)**

Graduate level course to educate students on the psychological aspects of athletic performance, and secondarily coach performance. Course content includes the theoretical and practical application of established mental skills (e.g., motivation, efficacy, arousal, anxiety, focus, self-awareness, goal-setting, imagery, team cohesion). Concepts will be applied to the evaluation and creation of practice and training plans to enhance athletic performance.

**CPSY 4722 Social-Psychology of the Body, Health, and Performance (2 Credits)**

The purpose of this course is to understand the ways in which people in society understand the body in sport, physical activity and health and wellness. Or in more simple terms, answer the question: why society thinks about the sporting, healthy and physically active body in the ways that it does? In order to acquire this understanding we will explore the complex and powerful historical, social and cultural forces that have shaped the assumptions underpinning the sporting, physically active and healthy body. No prerequisites exist for this course.

**CPSY 4723 Applied Sports Technology for Coaches (2 Credits)**

This elective graduate level course is designed to educate students on the uses, effects, and ethics of technologies on athletic performance. Students will learn about the breadth of research and uses of technologies in attempts to enhance athletic performance. Course content includes surveying the sports technology field, technology ethics, positive and negative effects of technology, evaluating knowledge claims (i.e., reliability, validity, measurement issues), and common uses of technology to enhance performance (e.g., team communication, athlete monitoring and tracking, instruction and feedback, apps).

**CPSY 4725 Philosophy and Ethics of Sport Coaching (4 Credits)**

Graduate level course to educate students on the philosophical, social, and ethical foundations of sport and sport coaching. Course content includes the history and formation of sport and sport coaching, social issues (e.g., race, class, gender, inclusivity, etc.), how sport is used for (un)desirable ends and the public good, the coach's role in demonstrating and encouraging ethical behavior, and promoting a healthy and safe environment for numerous stakeholders. Leadership theory (e.g., transformational and servant leadership, emotional intelligence, athlete-centered coaching) is also touched upon and discussed in relation to the ethics and norms of sport, and the relationship between educational institutions and sport/athletics. There are no prerequisites for this course.

**CPSY 4730 Biomechanics of Athletic Performance (4 Credits)**

Graduate level course to educate students on the biomechanics of athletic performance. Students will learn quantitative and qualitative methods of biomechanics to analyze and enhance athletic performance and prevent injury. Course content includes knowledge of the musculoskeletal system, force development and how additional factors such as body composition and joint structures influence athletic performance and injuries.

**CPSY 4735 Understanding Sport Research (4 Credits)**

Graduate level course to educate students on understanding and doing sport research. The primary focus of this course is on facilitating student's understanding of research methods commonly used in sport research. Secondarily, the course will examine how research is actually done, including reviewing the literature and writing and referencing scholarly work. Course content will cover topics such as paradigms and philosophy of science, epistemology and the creation of knowledge, and numerous research designs, methodologies and methods. Content will also include understanding statistics and qualitative methods.

**CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching (1 Credit)**

The purpose of the Practicum in Strength, Conditioning, and Fitness Coaching course is to help students gain the knowledge, skills and attitudes to become a quality coach and a reflective practitioner through experiential learning. Students will be provided with a variety of strategies and methods to solve real-world strength, conditioning, and fitness coaching problems in real life settings. Students will draw upon other coursework, research, and practical insights to exercise professional judgement. Students must complete at least 50 hours of coaching throughout the quarter.

**CPSY 4751 Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research (1 Credit)**

Applied Sport Coaching 1 introduces students to reflective practice and how to become a reflective practitioner. Students will draw upon a variety of discourses and practices to understand the significance of framing and naming problems and implementing potential solutions within their own context. To help become a skilled scholar-coach, students must complete at least 50 hours of coaching or coaching related duties throughout the quarter. The course culminates with an introduction to action research, and other forms of applied research, and shifts the student from their own reflective practice to a wider, rigorous social research approach to addressing sport or coaching problems.

**CPSY 4752 Applied Sport Coaching 2: Theory, Literature, and Planning Applied Research (1 Credit)**

Applied Sport Coaching 2 introduces students to key issues and challenges of the action research process and additional forms of applied research. Students consider the meaning and social construction of science, research, and enduring concerns such as ethics, power, and benefit and harm. Students consider the role theory takes in action and applied research, identify a focus of the research, review relevant literature, and develop relationships with key stakeholders. Students may also submit institutional review board approval and develop additional materials or tools for their research.

**CPSY 4753 Applied Sport Coaching 3: Data Collection and Analysis (1 Credit)**

Applied Sport Coaching 3 exposes students to issues and methods pertaining to data collection and analysis. Also, students reconcile issues related to the research process and make decisions that focus the scope of the research. Students further their relationships with key stakeholders and, if not already, obtain institutional review board approval prior to data collection. With stakeholders, students solidify the framing of the problem to be addressed and use data collection and analysis methods to understand the problem.

**CPSY 4754 Applied Sport Coaching 4: Implementing Action Plans (1 Credit)**

In Applied Sport Coaching 4, students plan, implement, and reflect on their action, or applied, research. Students' time is "in the field" working through the messy complexities of practice in relation to theory and method. Students learn to manage obstacles that arise and deepen their understanding of what is going on in practice and why. As needed, students revisit theory, literature and method to develop new insights on the path of implementing a rigorous sustainable solution to their identified research problem.

**CPSY 4755 Applied Sport Coaching 5: Writing and Communicating Research (1 Credit)**

Writing up research, as well as creating other ways to communicate the action research to stakeholders and partners, is a significant challenge. In Applied Sport Research 5, students learn issues related to journal style guidelines, including key issues such as audience, tone, writing style, and submission guidelines and instructions for authors. Also, students learn how to communicate in a variety of ways to lay audiences and community partners and stakeholders, which is essential to providing benefit to partners.

**CPSY 4756 Applied Sport Coaching 6: Knowledge Dissemination and Reflection (1 Credit)**

Applied Sport Coaching 6 is the culmination of two key milestones. First, this course facilitates students' dissemination of their action, or applied, research studies. Students finish their written manuscript and submit it for publication. Students also reflect on the entirety of the research process and reflective practice. Through the submission process, students develop an understanding of what it takes to become a scholar-coach, they contribute to the advancement of science in sport, and they have their work challenged by the peer review process. Second, this course is the culminating experience for students in the Masters of Arts in Sport Coaching degree program. Students reflect on their growth while in the program and consider next steps on the journey as lifelong learners and scholar-coaches.

**CPSY 4991 Independent Study (1-4 Credits)****CPSY 4995 Independent Research (1-17 Credits)****CPSY 5000 Rad Behav/Func Contextl Models (3 Credits)**

This course is designed to provide a historical, philosophical, and conceptual background to better understand and appreciate Behaviorist views of "being-in-the-world". The course lays the foundation for the sophisticated application of the science of behaviorist theories and methods for the assessment of clinical problems and the art of doing psychotherapy. The course will invite a little discomfort, disturb some preconceptions, and compel students to address some difficult questions and thorny issues. Among the goals of this course are to see students commit to being more than a psychologist technician, to encourage them to develop a guiding philosophical core in their practice as a psychologist; to assist them in clarifying or deepening whatever philosophical worldview they may hold; and that they will have achieved an informed understanding of radical behaviorism/functional contextualism - whether or not they choose to further pursue these models.

**CPSY 5010 Cognitive & Affective Models (3 Credits)**

This is the first in a three part sequence that includes Psychophysiology and Clinical Neuropsychology and is designed to introduce students to the current research in cognitive neuroscience and consciousness. This first course focuses on sensation/perception, learning, memory, emotion, language and other higher cognitive functions. Lectures will emphasize current technologies and historical inquiry and the unique contributions made by psychosocial and cultural variables.

**CPSY 5020 Psychoanalytic Models (3 Credits)**

Psychoanalytic theories, including Freud's topographic and structural theories, ego psychology, object relations theory and modern relational theories, including self-psychology and intersubjectivity.

**CPSY 5030 Systems Models (3 Credits)**

Basic concepts of general systems theory and their applications in psychology, focusing on family systems, groups and organizations.

**CPSY 5040 History and Systems in Psych (2 Credits)**

Basic psychological concepts surveyed from a historical point of view, tracing development of psychological bases of professional practice.

**CPSY 5050 Advanced Statistics (3 Credits)**

This course is designed to increase students understanding of advanced analytical techniques in statistics, particularly as they pertain to psychology. We will take an applied approach, i.e., the course material will emphasize the feasibility, application, and utilization of these analyses rather than the theories upon which they are based.

**CPSY 5070 Research Methods (2 Credits)**

Sequential course that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitude and thinking skills necessary for function as a local clinical scientist; research design tools, methods and strategies for answering different types of questions.

**CPSY 5073 Qualitative Research Methods (2 Credits)**

Qualitative research involves obtaining in-depth information about the behaviors and beliefs of people in naturally occurring social settings. This course introduces students to the philosophical underpinnings, history, and key elements of five qualitative approaches: narrative research, phenomenology, grounded theory, ethnography, and case study. We compare theoretical frameworks and methodologies, experience the use of data, and discuss writing strategies. In addition, we read articles that are exemplars of each approach.

**CPSY 5075 Program Evaluation Technique (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs.

**CPSY 5080 Diagnosis and Classification (2 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

**CPSY 5108 Introduction to Acceptance and Commitment Therapy (ACT) (2 Credits)**

Acceptance and Commitment Therapy (ACT) belongs to the movement in clinical psychological science that sees acceptance and openness to experience as an essential addition to change-focused psychotherapeutic treatment strategies. Although consciously based on behavior-analytic thinking, ACT is a hybrid in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. The paradox upon which ACT is founded is that only radical acceptance of what cannot be changed empowers people to recognize and change the things that they can. The ACT approach is about embracing necessary suffering in order to make more committed, life-affirming choices and live in accordance with personal values. ACT emphasizes that in a very deep sense all human beings are in the same boat. The technical and theoretical bases of ACT are through normal didactics, but the heart and art of the approach occurs through experiential exercises, group process, and from observation and modeling. Prerequisite: CPSY 5000.

**CPSY 5120 Introduction to Animal-Assisted Interventions (3 Credits)**

This course serves as an introduction to animal-assisted interventions (AAI) as they are commonly used by mental health care professionals. It is designed to provide students with an overview of the foundations of AAI, the variety of ways in which this modality is used, international perspectives on AAI, various perspectives on ethics and animal welfare, and researchers' current understanding of the role of the human-animal bond in facilitating AAI treatment efficacy. General topics to be addressed include the characteristics of the species used in AAI, the basic principles of AAI, the use of AAI with a variety of populations, and animal abuse issues. A number of guest lecturers will share their knowledge and experiences with students throughout the quarter.

**CPSY 5130 Issues in Measurement (3 Credits)**

Validity, reliability and standardization issues in psychological testing; statistical properties of commonly used tests.

**CPSY 5170 Life Cycle: Inf to Mid Childhd (3 Credits)**

Understanding normal development of children (0-12 years), integrating theory, research and a phenomenological perspective.

**CPSY 5180 Life Cycle: Adolescent - Adult (2 Credits)**

Understanding normal adolescent development (13-18 years), integrating theory, research and a phenomenological perspective. Major theories, life events, crisis and the adult life phases. There will be an emphasis on the diversity of adult experiences.

**CPSY 5200 Life Cycle: Late Adulthood (3 Credits)**

Theories of aging; social, psychological and biological changes; assessment and intervention methods, emphasizing issues impacting older adults. (65 years and above).

**CPSY 5230 Group Dynamics & Interventions (3 Credits)**

Provides psychologists in training with multiple learning experiences highlighting that groups and organizations are intensely psychological environments in which most psychologists function professionally and personally and have the potential to impact positively.

**CPSY 5231 Social Psychology (3 Credits)**

This course explores how social psychologists approach psychology, concentrating on key concepts, research findings, and critical thinking strategies that students can integrate into their own clinical work.

**CPSY 5250 Existential and Humanistic Theory and Therapy (2 Credits)**

Historical roots and basic assumption of existential and humanistic views. Students encouraged to integrate materials with their personal values and assumptions about human nature and their interaction with clients.

**CPSY 5270 Physiological Psychology I (3 Credits)**

Terminology and principles of and research in physiological psychology. Where possible, application made to content and practice of clinical psychology.

**CPSY 5271 Physiological Lab I (1 Credit)**

Optional. Assistance with material covered in CPSY 4170.

**CPSY 5290 Clinical Neuropsychology (3 Credits)**

Historical, conceptual and clinical foundation for, as well as current developments related to, the field of clinical neuropsychology. Includes exposure to: developmental neuropsychology and neuroanatomy; higher cognitive functions; neuropsychologically informed interviews and standard neuropsychological test batteries; neuropsychological profiles associated with a variety of acquired disorders (both classical neuropsychological and psychological in nature); ethnic, cultural, age and gender considerations; and current status of a variety of professional/ethical issues. Prerequisite: CPSY 5270.

**CPSY 5310 Ethical Issues in Psychology (3 Credits)**

In-depth consideration of ethical standards applicable to the science and practice of psychology; pertinent laws and legal standards governing the practice of psychology; areas in which legal and ethical standards suggests contradictory actions on the part of the clinical psychologist.

**CPSY 5320 Professional Issues in Psych (2 Credits)**

Issues, concerns and controversies impacting current practice of professional psychology at the state and national levels; preparation for future alternative systems of service delivery. Emphasis is on professional life after the PsyD. Required for first year students.

**CPSY 5340 Psychology of Racism and Other Oppression (3 Credits)**

This course focuses on the impacts of multiple forms of oppression targeting diverse communities with a focus on racism. Historical and intergenerational components of oppressive systems will be reviewed. The course will offer an overview of the ways in which oppression is supported and maintained across macro-, meso-, and individual dimensions, and students will be challenged to consider approaches for interrupting oppression in their professional roles. Intersectional forms of oppression and their effects will be examined. Cognitive, behavioral, and psychological manifestations of oppressive ideologies expressed by therapist and client will be examined with a focus on reducing the harms of oppression in psychological practice. This course is part of the multicultural course sequence.

**CPSY 5360 Intersectional Identity Development (3 Credits)**

This course introduces conceptual frameworks of development across multiple domains of identity and their intersections. Diverse models of identity development will be reviewed with an emphasis on the ideological, cultural, and developmental factors influencing identity formation. The interplay of social power with identity will be explored. This course is part of the multicultural course sequence.

**CPSY 5370 Clinical Practice with LGBTQ+ Populations (3 Credits)**

This course will focus on the specific experiences of lesbian, gay, bisexual, transgender, queer (LGBTQ+) peoples and additional communities experiencing oppression based on their sexual orientation and/or gender identity. Concepts honoring the diversity of these communities will be discussed. Intersectional and developmental perspectives of the biological, psychological, relational, cultural, and social issues encountered across the lifespan will be integrated throughout the course. Systems of power and oppression that target LGBTQ+ communities on macro-, meso-, and individual levels will be reviewed, and the impact of these oppressions on psychological health will be discussed. The course will highlight affirmative psychotherapy approaches that support resiliency and incorporate culturally responsive practices. The course will recognize the ethical considerations of working with LGBTQ+ communities in alignment with current profession-wide guidelines. This course is part of the multicultural course sequence.

**CPSY 5380 Culturally Competent Psychotherapy (3 Credits)**

As the final class in the year-long multicultural course sequence, this class will integrate the theoretical content of the preceding classes and focus on their psychotherapeutic implications. This course will address psychotherapy with the following groups - African Americans, Asian Americans, Latinos, Native Americans, and the LGBT community.

**CPSY 5385 First-Year Seminar (2 Credits)**

This is a clinical and didactic seminar on beginning psychotherapy. The focus will be on case formulation and developing a therapeutic relationship with the client. Content covered will include foundations of evidence-based practice, common factors, documentation standards, standards of practice, emergency/crisis policies and procedures, and foundational applied ethics.

**CPSY 5388 Professional Seminar: Psychological Assessment (2 Credits)**

This seminar will focus on clinical material related to aspects of psychological assessment. It demands more of a time commitment than most other seminars because assessment requires longer sessions with clients to administer tests, time to score and interpret tests, and report writing. Students should not sign up for this seminar if the main reason is to fulfill the GSPP four assessment cases requirement. Students should only rank this seminar if they are passionate about assessment. There will be opportunities to complete ADHD evaluations, learning disability assessments, personality batteries and collaborative therapeutic assessments for children and adults. Students are required to complete a minimum of 4 cases during the course of the year (one per quarter). We will not be providing forensic testing or neuropsychological testing services, although we will discuss some neuropsychological issues as they arise. Students will have the chance to present their cases and consult with the seminar. Requirements for enrollment in the seminar include: prior completion of Cognitive Assessment and Self-Report Assessment, as well as completion of or at least concurrent enrollment in the Introduction to Rorschach class. The seminar co-leaders provide supervision and enrich the experience. Supervision of assigned small subgroups typically takes place either before or after seminar or on Fridays.

**CPSY 5390 Professional Seminar: Forensic Issues (2 Credits)**

This seminar will introduce students to the various areas and ways in which psychology interacts with the legal and criminal justice systems. Students will develop their capacity to perform evaluations relating to psychological questions, dilemmas, and disputes that are most frequently requested of forensic psychologists. The focus of the seminar will be on assisting students in clarifying their role as an evaluator and consultant to attorneys, judges, and criminal justice personnel; exploring the ethical responsibilities therein; learning to compose reports for a legal rather than a clinical audience; and preparing to testify as an expert witness. Students will formulate and deliver case presentations, participate in a "mock" testimony experience, and submit reports. Students in past seminars have conducted child custody evaluations, mental status at the time of offense evaluations, Social Security disability evaluations, asylum, T-visa, and U-visa evaluations, animal abuse, competency, and juvenile placement evaluations. These evaluations allow students the opportunity to conduct full battery psychological assessments and learn how to apply findings to a legal context. In addition, we have been getting more court-mandated therapy clients. Thus, students will get assessment experience as well as individual therapy experience with adults and children. Assessment experience is required. Students are required to complete a combination of 4 assessments/therapy clients during the year. Please note that the forensic seminar requires a substantial time commitment because assessments require longer sessions with clients to administer tests, time to score and interpret tests, and report writing.

**CPSY 5391 Professional Seminar: Psychodynamic Therapy (2 Credits)**

This seminar focuses on psychodynamic psychotherapy - that is, individual adult psychotherapy with the aim of bringing about meaningful and lasting psychological concepts as they apply to your patients, with a practical, "hands on" focus - for example, what to do and say when your patient shuts down, threatens suicide, act out, comes on to you, misses appointments, gets worse, throws up in your office, and all the other troubling and fascinating things people do from time to time in psychotherapy. Prior or current personal psychotherapy is highly desirable and strongly recommended. Students should be prepared to discuss their clinical work candidly - and help foster an environment of mutual trust, compassion, and respect, in which candid discussion can take place.

**CPSY 5392 Professional Seminar: Couple and Family (2 Credits)**

This seminar allows students more in-depth training in working with systems including couples and families. Students should take Couples Therapy and Family Therapy either before or concurrent with the seminar. Special topics covered include divorce, step families parenting, sex therapy, multicultural issues, and ethics, as well as more general couple and family therapy work.

**CPSY 5393 Professional Seminar: Acceptance and Commitment Therapy (2 Credits)**

Acceptance and Commitment Therapy (ACT) is a pragmatically based, relatively new and highly experiential form of therapy whose overarching goals are to a) assist clients (and therapists) in accepting what cannot be changed (i.e., the form or frequency of certain private events), while b) helping them fully commit to behaving in accordance with idiosyncratic values. Although consciously based on behavior-analytic thinking, ACT is a hybrid therapy in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. In the seminar, students will learn the technical and theoretical bases of ACT through group process, individual and small group supervision, as well as from observation and modeling. Prerequisite: Behavioral Models course.

**CPSY 5394 Professional Seminar: Cognitive-Behavior Relational Therapy (2 Credits)**

This is a year-long seminar on integrating cognitive-behavior (CBT) and relational therapy. Trainees learn the theory and practice of CBT and relational therapy through readings, didactic presentations, discussion, and especially case presentations of their clients and themselves. Small-group supervision is also required.

**CPSY 5404 Professional Seminar: Integrative Therapy (2 Credits)**

This advanced seminar examines various integrative models of psychotherapy, and students will have the opportunity to develop their own therapeutic "voice" by integrating the major theories already learned at the GSPP. While the seminar will be theoretical, one goal is to help students prepare for practice in the real world by exploring the common factors of therapy, and how to work collaboratively in a client-directed fashion. Clients may include adults, adolescents, and children with a wide variety of presenting concerns, in individual, couples, family, or group therapy. Competency areas covered include professionalism, reflective practice, scientific knowledge and methods, relationships, individual and cultural diversity, ethical/legal standards and policy, assessment, and intervention. In addition to supervision on psychotherapy, there may be an option for students to be supervised on their supervision of a first-year student in the PPC.

**CPSY 5406 Professional Seminar: Health Psychology (2 Credits)**

This advanced seminar focuses on the ways that clients' physical health concerns affect psychosocial and emotional well-being. We focus on the relationship between the mind and the body and take a holistic and contextual approach to understanding work with clients, keeping in mind relational and cultural variables throughout the seminar. Clients in the PPC that have been in this seminar have had cancer, multiple sclerosis, diabetes, heart failure, chronic pain, autoimmune diseases, etc. As relevant to our work with clients, we discuss pain management, mindfulness, differential diagnosis of depression and anxiety, sleep hygiene, psychosocial oncology, grief and loss, and other empirically supported treatments for issues that clients present. The overarching theoretical framework of the course is relationship-focused, client-centered, and strengths-based. We draw on rehabilitation psychology and medical psychology, and explore diversity issues in a variety of ways, including examining disability as a multicultural issue. We use readings from interpersonal psychotherapy, feminist and multicultural therapy, positive-psychology, meaning-centered psychotherapy, humanistic/existential therapy, client-centered therapy and post-traumatic growth to guide discussions. Particular attention is paid to helping clients enhance their strengths and find meaning in their lives during times of transition. Since many health settings are focused on a short-term model of treatment, students in seminar have the option of taking on shorter-term cases and we explore the use of time-limited psychotherapy in a health setting. It is expected that most students take on new cases in this seminar.



**CPSY 5407 Professional Seminar: Caregiver and Child Relationships From Pregnancy Through Early Childhood (2 Credits)**

This seminar involves the evaluation and treatment of infants, young children, and their caregivers in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant to perinatal, infant, and early childhood assessment and treatment are discussed. Prerequisite: CPSY 5385.

**CPSY 5408 Professional Seminar: Military Psychology (2 Credits)**

This clinical seminar teaches military cultural competency, which is infused throughout topics during the year. There is also a focus on learning the evidence-based treatments taught and utilized within the Department of Defense and the Department of Veteran Affairs as the purpose of this field placement and seminar is to prepare students to serve this population and to work within these large systems of care for their predoctoral internships, postdoctoral fellowships and beyond. A specific focus on the prevention of vicarious trauma, compassion fatigue and burnout is infused throughout the year-long seminar. Throughout case presentations, students are encouraged to discuss how various intersecting aspects of culture and identity contribute to the case and their own interventions as therapists.

**CPSY 5420 Behav-Analytic Prin 1 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles underlying major systems and models of behaviorism. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic tradition. Course I specifically targets contingency-shaping selection processes based upon Pavlovian and operant conditioning paradigms. Recommended prerequisite: CPSY 5000.

**CPSY 5421 Behavioral Analysis Princ La (1 Credit)****CPSY 5422 Behav-Analytic Prin 2 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles relevant to cultural-linguistic practices. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. Course 2 specifically addresses verbal relational contingency selection processes based upon cultural and its verbal community. Prerequisite: CPSY 5420.

**CPSY 5423 Behav-Analytic Assess/Case Frm (2 Credits)**

This course covers the philosophical foundations, assumptions, and principles relevant to behavioral assessment and case formulation tactics. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets an empirical data-driven approach to idiographic assessment for purposes of developing conceptual analyses from the contextual-functional analytic perspective. Prerequisites: CPSY 5420, CPSY 5422.

**CPSY 5424 Behavior-Analytic Intervention (2 Credits)**

This course provides an overview of issues, principles and methods basic to clinical practice and intervention. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets a range of commonly used methods of intervention (e.g., counter-conditioning and exposure-based treatments, guided action strategies, acceptance-commitment approaches, Eastern interventions). Issues relevant to the structuring of therapy sessions, the therapeutic relationship, behavioral nonadherence, empirical research, and other topics of therapeutic interest will be reviewed. This course will incorporate the use of experiential exercises, modeled demonstration, and behavior rehearsal methods for training purposes. Prerequisites: CPSY 5420, CPSY 5422, CPSY 5423.

**CPSY 5466 Health Psychology (2 Credits)**

This course is designed to provide students with a broad overview of the salient empirical and theoretical aspects of health psychology and behavioral medicine. The course will emphasize the role that psychological variables play in the development, exacerbation, treatment and prognosis of both acute and chronic illness. We will also highlight sociopolitical and cultural discourse surrounding end-of-life decision making, healthcare accessibility and the phenomenology of a disabled population.

**CPSY 5480 Integrated Primary Care (2 Credits)**

This course is designed to provide an introduction to the field of Integrated Primary Care (IPC). Primary health care physicians currently serve as the de-facto mental health care providers for approximately 50-80% of the patients they serve. Psychologists are desperately needed to support primary care, yet traditional clinical training does not adequately prepare them to work in this field. Students in this course can expect to acquire a solid knowledge in IPC that will enable them to function effectively in the primary care culture. A clinical exposure component are required so students can experience the pace and problem range seen in the primary care office. Class size is limited. Students not enrolled in the PsyD program must petition the instructor for approval to register.

**CPSY 5500 Diagnosis & Treatment of Children (2 Credits)**

The focus of this course will be on the evaluation and treatment of children. Considerations concerning the particulars of the evaluation process will be discussed. An integrative approach to child treatment will be presented with a "child-in-family" approach. Play therapy approaches and techniques will be described and contrasted. Behavioral approaches will be discussed. Work with populations common in child work will be discussed, such as children in high-conflict divorce families, learning disabilities, ADHD, mood disorders and situations of physical/sexual abuse.

**CPSY 5505 Diagnosis & Treatment of Adolescents (2 Credits)**

This course focuses on counseling and psychotherapy with adolescents from a variety of approaches, including developmental, integrative, psychodynamic, person-centered, reality, rational emotive, cognitive behavioral and systemic. Topics will include the ethical and legal issues involved in psychological interventions, culturally responsive counseling, and orchestrating productive family sessions with challenging adolescents.

**CPSY 5550 Couples Therapy (2 Credits)**

Theory, techniques and research relating to couples therapy, including theoretical perspectives: behavioral couples therapy, emotionally-focused couples therapy and object relations couples therapy. The course also addresses specific problem areas, including domestic violence, infidelity, depression, anxiety, substance abuse and personality disorders. Prerequisite: CPSY 5030.

**CPSY 5560 Family Therapy (2 Credits)**

Theory, techniques and research relating to family therapy, including several theoretical perspectives: behavioral, experiential, psychodynamic, multigenerational approaches. Special topics covered include working with community resources, addressing developmental issues of children, working with medical and school systems, utilizing cultural factors in planning programs and interventions and adults in family therapy. Prerequisite: CPSY 5030.

**CPSY 5562 Psychological Consultation (2 Credits)**

This course provides an overview of the practice of psychological consultation. Theories and models of consultation in various settings including businesses, organizations, health care, and schools are covered. The process and stages of consultation from entry to termination are analyzed. This class differentiates consultation from other types of psychological interventions. Important legal, ethical and multicultural issues in consultation are addressed throughout the course. Students develop their own model for conducting consultation and refine that model through work with local organizations. Students increase their awareness of their strengths and weaknesses in the practice of consultation. Methods of instruction include lecture, discussion, experiential exercises, and interactions with local organizations and professional consultants.

**CPSY 5591 Psychodynamic Psychotherapy (2 Credits)**

Theoretical understanding and treatment of adults within a developmental, ego analytic framework. Second quarter - the neuroses. Prerequisite: CPSY 5020.

**CPSY 5620 Intersubjective Systems Theory (2 Credits)**

This course focuses on psychotherapy from the perspectives of intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, empathic listening, attuning to the other's affective experience and putting the other's subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

**CPSY 5680 Cognitive Assessment (4 Credits)**

Theoretical, professional, and clinical issues involving intelligence and its measurement; assessment of cognitive functioning and clinical interpretation of test results, focusing on the WAIS-III (and child equivalents).

**CPSY 5685 Introduction to Pediatric Neuropsychological Assessment (2 Credits)**

Pediatric neuropsychology integrates many basic sciences including behavioral Neurology, developmental psychology, neuroanatomy, psychopathology, and psychological assessment. The role of pediatric neuropsychologist is to provide comprehensive assessment, consultation, and intervention in the context of a developing child. The course will review important concepts, theories, and empirical research in the field of pediatric neuropsychology. Students will learn the basic rationale in conducting a pediatric neuropsychological evaluation, including a brief review of many common pediatric assessment measures. In addition, many common pediatric disorders will be reviewed from a neuropsychological perspective including: Dyslexia, Attention Deficit hyperactivity Disorder, Pervasive Development Disorders, Traumatic Brain Injury, Seizure Disorders, and Mental Retardation. Upon completion of the course the student will have a greater appreciation of a neuropsychological conceptual framework and have a better understanding of specific pediatric disorders.

**CPSY 5686 Suicide Prevention, Intervention and Postvention (2 Credits)**

Suicide is a serious public health issue and challenge for the nation, Colorado, and our local communities. While most clinicians are focused on the assessment and treatment of people at high risk for suicide, a more comprehensive approach is needed to prevent people from becoming suicidal in the first place. This course covers best practices in suicide prevention, intervention, and "postvention" (suicide crisis response) and will explore the particular issues of several vulnerable populations.

**CPSY 5690 Introduction to the Rorschach (4 Credits)**

The purpose of this course is to provide a solid foundation for using the Rorschach Inkblot Method. The Rorschach serves a central role in personality assessment. It has a long history in psychology and is the topic of an abundance of empirical research—as well as many uninformed misconceptions. It meets Supreme Court Daubert validity standards and is admissible in court. It is a very powerful technique but is very complex, requiring extensive knowledge to effectively administer, score, and interpret.

**CPSY 5692 Advanced Rorschach Analysis (2 Credits)**

This course is an exploration of advanced topics in Rorschach interpretation. Topics will include: conceptual understanding of the Comprehensive System; content and sequence analysis; differential diagnosis; integrating alternative systems of interpretation with the Comprehensive System; development and use of special scales; appropriate use of computerized interpretation; and integration of Rorschach analysis with personality theory. Prerequisites include course work in Rorschach administration, scoring and basic interpretation; and in personality theory. Students will be expected to score, analyze, and present Rorschach protocols.

**CPSY 5700 Advanced Personality Assessment (2 Credits)**

This class is for students who wish to learn the skills necessary to conduct comprehensive psychological assessments in a competent, ethical, antiracist and culturally informed manner. This course will focus on learning how to integrate multiple personality measures into a cohesive understanding of one's personality. Students will be taught how to write a traditional integrated personality report and several weeks will be spent on Collaborative/Therapeutic Assessment (C/TA). Students will be exposed to several personality tests including the Minnesota Multiphasic Personality Inventory – 3 (MMPI-3), Rorschach Performance Assessment System (R-PAS), Early Memories Procedure, Wartegg Drawing Completion Test (Crisi Wartegg System), Thematic Apperception Test (TAT), Trauma Symptom Inventory – 2 (TSI-2) and the Thurston Cradock Test of Shame (TCTS), among others. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5705 Self Report Assessment (3 Credits)**

Construction and application of objective instruments, emphasizing the MMPI and MCMI. Students are required to submit test reports. Prerequisite: CPSY 5130.

**CPSY 5706 Self Report Assessment Lab (1 Credit)**

Optional. For students anticipating a need for extra help with report writing.

**CPSY 5740 Integrative Personality Assessment (2 Credits)**

This course is the culmination of the assessment sequence, and integrates techniques, approaches and concepts covered in issues in Measurement, Cognitive Assessment, Objective Personality Assessment, and Rorschach. Aspects of the other core courses in the curriculum will also be brought to bear on the question of how to obtain and how to interpret information within various theoretical models for the purposes of answering referral questions and planning interventions. Projective testing will be introduced as a source of behavior samples for which the occasioning environment is known to the psychologist. There will be focus on distinguishing interpretable from irrelevant information, and on integrating interpretable information into meaningful patterns. The goal of using assessment to answer referral question and plan treatments will generate a special focus on report writing.

**CPSY 5741 Therapeutic Assessment (3 Credits)**

This course will explore Collaborative/Therapeutic Assessment, which is an approach to psychological assessment that can have extraordinary therapeutic effects with clients. We will focus on the Therapeutic Assessment model developed by Stephen Finn. We will read broadly in the area: from the genesis of collaborative assessment fueled by Fischer to the empirical foundations and structure of Therapeutic Assessment provided by Finn to novel applications of the approach highlighted by Handler, Tharinger, and others. This important paradigm shift in assessment is applicable to personality, cognitive, and neuropsychological assessment as well as any professional endeavor that aims to help clients understand themselves in life-changing ways. The course is designed for those with a solid foundation in assessment who wish to develop greater facility in helping their clients. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5745 Human Sexuality (2 Credits)**

The psychology of human sexuality is a survey of historical and contemporary psychological views on a wide variety of sexual behaviors; theory and research bearing on the relationship between life span, psychological development, psychological functioning, interpersonal processes, and sexual behaviors; political and social issues involved in current sexual norms and practices. Specific implications for clinical psychology will be discussed.

**CPSY 5750 Supervision (2 Credits)**

This course is designed to familiarize students with theories of supervision; provide practical, guided experience in peer supervision/consultation; help students understand and critically discuss the supervisory process; aid in gaining awareness of how multicultural issues may affect supervision; and familiarize students with ethical and legal issues in supervision.

**CPSY 5760 Professional Issues II (2 Credits)**

This class provides an organized and comprehensive approach to pre-doctoral psychology internship selection, emphasizing an understanding of "fit." Topics covered include choosing sites; writing cover letters, CVs, and AAPI essays; preparing application materials; interviewing techniques; rank ordering sites; and dealing with emotions related to the process. The course syllabus includes important readings from the current literature. Lectures are balanced with guest appearances by DU Writing Center staff and others. Opportunities are given for role play among the students.

**CPSY 5765 Cognitive Behavioral Therapy (2 Credits)**

This course focuses on clinical applications of cognitive-behavioral theory. Major theorists in the area are reviewed, including Ellis, Beck, Lazarus, and Meichenbaum. Research utilizing cognitive-behavioral therapy as an evidence-based practice are reviewed. In addition, key cognitive behavioral techniques are demonstrated and practiced.

**CPSY 5831 Theory and Foundations of IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This course will provide an in-depth historical, theoretical, and empirical foundation for students interested in engaging in ongoing research and practice in Infant Early Childhood Mental Health (IECMH). Formative readings from the IECMH literature, including groundbreaking articles and textbooks will be reviewed and discussed. We will examine methods of applied IECMH work, including promotion of well-being and the spectrum of prevention, early intervention, assessment, and treatment with young children and their caregivers. The multidisciplinary nature of IECMH will be explored, along with a focus on how psychologists and infant mental health specialists fit into these teams in various contexts. We will also examine different "ports of entry" or means into treating caregivers, young children, and their relationships from an IECMH framework. Empirical studies establishing the efficacy, effectiveness, and cultural sensitivity (or lack thereof) of various assessments, therapeutic approaches, and practices in the IECMH field will be examined. We will spend the most time examining critical theories of social development including attachment and temperament and will consider their applicability to IECMH work, cultural responsive across several cultures, strengths, and limitations. Throughout the course, will explore the IECMH Diversity tenets created by leaders in the field and will apply the tenets in discussions and coursework.

**CPSY 5832 Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback (2 Credits)**

Intensive training will be offered in the process of assessing a caregiver and child relationship in a manner designed to inform dyadic treatment planning. All students will be trained in conducting a multi-modal, relationship-based assessment with a caregiver and child under the age of six. Assessment tools used will include the Infant Toddler Mental Status Exam (ITMSE), the Crowell Procedure and the Working Model of the Child Interview (WMCI). Students will also be introduced to the Interpersonal Inventory and paper and pencil means of assessing the individuals and their relationship. Students will be introduced to diagnosis in IECMH using the Diagnostic & Statistical Manual of Mental Disorders – fifth edition (DSM-V) and the Diagnostic Classification of Mental Health & Developmental Disorders of Infancy and Early Childhood (DC:0-5) classification systems, as well as crossover considerations between the two systems. Students will conduct a thorough and multi-modal assessment of a caregiver-child relationship and will integrate the information learned into a professional report. Students will practice treatment planning as well as providing feedback to the dyad.

**CPSY 5833 Advanced Topics in IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This advanced topics course will continue fostering the student's understanding of Infant and Early Childhood Mental Health (IECMH) practice. Throughout the course, in-class discussion centers on developing clinical relationships with families and on how these relationships can support growth and change in both child and caregiver. Of particular importance is the student's continued exploration of use of self, and integrating IECMH practice principles into their field placement and CUB Clinic work. Topics include infant regulatory concerns, attachment difficulties, caregiver mental illness and impact on the child and relationship, parenting self-efficacy, child maltreatment and trauma, and application of IECMH treatment practices in the community. Prerequisite: CPSY 5831 or equivalent with instructor's permission.

**CPSY 5834 Perinatal-5 Mental Health: Training Intensive in Evidenced-Based Approaches (2 Credits)**

This intensive therapeutic course will continue fostering the student's understanding of Perinatal-Five mental health practice via working knowledge of a psychotherapeutic model used during this time period. In alternating years we will focus on Interpersonal Psychotherapy (IPT) or Parent Child Interaction Therapy (PCIT), two evidenced based approaches, with a focus on use with clients in perinatal through five populations. Students will gain knowledge of IPT or PCIT approaches to assessment and practice via readings, discussions, video, role plays, and case presentations. Of particular emphasis is the student's continued exploration of use of self and integrating P-5 mental health practice principles when learning about and practicing IPT or PCIT.

**CPSY 5840 Psychopharmacology (2 Credits)**

This course focuses on the various medications prescribed by psychiatrists to alter consciousness, modify behavior, and/or alleviate symptoms in the treatment of mental disorders including depression, bipolar disorder, anxiety, eating disorders, and psychoses. Topics such as sleep, pain and addiction will be covered, as well as drug interactions, psychotropic drugs in pregnancy, the treatment of children, geriatrics, and the psychologist-psychiatrist relationship.

**CPSY 5846 Military Psychology and the Culture of Warfighting (2 Credits)**

This course is intended to provide an introduction to military and veteran culture as well as military psychology and behavioral health. This course is designed as the first of a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with military members, veterans, and the families of servicemembers. The principal focus will be on training students to utilize culturally competent attitudes and knowledge as clinicians when providing services to servicemembers of the military branches, veterans of the military, and the families of servicemembers. American historical context, military history, and military structure will be covered in this course. Additionally, multiple types of behavioral health services within the United States government will be covered including the Department of Defense, the Public Health Service, and the Department of Veterans Affairs. A survey of world affairs as they currently stand, the U.S. national defense strategy, and current military posture will be covered. Salient health care issues within the military and veteran population will be covered. Legal and ethical issues that are pertinent and complex within military psychology and combat will be examined.

**CPSY 5847 Psychology and Physiology of Isolated, Confined, and Extreme Environments (2 Credits)**

This course is intended to survey and examine human psychological and physiological performance in extreme, austere, and challenging environments and the secondary effects of these environments after deployment. This course is designed as the second in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. This course will examine issues, literature, and critical arguments surrounding team makeup and cohesion in austere environments as well as physiological and cognitive/behavioral effects of operating within these environments. Operational behavioral health will be covered in addition to the physical and psychological after-effects of these deployments. Psychological casualties, forensic issues, and post-deployment transition will also be covered. Prerequisite: CPSY 5846.

**CPSY 5848 Evidence-based Practice for Military-related Health Disparities (2 Credits)**

This course is intended to survey and examine current evidence-based assessment tools utilized to diagnose certain psychiatric and neurological conditions within military servicemembers and Military Veterans. The course will also focus on the understanding and utility of the best available evidence for the treatment of these psychiatric conditions. Prevalence rates, comorbid conditions, differential diagnosis, and complicating treatment factors within these particular psychiatric conditions will be the primary focus of the course. This course is designed as the third in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity.

**CPSY 5849 Behavioral Medicine and Interprofessional Healthcare in Military/Veterans (2 Credits)**

This course is intended to build upon academic and clinical knowledge gained throughout the entirety of the Graduate School of Professional Psychology curriculum and integrate this knowledge with the understanding of clinical and operational psychology within Military and Veteran settings gained through courses in the Sturm Specialty in Military Psychology. This course is focused on the acquisition of knowledge of the unique aspects of Military behavioral medicine and its role within the medical center environment. A second focus of the course is on interprofessional work within healthcare settings and how behavioral science professionals play a role on interprofessional teams within family medicine, primary care, and medical/surgical units within the medical center environment. Additionally, special considerations for behavioral medicine and interprofessional work with Military and Veteran populations will be covered. This course is designed as the fourth in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. Enforced Prerequisites: CPSY 5846.

**CPSY 5852 Foundations in Substance Use Disorder (2 Credits)**

The course examines the major theories addressing substance use disorder and addiction. Students will explore these disorders as understood from a variety of theoretical frameworks (including psychoanalytic, behavioral, humanistic and social learning theory), as well as findings from neuroscience. The course emphasizes a developmental perspective in the understanding of these issues. Further, the course will emphasize current treatment models based on empirically based information and research. Students will gain skills in using their generalist training to conceptualize, diagnose, and treat these difficult disorders.

**CPSY 5853 Neurobiology of Attachment, Trauma and Addiction (2 Credits)**

The course will examine research and practice findings from the fields of neuropsychology and biology with regard to substance use disorders. Major findings and theories related to brain and nervous system functioning as they relate to substance use will be discussed, and used to further inform treatment considerations and clinical conceptualization. Additionally, students will be engaged in a more in-depth review of treatment modalities available. Students will build on their knowledge of empirically supported treatments in the first course. Students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course.

**CPSY 5854 Behavioral Addictions: Assessment and Treatment (2 Credits)**

The course will examine research and practice findings regarding behavioral addictions such as sex, pornography, gambling, food, and others. Discussion of brain and nervous system functioning as they relate to behavioral addiction will be discussed, and used to further inform treatment considerations and clinical conceptualization. Prerequisites: students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course, and completion of CPSY 5853 Neurobiology of Addiction and Advanced Treatment is strongly recommended.

**CPSY 5855 Advanced Treatment of Substance Use and Addictive Disorders (2 Credits)**

This course will provide students a more nuanced and advanced look at the current treatments for substance use and other addictive disorders. Topics will include medically assisted treatment models, therapeutic communities, and the use of FDA-approved psychoactive substances to treat addictions and underlying disorders.

**CPSY 5865 Introduction to Psychosocial Oncology (3 Credits)**

In this course, students will be introduced to the field of Psychosocial Oncology. This course will include an overview of the physiological processes involved in cancer prevention, etiology, and treatment. Students will develop a better knowledge of the different types of cancer, staging, and treatment options. A brief history of the field of psychosocial oncology will also be presented. The psychological sequelae of cancer diagnosis, treatment, metastases and recurrence, and survivorship will be included in this course. Special topics will also include working with caregivers and family members of cancer patients, sexuality and cancer, and working with patients and families at the end of life. Common psychotherapeutic interventions and assessments for oncology settings will be explored. In addition, the variety of roles of a psychologist in oncology settings will be discussed. Themes that will be included throughout the course are ethical and reflective practice, working with cancer patients from a multicultural perspective, and reducing compassion fatigue.

**CPSY 5880 Business Issues in Professional Psychology (2 Credits)**

This course introduces students to business principles as they apply to professional psychology. Students think through various business practice decisions, such as starting, managing, marketing, and diversifying a psychology practice and consider the related legal, ethical, and financial issues.

**CPSY 5989 Doctoral Paper Development (1 Credit)**

This course is designed to facilitate the development and writing of the doctoral paper. Students are expected to adhere to the GSPP Doctoral Paper Guidelines and the APA style guidelines. A major feature of the class is student-to-student sharing and critiquing of doctoral project ideas and plans. Students are expected to take advantage of this opportunity to hone their writing skills and develop their doctoral paper proposal. Students have complete the proposal phase of their project further develop their research methodology.

**CPSY 5991 Independent Study (1-17 Credits)****CPSY 5993 Advanced Field Placement Experience (1-8 Credits)**

All PsyD students are required to work as a Psychology Trainee in an outside agency each year prior to the internship year. The minimum total is 384 hours per year. Students are expected to arrange with a field placement to receive psychological clinical training, which could include the following types of experiences: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.

**CPSY 5994 PsyD Internship (4,8 Credits)**

The Graduate School of Professional Psychology (GSPP) requires that all students attend a yearlong or two half-time years of clinical internship. Internship is the clinical experience after the student has completed all courses, the clinical competency examination, and at least three years of residency at GSPP. Students typically apply through APPIC and are offered formal internships. Occasionally students create internships, but they must be approved formally through GSPP prior to the start of the internship. The basic experiences may include training in: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc. To register, student must have departmental approval. Students can register half-time for 4 credit hours or full-time for 8 credit hours.

**CPSY 5995 Independent Research (1-17 Credits)**

## Graduate School of Social Work

The Graduate School of Social Work (GSSW) at the University of Denver is internationally recognized as a leader in educating practitioners, scholars, educators and researchers. GSSW's vision aims for the achievement of thriving sustainable communities, actualized human potential, and embodiment of equity across all communities. GSSW's mission promotes social justice by advancing scholarship, education, and community

engagement that leads, connects, mobilizes, and transforms. This mission is carried out in a rich educational environment featuring excellent teaching by award-winning faculty and path-breaking research.

The Master of Social Work (MSW) program is ranked in the top seven percent of all accredited MSW programs in the country by the U.S. News and World Report. GSSW offers four program locations to fit diverse learning needs. Although course options differ between locations, all MSW programs provide small class sizes, field internships and an individualized learning experience. MSW program locations span across Colorado and beyond:

- Denver Campus MSW Program – four unique certificates and international courses
- MSW@Denver - Online MSW Program – course work is 100% online
- Four Corners MSW Program (located in Durango, Colorado) - focus on rural and tribal communities
- Western Colorado MSW Program (located in Glenwood Springs, Colorado) - focus on rural social work practice, integrated health and sustainability

Throughout the MSW program, students gain fundamental skills to make a significant impact on individuals, communities, systems and policy.

GSSW's Denver-based Doctor of Philosophy in Social Work was one of the first in the United States. During the program, students work alongside distinguished faculty to conduct research, write publications and gain substantive knowledge in the field of social work.

## Graduate School of Social Work

### Doctor of Philosophy in Social Work

The doctoral program at the Graduate School of Social Work trains master's level human service professionals from across the country and around the world to become social work researchers, educators, and policy experts.

Founded in 1968, our PhD program is among the oldest social work doctoral programs in the nation. Students work alongside distinguished faculty members (<http://www.du.edu/socialwork/facultyandstaff/facultydirectory/>) to conduct research, write publications and gain substantive and methodological knowledge in the field of social work.

As a doctoral student, you are encouraged to develop a solid understanding of the theories, social interventions and policies that guide research in your individual substantive areas.

The program emphasizes the following:

- critical approaches to knowledge development through advanced coursework in theory, policy, and research methodology;
- research competencies through required and elective courses, graduate research assistantships and dissertation research;
- collaboration with faculty working in diverse, substantive areas of social work research; and
- teaching skills through pedagogy coursework, a teaching practicum, elective courses, and faculty mentoring.

Watch our PhD video to learn more. (<https://www.youtube.com/watch?v=By-28nhKXPk&t=10s&index=1&list=PLf4Wfa1INglKRjtLW4X12auqoHShxVK6y>)

### Master of Social Work with a Concentration in Advanced Social Work Practice

The Master in Social Work degree with a concentration in Advanced Social Work Practice will prepare you with the theoretical knowledge, applied skills, and values to work across a continuum of services at micro, mezzo and macro levels. Our model prepares you to practice with a wide range of populations and settings to meet the needs of your community. The curriculum emphasizes culturally responsive practice needed for the increasing diversity within communities at a local, state, national or global context, including a close examination of power, privilege, and oppression. During foundation coursework, students develop a generalist perspective and introductory skills for working with individuals, families, groups, communities, and organizations. During concentration coursework, students customize and specialize their pathway through the curriculum, ranging from a focus on individual therapy to policy practice and social change.

### Global Social Work Certificate (Denver Campus MSW programs)

The Global Social Work Certificate is designed for students who wish to understand global connections and perspectives, whether they ultimately intend to work internationally or domestically. Certificate courses are anchored in social work values and ethics including a close examination of power, privilege and oppression as it plays out across the world, applying these principles to human rights advocacy and intervention, as well as examining and reflecting on the necessity to avoid the "white savior complex". Approaching international work from a place of humility enables students to decenter their own lens which is crucial for global social work. Students have the opportunity to further their understanding of relationship-based work done in conjunction with local communities, working side by side rather than from a "top down" model. Appropriate roles for working internationally are examined and discussed. Ethical considerations when working in a community other than one's own are examined when focusing on injustices and inequalities, including the role of domestic and international policies and agreements. The Global Social Work Certificate is a Specialized Graduate Certificate of 12 credits.

## Human-Animal-Environment Interactions in Social Work Certificate (Denver Campus MSW programs)

The Human-Animal-Environment Interactions in Social Work certificate prepares social work students to recognize the importance and impact of human-animal-environment interactions (HAEIs) in culturally responsive and ethically advanced professional social work practice settings. Clinical and community settings such as mental health agencies, schools, and shelters are emphasized. The certificate centers social justice and highlights intersecting systems of oppression and violence directed towards humans, animals, and the environment. There are three required certificate courses, which are taken in sequence. Students do not need a specialized field internship placement to complete the certificate.

## LatinX Social Work Certificate (Denver Campus MSW programs)

The Certificate in Latinx Social Work prepares students to provide culturally responsive practice with individuals and families of Latin American origin. Three certificate courses and an approved concentration year field internship are required. Students must include a plan for integrating the specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements of the concentration year, as well as those of the certificate. The certificate is available to Spanish speaking and non-Spanish speaking students.

## School Social Work Certificate (Denver Campus MSW programs)

Students enrolled in this certificate program are required to complete 12 hours of concentration year field internship (four in each of three quarters) in a school setting in the State of Colorado and with supervision by a school social worker. Students must include a plan for integrating specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements of the concentration year, as well as those of the certificate.

The school microsystem is a unique work environment for the social worker. It is a venue that is dynamic and continually changing. Because of the school's central location in the lives of students, the school social worker has the ability to access and to bridge to the peer network, family network, teachers, school administration, neighborhood network, community resources, and the legal system. For some students, the school can be an oasis or a refuge from problems that they are facing outside of school. Other students may keenly feel that the school is a place of humiliation, frustration, or isolation. For both these groups of students, their relationship with their school social worker can have a pivotal role in their lives and their families.

The School Social Work certificate discusses the many roles that the School Social Worker may have and effective techniques for being successful in those many roles. It examines the laws that impact service delivery in the school system. Additionally, it gives students an advanced understanding of school-based assessment and how these assessments fit into the fabric of the school, and by extension, the life of the student and family.

This certificate also addresses the need for students who wish to be School Social Workers to learn and demonstrate culturally responsive interpersonal skills, techniques, and strategies to effectively work with linguistically and culturally diverse students, families, and communities. It helps students apply social work ethics and values within the framework of a school microsystem.

School settings are one of the largest providers of employment to GSSW alumni. As many school districts in Colorado move to a mental health provider model, in which the mental health provider can be a school psychologist or school social worker, the School Social Work Certificate provides the advanced training that social workers need to be competitive in this field.

## Accreditation

Since 1933, our MSW program has been accredited by the Council on Social Work Education (CSWE) (<https://www.cswe.org/>), a specialized accrediting body recognized by the Council on Post-Secondary Accreditation.

CSWE accreditation signifies that our MSW program meets nationally accepted standards in eight areas:

- Mission, goals and objectives
- Curriculum
- Governance, structure and resources
- Faculty
- Student professional development
- Non-discrimination and human diversity
- Program renewal
- Program assessment and continuous improvement

All CSWE programs measure and report student learning outcomes. Students are assessed on their mastery of the competencies that comprise the accreditation standards of CSWE. These competencies are dimensions of social work practice that all social workers are expected to master during

their professional training. A measurement benchmark is set by the social work programs for each competency. An assessment score at or above that benchmark is considered by the program to represent mastery of that particular competency.

## Doctor of Philosophy in Social Work

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Doctoral students are expected to enter the program with a basic proficiency in descriptive and inferential statistics. This knowledge is necessary for several of the required doctoral courses. If you lack this required statistical proficiency, you should plan to take a basic statistics course before enrolling at GSSW.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 8
- Minimum C1 Advanced Score: 200
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Social Work (Denver Campus, Four Corners, Online and Western Colorado Programs)

The Western Colorado program is unavailable for admission in the 2024-25 academic year. The next cohort of two-year students will begin in the fall of 2025.

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.



## Master of Social Work Advanced Standing ( **Denver Campus, Four Corners, Online and Western Colorado Programs** )

**The Western Colorado program is unavailable for admission in the 2024-25 academic year. The next cohort of students will begin in the summer of 2026.**

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must hold an earned CSWE-accredited bachelor's degree in social work from a regionally accredited college or university or the recognized equivalent from an international institution.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Social Work (Western Colorado Program)

**The Western Colorado MSW program is unavailable for admission in the 2022-23 academic year. The next cohort of two-year students will begin in the fall of 2023.**

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- A minimum of 20 semester hours or 30 quarter hours in undergraduate course work in the arts and humanities, social/behavioral sciences and biological sciences. For each liberal arts course taken to fulfill this requirement, students must earn a grade of "C" (2.0 on a 4.0 scale) or better. In addition, you must have completed at least one course in English composition or present evidence of testing out of the English composition requirement.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum CAE Score: 185

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Overall Requirements for Admission to Certificate Programs

Students who wish to be considered for admission to any one of the academic certificate programs must:

- successfully complete the foundation curriculum at GSSW or be admitted to the MSW program as an advanced standing student.
- be in good standing in both academics and field.
- declare intention to complete certificate to the GSSW Registrar by completing the form within the GSSW Student Resource Portal (<http://portfolio.du.edu/GSSWStudentResourcePortal/page/92894/>).
- be willing and able to attend all classes required for the certificate at the time these classes are offered.
- be willing and able to meet all academic requirements for concentration coursework, as well as for the certificate program.
- meet any additional eligibility requirements listed within the individual certificate descriptions below.

### Global Social Work Certificate

Students who wish to be considered for admission to the Global Social Work Certificate are required to:

- meet the general requirements for admission to certificate programs listed in the introductory section.
- complete the Global Social Work Certificate application once matriculated into a MSW degree programs.
- Attend a group information meeting or individual meeting with the certificate coordinator.
- be willing to attend extracurricular, Global Social Work Certificate activities.

### Human-Animal-Environment Interactions in Social Work Certificate

Students who wish to be considered for admission to the Human-Animal-Environment Interactions in Social Work Certificate program are required to:

- meet the general requirements for admission to certificate programs listed in the introductory section.
- be willing to attend extracurricular, experiential Human-Animal-Environment Interactions activities offered by the Institute for Human-Animal Connection (IHAC).
- integrate Human-Animal-Environment Interactions concepts into their concentration year field placement. It is not required to have a therapy animal or therapy animal-in-training to fulfill this requirement.

### Latinx Social Work Certificate

Students who wish to be considered for admission to the Latinx Social Work Certificate program are required to:

- complete the Latinx Social Work Certificate application.
- submit a copy of their current Resume/Curriculum Vitae.
- schedule a meeting with the certificate coordinator.

### School Social Work Certificate

Students who wish to be considered for admission to the School Social Work Certificate program are required to:

- complete the School Social Work Certificate application.
- submit an application to the certificate coordinator by May 1 in the foundation year or by August 1 for advanced standing and Winter start MSW students within the Denver Campus MSW program.
- have a school placement in the State of Colorado in either their foundation or concentration year.

## Doctor of Philosophy in Social Work

### PhD Degree Requirements for Candidates with an MSW

University policy requires a minimum of 135 quarter hours beyond a baccalaureate for the doctor of philosophy degree in social work. Up to 60 quarter hours toward this requirement may be credited for "A" or "B" work completed as part of a master's degree conferred through an accredited school of social work.

Minimum number of credits required beyond the MSW: 75

Code	Title	Credits
<b>CORE REQUIRED CURRICULUM</b>		
<b>Professional Development</b>		<b>9</b>
SOWK 5000	Seminar in Professional Social Work Issues (6 credits: 2 credits over three quarters)	
SOWK 5450	Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective (3 credits)	
<b>Research Methods</b>		<b>17</b>
SOWK 5110	Introduction to Advanced Quantitative Research Methods (3 credits)	
SOWK 5120	Introduction to Advanced Qualitative Research Methods (2 credits)	
SOWK 5121	Qualitative Data Analysis (3 credits)	
SOWK 5130	Mixed Methods Research in Social Work (3 credits)	
SOWK 5405	Advance Qualitative Analysis (3 credits)	

SOWK 5406	Critical Perspectives on Quantitative Research Methods	
<b>Statistics</b>		<b>9</b>
SOWK 5201	Intro to Statistical Methods in Social Work (5 credits) <sup>1</sup>	
SOWK 5202	Correlation and Regression (4 credits)	
<b>Theory</b>		<b>6</b>
SOWK 5300	Social Science Theory and the Philosophy of Science (3 credits)	
SOWK 5301	Social Work Theory in Research and Practice (3 credits)	
<b>Policy</b>		<b>3</b>
SOWK 5101	Social Welfare Policy Analysis and Development (3 credits)	
<b>Pedagogy</b>		<b>9</b>
SOWK 5500	Pedagogy in Social Work Education (3 credits)	
SOWK 5600	Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies (3 credits)	
SOWK 5700	Teaching Practicum (3 credits)	
<b>ELECTIVES</b>		
<b>Theory Elective Course</b>		<b>3</b>
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>Advanced Methodology or Statistics Electives</b>		<b>6</b>
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>General Electives</b>		<b>13</b>
All Doctoral level SOWK courses that do not meet the above requirements count towards General Electives. See Course Description section for list of all Doctoral Curriculum courses.		
Students with an MSW may not take Masters level SOWK courses as General Electives (SOWK 4000 level).		
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>Total Credits</b>		<b>75</b>

## PhD Degree Requirements for Candidates with an MA/MS

University policy requires a minimum of 135 quarter hours beyond a baccalaureate for the doctor of philosophy degree in social work. Up to 60 quarter hours toward this requirement may be credited for "A" or "B" work completed as part of a master's degree conferred through an accredited school of social work.

Minimum number of credits required beyond the MA/MS: 90

Code	Title	Credits
<b>CORE REQUIRED CURRICULUM</b>		
<b>Professional Development</b>		<b>9</b>
SOWK 5000	Seminar in Professional Social Work Issues (6 credits: 2 credits over three quarters)	
SOWK 5450	Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective (3 credits)	
<b>Research Methods</b>		<b>17</b>
SOWK 5110	Introduction to Advanced Quantitative Research Methods (3 credits)	
SOWK 5120	Introduction to Advanced Qualitative Research Methods (2 credits)	
SOWK 5121	Qualitative Data Analysis (3 credits)	
SOWK 5130	Mixed Methods Research in Social Work (3 credits)	
SOWK 5405	Advance Qualitative Analysis (3 credits)	
SOWK 5406	Critical Perspectives on Quantitative Research Methods	
<b>Statistics</b>		<b>9</b>
SOWK 5201	Intro to Statistical Methods in Social Work (5 credits) <sup>1</sup>	
SOWK 5202	Correlation and Regression (4 credits)	
<b>Theory</b>		<b>6</b>
SOWK 5300	Social Science Theory and the Philosophy of Science (3 credits)	
SOWK 5301	Social Work Theory in Research and Practice (3 credits)	
<b>Policy</b>		<b>3</b>
SOWK 5101	Social Welfare Policy Analysis and Development (3 credits)	

<b>Pedagogy</b>		<b>9</b>
SOWK 5500	Pedagogy in Social Work Education (3 credits)	
SOWK 5600	Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies (3 credits)	
SOWK 5700	Teaching Practicum (3 credits)	
<b>ELECTIVES</b>		
<b>Theory Elective Course</b>		<b>3</b>
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>Advanced Methodology or Statistics Electives</b>		<b>6</b>
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>General Electives</b>		<b>28</b>
All Doctoral level SOWK courses that do not meet the above requirements count towards General Electives. See Course Description section for list of all Doctoral Curriculum courses.		
Students work with their advisor and other faculty to develop an Educational Plan that identifies appropriate electives.		
<b>Total Credits</b>		<b>90</b>

## Master of Social Work: Denver Campus

### Master of Social Work- Denver Campus MSW Program with a Concentration in Advanced Social Work Practice

#### MSW Degree Requirements

The minimum credits required to earn an MSW degree is 81 credits (Foundation Curriculum: 36 credits. Concentration Curriculum: 45 credits).

Code	Title	Credits
<b>FOUNDATION CURRICULUM</b>		
SOWK 4000	Professional Development Seminar	1
SOWK 4001	Clinical Social Work Skills	3
SOWK 4003	Clinical Social Work Theory and Practice	3
SOWK 4006	Human Behavior and the Social Environment: Theory and Practice	3
SOWK 4007	Community and Macro Social Work Theory and Practice	4
SOWK 4020	Integrated Social Work Practice for Social Justice	4
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective	3
SOWK 4120	Social Policy Analysis, Advocacy, and Practice	3
SOWK 4201	Evidence for Practice	3
SOWK 4950	Foundation Field Internship	9
Total Credits Required for Foundation Curriculum: 36		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4315	Critical Theories of Child and Adolescent Development	
SOWK 4320	Family Systems Theories for Social Work Practices	
SOWK 4325	Evolving Perspectives and Trends in Health and Wellness	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4360	Social-Ecological Resilience: Connecting Human and Environmental Wellbeing	
SOWK 4370	Community and Organizational Change: Theory for Practice	
SOWK 4750	Critical Perspectives on the Latinx Context	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4501	Wellness Assessment & Promotion Across the Lifespan	
SOWK 4565	Social and Environmental Impact Assessments	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4202	Creating a Regenerative Future	
SOWK 4203	Environmental Change Impacts and Resilience Strategies for Mental Health	
SOWK 4205	Contemporary Ecological Justice Issues and Social Work Practice	
SOWK 4340	Leadership and Supervision Skills	
SOWK 4435	Grassroots Organizing for Social Justice	

SOWK 4465	Human Security	
SOWK 4535	Planning and Program Development	
SOWK 4759	Global Cultural Perspectives: Ethical Considerations	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4245	Restorative Approaches in Social Work Practice	
SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4412	Practice Elements in Interventions with Children and Youth	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4420	Advanced Assessment and Intervention with Family Systems	
SOWK 4425	Positive Youth Development Programming	
SOWK 4430	Substance Use Interventions	
SOWK 4454	Child and Adolescent Trauma	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4723	Social Work Practice in Health	
SOWK 4725	Mind-Body Connections and Social Work Practice	
SOWK 4726	Experiential Therapy	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4735	Interpersonal Approaches to Counseling	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4204	Policy Advocacy for Ecological Justice in the U.S.	
SOWK 4600	Child Welfare History & Policies	
SOWK 4610	Policies and Programs for Children and Youth	
SOWK 4630	Family Policies and Services	
SOWK 4635	Immigration Policies and Services	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4645	Health Care Policy	
SOWK 4650	Aging Policy	
SOWK 4655	Mental Health and Health Care Policy	
SOWK 4660	Social Policy Advocacy	
SOWK 4680	Native Peoples Practice: History and Policy	
SOWK 4712	Social Work & the Law	
SOWK 4753	Social Development in Latin America	
SOWK 4765	Global Social Change	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4361	Adapting and Implementing Interventions	
SOWK 4900	Methods for Evaluating Practice and Programs	
SOWK 4902	Public Impact for Policy, Community Organizing, and Research Dissemination	
SOWK 4903	Photovoice as Intervention and Research Methodology	
SOWK 4904	Introduction to Human-Centered Design for Evaluation & Program Development	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4232	Critical Race Theory Praxis and Social Work	
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4240	Intergenerational Justice	
SOWK 4355	Genocide: A Social Justice Issue	
SOWK 4362	EmBODYed Practice: Ethical Approaches to Fatness and the Body	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4480	Social Justice in Mental Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4555	Spirituality and Social Work	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	

SOWK 4642	Global Trauma	
SOWK 4643	Digital Justice in Social Work	
SOWK 4682	Values for Social Work Practice Native Peoples	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4764	Historical Trauma and Healing	
SOWK 4782	Feminisms in Social Work Practice	
SOWK 4786	Human Trafficking: Prevention, Intervention, and Support of Its Victims	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>81</b>

## Master of Social Work- Denver Campus Advanced-Standing MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 54 credits (Advanced-Standing Curriculum: 9 credits. Concentration Curriculum: 45 credits).

### Advanced-Standing MSW Degree Requirements

Code	Title	Credits
<b>ADVANCED STANDING CURRICULUM</b>		
SOWK 4299	Advanced Standing Seminar	3
SOWK 4302	Advanced Evidence for Practice	3
SOWK 4303	Advanced Standing: Engaging Anti-oppressive Social Work	3
Total Credits Required for Advanced Standing Curriculum: 9		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4315	Critical Theories of Child and Adolescent Development	
SOWK 4320	Family Systems Theories for Social Work Practices	
SOWK 4325	Evolving Perspectives and Trends in Health and Wellness	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4360	Social-Ecological Resilience: Connecting Human and Environmental Wellbeing	
SOWK 4370	Community and Organizational Change: Theory for Practice	
SOWK 4750	Critical Perspectives on the Latinx Context	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4501	Wellness Assessment & Promotion Across the Lifespan	
SOWK 4565	Social and Environmental Impact Assessments	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4202	Creating a Regenerative Future	
SOWK 4203	Environmental Change Impacts and Resilience Strategies for Mental Health	
SOWK 4205	Contemporary Ecological Justice Issues and Social Work Practice	
SOWK 4340	Leadership and Supervision Skills	

SOWK 4435	Grassroots Organizing for Social Justice
SOWK 4465	Human Security
SOWK 4535	Planning and Program Development
SOWK 4759	Global Cultural Perspectives: Ethical Considerations
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>	
<b>3</b>	
SOWK 4245	Restorative Approaches in Social Work Practice
SOWK 4401	Integrated Health Care: Models and Practice
SOWK 4412	Practice Elements in Interventions with Children and Youth
SOWK 4420	Advanced Assessment and Intervention with Family Systems
SOWK 4425	Positive Youth Development Programming
SOWK 4430	Substance Use Interventions
SOWK 4454	Child and Adolescent Trauma
SOWK 4700	Solution Focused Brief Therapy
SOWK 4715	School Social Work Interventions
SOWK 4723	Social Work Practice in Health
SOWK 4725	Mind-Body Connections and Social Work Practice
SOWK 4726	Experiential Therapy
SOWK 4730	Cognitive Behavioral Therapies
SOWK 4735	Interpersonal Approaches to Counseling
SOWK 4784	Suicide Assessment and Interventions
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>	
<b>3</b>	
SOWK 4204	Policy Advocacy for Ecological Justice in the U.S.
SOWK 4600	Child Welfare History & Policies
SOWK 4610	Policies and Programs for Children and Youth
SOWK 4630	Family Policies and Services
SOWK 4635	Immigration Policies and Services
SOWK 4640	Mental Health and Substance Use Policies
SOWK 4645	Health Care Policy
SOWK 4650	Aging Policy
SOWK 4655	Mental Health and Health Care Policy
SOWK 4660	Social Policy Advocacy
SOWK 4680	Native Peoples Practice: History and Policy
SOWK 4712	Social Work & the Law
SOWK 4753	Social Development in Latin America
SOWK 4765	Global Social Change
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>	
<b>3</b>	
SOWK 4361	Adapting and Implementing Interventions
SOWK 4900	Methods for Evaluating Practice and Programs
SOWK 4902	Public Impact for Policy, Community Organizing, and Research Dissemination
SOWK 4903	Photovoice as Intervention and Research Methodology
SOWK 4904	Introduction to Human-Centered Design for Evaluation & Program Development
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>	
<b>3</b>	
SOWK 4232	Critical Race Theory Praxis and Social Work
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth
SOWK 4240	Intergenerational Justice
SOWK 4355	Genocide: A Social Justice Issue
SOWK 4362	EmBODYed Practice: Ethical Approaches to Fatness and the Body
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health
SOWK 4480	Social Justice in Mental Health
SOWK 4545	Social Work Practice with LGBTQIA Communities
SOWK 4555	Spirituality and Social Work
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition

SOWK 4642	Global Trauma	
SOWK 4643	Digital Justice in Social Work	
SOWK 4682	Values for Social Work Practice Native Peoples	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4764	Historical Trauma and Healing	
SOWK 4782	Feminisms in Social Work Practice	
SOWK 4786	Human Trafficking: Prevention, Intervention, and Support of Its Victims	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Advance-Standing students may not take Foundation Curriculum SOWK courses as Concentration Curriculum Electives		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>54</b>

## Master of Social Work: Four Corners

### Master of Social Work - Four Corners MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 81 credits (Foundation Curriculum: 36 credits. Concentration Curriculum: 45 credits).

Code	Title	Credits
<b>FOUNDATION CURRICULUM</b>		
SOWK 4000	Professional Development Seminar	1
SOWK 4001	Clinical Social Work Skills	3
SOWK 4003	Clinical Social Work Theory and Practice	3
SOWK 4006	Human Behavior and the Social Environment: Theory and Practice	3
SOWK 4007	Community and Macro Social Work Theory and Practice	4
SOWK 4020	Integrated Social Work Practice for Social Justice	4
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective	3
SOWK 4120	Social Policy Analysis, Advocacy, and Practice	3
SOWK 4201	Evidence for Practice	3
SOWK 4950	Foundation Field Internship	9
Total Credits Required for Foundation Curriculum: 36		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4320	Family Systems Theories for Social Work Practices	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4370	Community and Organizational Change: Theory for Practice	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4340	Leadership and Supervision Skills	
SOWK 4535	Planning and Program Development	
SOWK 4759	Global Cultural Perspectives: Ethical Considerations	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>



SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4430	Substance Use Interventions	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4600	Child Welfare History & Policies	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4655	Mental Health and Health Care Policy	
SOWK 4680	Native Peoples Practice: History and Policy	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	
SOWK 4643	Digital Justice in Social Work	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>81</b>

## Master of Social Work - Four Corners Advanced-Standing MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 54 credits (Advanced-Standing Curriculum: 9 credits. Concentration Curriculum: 45 credits).

### Advanced-Standing MSW Degree Requirements

Code	Title	Credits
<b>ADVANCED STANDING CURRICULUM</b>		
SOWK 4299	Advanced Standing Seminar	3
SOWK 4302	Advanced Evidence for Practice	3
SOWK 4303	Advanced Standing: Engaging Anti-oppressive Social Work	3
Total Credits Required for Advanced Standing Curriculum: 9		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4320	Family Systems Theories for Social Work Practices	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4370	Community and Organizational Change: Theory for Practice	

<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4340	Leadership and Supervision Skills	
SOWK 4535	Planning and Program Development	
SOWK 4759	Global Cultural Perspectives: Ethical Considerations	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4430	Substance Use Interventions	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4600	Child Welfare History & Policies	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4655	Mental Health and Health Care Policy	
SOWK 4680	Native Peoples Practice: History and Policy	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	
SOWK 4643	Digital Justice in Social Work	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIRMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Advance-Standing students may not take Foundation Curriculum SOWK courses as Concentration Curriculum Electives		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		

Total Credits Required for Concentration Curriculum: 45

**Total Credits**

**54**

## Master of Social Work: Online

### Master of Social Work - Online MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 81 credits (Foundation Curriculum: 36 credits. Concentration Curriculum: 45 credits).

#### MSW Degree Requirements

Code	Title	Credits
<b>FOUNDATION CURRICULUM</b>		
SOWK 4000	Professional Development Seminar	1

SOWK 4001	Clinical Social Work Skills	3
SOWK 4003	Clinical Social Work Theory and Practice	3
SOWK 4006	Human Behavior and the Social Environment: Theory and Practice	3
SOWK 4007	Community and Macro Social Work Theory and Practice	4
SOWK 4020	Integrated Social Work Practice for Social Justice	4
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective	3
SOWK 4120	Social Policy Analysis, Advocacy, and Practice	3
SOWK 4201	Evidence for Practice	3
<b>FOUNDATION INTERNSHIP REQUIREMENT</b>		<b>9</b>
SOWK 4950	Foundation Field Internship (9 credits)	
OR		
SOWK 4413	Virtual Field Experience Seminar I (3 credits)	
SOWK 4414	Virtual Field Experience Seminar II (3 credits)	
SOWK 4950	Foundation Field Internship (3 credits)	
Total Credits Required for Foundation Curriculum: 36		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4325	Evolving Perspectives and Trends in Health and Wellness	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4370	Community and Organizational Change: Theory for Practice	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4340	Leadership and Supervision Skills	
SOWK 4535	Planning and Program Development	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4245	Restorative Approaches in Social Work Practice	
SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4430	Substance Use Interventions	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4723	Social Work Practice in Health	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4600	Child Welfare History & Policies	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4655	Mental Health and Health Care Policy	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4240	Intergenerational Justice	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	
SOWK 4643	Digital Justice in Social Work	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	

SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>81</b>

## Master of Social Work- Online Advanced-Standing MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 54 credits (Advanced-Standing Curriculum: 9 credits. Concentration Curriculum: 45 credits).

### Advanced-Standing MSW Degree Requirements

Code	Title	Credits
<b>ADVANCED STANDING CURRICULUM</b>		
SOWK 4299	Advanced Standing Seminar	3
SOWK 4302	Advanced Evidence for Practice	3
SOWK 4303	Advanced Standing: Engaging Anti-oppressive Social Work	3
Total Credits Required for Advanced Standing Curriculum: 9		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4325	Evolving Perspectives and Trends in Health and Wellness	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4370	Community and Organizational Change: Theory for Practice	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4340	Leadership and Supervision Skills	
SOWK 4535	Planning and Program Development	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4245	Restorative Approaches in Social Work Practice	
SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4430	Substance Use Interventions	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4723	Social Work Practice in Health	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4600	Child Welfare History & Policies	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4655	Mental Health and Health Care Policy	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>

SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	
SOWK 4643	Digital Justice in Social Work	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Advance-Standing students may not take Foundation Curriculum SOWK courses as Concentration Curriculum Electives		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>54</b>

## Master of Social Work: Western Colorado

### Master of Social Work - Western Colorado MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 81 credits (Foundation Curriculum: 36 credits. Concentration Curriculum: 45 credits).

#### MSW Degree Requirements

Code	Title	Credits
<b>FOUNDATION CURRICULUM</b>		
SOWK 4000	Professional Development Seminar	1
SOWK 4001	Clinical Social Work Skills	3
SOWK 4003	Clinical Social Work Theory and Practice	3
SOWK 4006	Human Behavior and the Social Environment: Theory and Practice	3
SOWK 4007	Community and Macro Social Work Theory and Practice	4
SOWK 4020	Integrated Social Work Practice for Social Justice	4
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective	3
SOWK 4120	Social Policy Analysis, Advocacy, and Practice	3
SOWK 4201	Evidence for Practice	3
SOWK 4950	Foundation Field Internship	9
Total Credits Required for Foundation Curriculum: 36		
<b>CONCENTRATION CURRICULUM</b>		
<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4320	Family Systems Theories for Social Work Practices	
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	
SOWK 4370	Community and Organizational Change: Theory for Practice	
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan	
SOWK 4752	Trauma Informed Assessment and Interventions	
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4202	Creating a Regenerative Future	
SOWK 4205	Contemporary Ecological Justice Issues and Social Work Practice	
SOWK 4340	Leadership and Supervision Skills	
SOWK 4535	Planning and Program Development	

SOWK 4759	Global Cultural Perspectives: Ethical Considerations	
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4245	Restorative Approaches in Social Work Practice	
SOWK 4401	Integrated Health Care: Models and Practice	
SOWK 4418	Child Welfare Practice: Assessment & Intervention	
SOWK 4430	Substance Use Interventions	
SOWK 4700	Solution Focused Brief Therapy	
SOWK 4715	School Social Work Interventions	
SOWK 4723	Social Work Practice in Health	
SOWK 4730	Cognitive Behavioral Therapies	
SOWK 4784	Suicide Assessment and Interventions	
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4600	Child Welfare History & Policies	
SOWK 4635	Immigration Policies and Services	
SOWK 4640	Mental Health and Substance Use Policies	
SOWK 4655	Mental Health and Health Care Policy	
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs	
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>		<b>3</b>
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	
SOWK 4545	Social Work Practice with LGBTQIA Communities	
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	
SOWK 4643	Digital Justice in Social Work	
SOWK 4742	Disability Studies	
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	
SOWK 4762	Bosnia in Transition: The Social Work Response	
SOWK 4763	Social Work and Social Justice in South Africa	
SOWK 4790	Human Sexuality	
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>		<b>12</b>
SOWK 4970	Concentration Field Internship	
<b>ELECTIVES REQUIREMENT</b>		<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.		
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.		
Total Credits Required for Concentration Curriculum: 45		
<b>Total Credits</b>		<b>81</b>

## Master of Social Work - Western Colorado Advanced-Standing MSW Program with a Concentration in Advanced Social Work Practice

The minimum credits required to earn an MSW degree is 54 credits (Advanced-Standing Curriculum: 9 credits. Concentration Curriculum: 45 credits).

### Advanced-Standing MSW Degree Requirements

Code	Title	Credits
<b>ADVANCED STANDING CURRICULUM</b>		
SOWK 4299	Advanced Standing Seminar	3
SOWK 4302	Advanced Evidence for Practice	3
SOWK 4303	Advanced Standing: Engaging Anti-oppressive Social Work	3
Total Credits Required for Advanced Standing Curriculum: 9		
<b>CONCENTRATION CURRICULUM</b>		

<b>THEORY REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4320	Family Systems Theories for Social Work Practices
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma
SOWK 4370	Community and Organizational Change: Theory for Practice
<b>ASSESSMENT REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4338	Assessment of Mental Health Across the Lifespan
SOWK 4752	Trauma Informed Assessment and Interventions
<b>ENGAGE &amp; INTERVENE WITH ORGANIZATIONS &amp; COMMUNITIES REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4202	Creating a Regenerative Future
SOWK 4205	Contemporary Ecological Justice Issues and Social Work Practice
SOWK 4340	Leadership and Supervision Skills
SOWK 4535	Planning and Program Development
SOWK 4759	Global Cultural Perspectives: Ethical Considerations
<b>ENGAGE &amp; INTERVENE WITH INDIVIDUALS, FAMILY &amp; GROUPS REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4245	Restorative Approaches in Social Work Practice
SOWK 4401	Integrated Health Care: Models and Practice
SOWK 4418	Child Welfare Practice: Assessment & Intervention
SOWK 4430	Substance Use Interventions
SOWK 4700	Solution Focused Brief Therapy
SOWK 4715	School Social Work Interventions
SOWK 4723	Social Work Practice in Health
SOWK 4730	Cognitive Behavioral Therapies
SOWK 4784	Suicide Assessment and Interventions
<b>POLICY &amp; ADVOCACY SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4600	Child Welfare History & Policies
SOWK 4635	Immigration Policies and Services
SOWK 4640	Mental Health and Substance Use Policies
SOWK 4655	Mental Health and Health Care Policy
<b>EVALUATION &amp; RESEARCH SKILLS REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4900	Methods for Evaluating Practice and Programs
<b>VALUES REQUIREMENT (3 credits) Choose one of the following courses:</b>	<b>3</b>
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health
SOWK 4545	Social Work Practice with LGBTQIA Communities
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition
SOWK 4643	Digital Justice in Social Work
SOWK 4742	Disability Studies
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability
SOWK 4762	Bosnia in Transition: The Social Work Response
SOWK 4763	Social Work and Social Justice in South Africa
SOWK 4790	Human Sexuality
<b>CONCENTRATION INTERNSHIP REQUIREMENT</b>	<b>12</b>
SOWK 4970	Concentration Field Internship
<b>ELECTIVES REQUIREMENT</b>	<b>12</b>
All Concentration level SOWK courses that do not meet the above requirements count towards Concentration Curriculum Electives. See Course Description section for list of all Concentration Curriculum courses.	
Advance-Standing students may not take Foundation Curriculum SOWK courses as Concentration Curriculum Electives	
Students may take up to 10 credits of coursework from other DU graduate programs with the approval of their advisor and Associate Dean for Academic Affairs.	

Total Credits Required for Concentration Curriculum: 45

## Certificate Programs

### Latinx Social Work Certificate

Students who wish to be considered for admission to the Latinx Social Work Certificate program are required to:

1. Complete the Latinx Social Work Certificate application.
2. Schedule a meeting with the certificate coordinator.

For Spanish Only Courses- Students must demonstrate, at minimum, an Intermediate-Mid Level of proficiency in Spanish. An online proficiency test is offered for applicants. Transcripts or other means may also be used to waive the need for testing. Students who wish to practice Spanish are encouraged to participate in a Spanish conversation group outside of classes.

Non-Spanish speakers are eligible to take all the certificate courses offered in English. For courses offered in Spanish individual and/or collective arrangements will be made to ensure all classes are made accessible.

Students enrolled in this certificate program are required to complete 12 hours of concentration field internship in a program or agency offering the opportunity to work with Latinx clients. Students must include a plan for integrating the specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements to earn an MSW, as well as those of the certificate.

#### Coursework Requirements

Within their course of study, Latinx Social Work Certificate program students must include the following courses:

Code	Title	Credits
SOWK 4749	Culturally Responsive Practice with LatinX	3
SOWK 4750	Critical Perspectives on the Latinx Context	3
SOWK 4753	Social Development in Latin America	3
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	3
<b>Total Credits</b>		<b>12</b>

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## Global Social Work Certificate

Social work students are increasingly interested in global work. They are now entering social work programs with rising levels of global experience including previous participation in the Peace Corps. Additionally others are wanting to gain more experience and skills while in graduate school in order to further their careers focused on global issues. Students have goals to work both domestically and internationally. One of the cornerstones of social work education is the focus on the interconnectedness of all systems so it is understandable that students want to enhance their understanding of global work and international perspectives.

Global social work courses are anchored in social work values and ethics and apply a power, privilege and oppression framework to human rights advocacy and intervention. Through the Global Social Work Certificate, you will:

- Further your understanding of relationship-based work done in conjunction with local communities—working side by side rather than top-down.
- Explore appropriate roles for working internationally.
- Weigh ethical considerations when working in a community other than one's own.
- Examine injustices and inequalities in the context of domestic and international policies and agreements.
- Reflect on the need to avoid the “white savior complex.”
- Learn to approach international social work from a place of humility and decenter your own lens.

12 Credit Requirement: three, 3-credit academic courses and 3 credits from field internship

#### Coursework Requirements

Within their course of study, Global Social Work Certificate program students must include the following courses:

Code	Title	Credits
Required		
SOWK 4759	Global Cultural Perspectives: Ethical Considerations	3
Select two of the following (international courses included):		
SOWK 4355	Genocide: A Social Justice Issue (3 credits)	3
SOWK 4465	Human Security (3 credits)	3
SOWK 4642	Global Trauma (3 credits)	3



SOWK 4635	Immigration Policies and Services (3 credits)	
SOWK 4765	Global Social Change (3 credits)	
SOWK 4786	Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 credits)	
International Course Options:		
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (3 credits total)	
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (3 credits total)	
SOWK 4762	Bosnia in Transition: The Social Work Response (3 credits total)	
SOWK 4763	Social Work and Social Justice in South Africa (3 credits total)	
Field Internship Requirement		
SOWK 4970	Concentration Field Internship (3 credits from the total 12 credits you will complete for internship will apply to your certificate )	3
<b>Total Credits</b>		<b>12</b>

### Certificate in Human-Animal-Environment Interactions in Social Work Certificate

The Human-Animal-Environment Interactions in Social Work certificate of specialization will prepare students to ethically incorporate non-human animals (primarily domesticated species) and the natural world into social work interventions.

#### Coursework Requirements

Within their course of study, Human-Animal-Environment Interactions in Social Work Certificate program students must include the following courses:

Code	Title	Credits
SOWK 4795	Foundations for Human-Animal-Environment Interactions in Social Work	3
SOWK 4796	Human-Animal-Environment Interventions in Social Work Practice	3
SOWK 4797	Professional Integration of Human-Animal-Environment Interactions in Social Work	3
Field Internship Requirement		
SOWK 4970	Concentration Field Internship (3 credits from the total 12 credits you will complete for internship will apply to your certificate)	3
<b>Total Credits</b>		<b>12</b>

### School Social Work Certificate

Students enrolled in this certificate program are required to complete either 9 credit hours of foundation field internship or 12 credit hours of concentration field internship in a school setting in the State of Colorado and with supervision by a school social worker. 3 of these credits will count toward the School Social Work Certificate. Students must include a plan for integrating specific requirements of the certificate into those of the internship on the Individualized Field Education Plan (IFEP). The internship must fulfill the requirements to earn an MSW, as well as those of the certificate.

#### Coursework Requirements

Within their course of study, School Social Work Certificate program students must include the following courses:

Code	Title	Credits
SOWK 4712	Social Work & the Law	3
SOWK 4715	School Social Work Interventions	3
SOWK 4718	School Social Work Assessment and Realities	3
Field Internship Requirement		
SOWK 4970	Concentration Field Internship (3 credits from the total 12 credits you will complete for internship will apply to your certificate)	3
<b>Total Credits</b>		<b>12</b>

**SOWK 4000 Professional Development Seminar (1 Credit)**

The Professional Development Seminar prepares students to develop a reflective practice and to make connections between applicable lived experience and the learning process, emphasizing professional social work identity. The course provides a supplement to the foundation curriculum and an opportunity for students to discuss their professional growth as social workers. The seminar provides opportunities to reflect on social work values and ethics, populations served, and the many fields and career pathways of social work practice. In conjunction with the foundation curriculum, key ethical issues and requirements are discussed so that students can deepen their understanding of ethics in practice with consideration of local, national, and global contexts. The course also gives an opportunity to reflect on their learning styles, participation in group work and the developmental process of practice. The ideas of conscious use of self and self-care concepts will be explored through a variety of learning modalities.

**SOWK 4001 Clinical Social Work Skills (3 Credits)**

This foundation course focuses on basic skills for micro social work practice with individuals and small groups. The framework of intentional interviewing teaches students to think critically about applying the skills for engagement, assessment and intervention. Attention focuses on use of these skills with clients from multiple social identities (e.g. ethnic, racial, sexual orientation, gender affiliation) and the pitfalls of practitioner micro-aggressions. An active learning approach requires students to participate in role-play exercises both in and outside of class. Students digitally record some of those exercises and share them with the class and instructor.

**SOWK 4003 Clinical Social Work Theory and Practice (3 Credits)**

This foundation course helps students develop a multi-dimensional assessment and intervention framework for clinical social work practice. This course builds upon knowledge of human behavior in the social environment and adds a focus on theories of change - at the individual and family level. The course is grounded in empirical information about the importance of relationship skills, across a variety of classic and modern approaches to intervention. We use a social work lens to emphasize the importance of context in client lives, including their socioeconomic status, cultural history, and experiences of oppression. Since no single theory captures the totality of human experiences, we integrate a variety of intervention techniques from multiple human behavior theories and ground them in a social work framework for ethical and effective clinical practice. Pre-requisite courses: SOWK 4020 and SOWK 4006 and SOWK 4001.

**SOWK 4006 Human Behavior and the Social Environment: Theory and Practice (3 Credits)**

This foundation course provides an overview of theoretical frameworks for understanding human behavior from a social work perspective. Theories reviewed include the developmental stages across the life cycle in terms of psychological, cognitive, moral, spiritual, identity and social development. Students apply a biopsychological assessment across the life span. The course emphasizes a social work perspective and key frameworks for social work, with an emphasis on the person in environment and systems theory as they describe diverse individual behavior in relation to social class, race and ethnicity, age, gender orientation, sexual orientation, and other multicultural backgrounds. The course aims to develop students' foundational understanding of how theories are used to promote relationship development with diverse individuals and to guide interventions across all system levels. Students may test out of this course and substitute an advanced course in human development, with advisor approval, if they have already successfully completed an equivalent course in human development.

**SOWK 4007 Community and Macro Social Work Theory and Practice (4 Credits)**

This foundation course provides students with a foundational level understanding of macro social work practice and roles. The course builds upon knowledge of human behavior in the social environment, and adds theories of change to understand diverse communities and social service networks and the relationship of local, national and global interventions. The course introduces students to empirically supported models and emerging interventions that address macro level social issues. Students complete community/organizational assessments and also participate in work groups to learn how to engage, assess, and intervene in communities and organizations.

**SOWK 4020 Integrated Social Work Practice for Social Justice (4 Credits)**

This foundation course focuses on professional development and identity for social work practice. The course emphasizes values, ethics and ethical decision making in the context of the history of the profession. Students are introduced to person-in-environment, critical theory and empowerment perspectives and apply these concepts to current field of practice and social work roles. Through integration of field placement experiences, students analyze and apply social work frameworks and generalist practice theories to current social justice challenges and diverse contexts that social workers face.

**SOWK 4050 Introduction to the Graduate Internship (1 Credit)**

The Introduction to the Graduate Internship seminar prepares students to enter the profession of social work at a graduate level. The course provides an overview of social work values and ethics, populations served, and issues that concern social workers. Through engagement in the course content, students will complete a readiness for field assessment, including their personal and professional motivations to join the profession and serve diverse communities. Students will be exposed to the social work profession's signature pedagogy, field education, and the stages of experiential learning. The course will also help students develop learning goals for field education and identify potential internship sites.

**SOWK 4120 Social Policy Analysis, Advocacy, and Practice (3 Credits)**

This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.

**SOWK 4132 Power, Privilege and Oppression from a Critical Multicultural Perspective (3 Credits)**

This foundation course examines the phenomena of power, privilege and oppression and their effect on individuals, families and communities in the context of the values of social and economic justice and the social work profession. The course is intended to increase awareness of the intersectionality of multiple oppressions with a focus on race/ethnicity, gender, socioeconomic status and sexual orientation. Students will gain a beginning self-awareness to identify the influence of personal biases and values that impact practice with diverse groups.

**SOWK 4150 Foundation Seminar (1-2 Credits)**

Required seminar format used to facilitate the integration of the foundation field practicum and the professional foundation course content; emphasis on linking classroom learning with practice in the field, integrating theory with professional practice; field practicum situations and issues used for discussion and deliberation. Co-requisite: SOWK 4950.

**SOWK 4151 Foundation Seminar I (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation.

**SOWK 4152 Foundation Seminar II (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4151.

**SOWK 4153 Foundation Seminar III (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, with emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4152.

**SOWK 4201 Evidence for Practice (3 Credits)**

This foundation course focuses on developing student skills in identifying, analyzing, and applying empirical evidence in order to inform their social work practice. The course introduces students to studies designed to examine the effectiveness of interventions. The course aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may critique the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4202 Creating a Regenerative Future (3 Credits)**

This course explores how we can create a regenerative future that is life-renewing for people and planet—a future in which all people, species, and ecosystems thrive. The concept of a “regenerative future” will be examined for how it goes beyond the limitations of a sustainability paradigm and analyzed from the lenses of ecological justice and power, privilege, and oppression. This course will use frameworks of permaculture, regenerative design, and futures thinking to move beyond “fixing” climate change or other planetary emergencies to a more robust, holistic framework for planning socio-ecological change. Students will gain skills of regenerative design, regenerative mapping, and emergent theories of change. These skills will be discussed in a vast array of applications (with both social and ecological systems) to focus on integration and regeneration of humans and the more-than-human world.

**SOWK 4203 Environmental Change Impacts and Resilience Strategies for Mental Health (3 Credits)**

The impacts of the climate crisis and global environmental degradation are becoming increasingly apparent upon mental health. Social workers are well positioned to address the mental health implications of the climate crisis, ecological injustice, and environmental degradation. Understanding how these phenomena bear upon the mental wellbeing of clients and communities will be explored in this required choice methods/skills class. Emphasis will be placed on building resilience to climate grief, solastalgia, eco-anxiety, and climate trauma utilizing a strengths-based perspective. Students will develop knowledge and awareness of how climate change impacts our thoughts, emotions, and behavior to be of support to clients and foster self-care as social work practitioners.

**SOWK 4204 Policy Advocacy for Ecological Justice in the U.S. (3 Credits)**

Contemporary policies in the U.S. are critically analyzed for how they promote or hinder human well-being, environmental sustainability, and ecological justice. Students will analyze policies and develop advocacy skills, with emphasis on intervening at local and state levels of U.S. policy making.

**SOWK 4205 Contemporary Ecological Justice Issues and Social Work Practice (3 Credits)**

This course is designed to support student learning by providing a dynamic review and exploration of contemporary social work issues with a focus on communication and intervention skills for ecological justice social work practice. Current events related to contemporary ecological justice social work practice, theory, or research will be covered included but not limited to: global environmental change, climate justice, environmental degradation and eco-systems loss, disasters, and instances of environmental and ecological injustice. Contemporary social work practice problems and possibilities are elevated, especially in the regard of trending and emerging interventions in social work practice. In this course, students will learn about the disproportionate burdens of ecological injustices in communities at the local, state, national, and international levels. From a social justice perspective, students will critically explore, analyze, and discuss current ecological injustices and relevant social work interventions and communicate them ethically and effectively utilizing web 2.0 platforms and social media outlets.

**SOWK 4232 Critical Race Theory Praxis and Social Work (3 Credits)**

An advanced multicultural social work practice course, this uses the fundamentals of Critical Race Theory (CRT) as a framework for contextualizing and intervening with client systems at the micro, mezzo, and macro levels. This course is a values elective for all concentrations. CRT is used as a framework to examine, critique, and challenge the way that race and racism is unwittingly sustained and perpetuated by traditional social work approaches to the amelioration of personal and social ills. Through this course, students learn the central tenets of CRT, how to evaluate traditional social work practice using these tenets, and begin to design a professional social work practice that uses CRT tenets as a foundation for micro-, mezzo-, and macro-level interventions. This course is offered within the concentration curriculum as a Values for Practice course to assist in the training and preparation of social workers practicing with historical underrepresented and marginalized clients and communities of color. Students develop skills and techniques grounded in anti-oppressive culturally grounded social work practice.

**SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth (3 Credits)**

This course will explore the interrelatedness of institutional racism and discrimination across major social systems within the U.S., focusing on the historical context of current racial disproportionalities and disparities in youth service systems such as child welfare, juvenile justice, mental health, education, and health. Using a critical lens, the course is designed to help students analyze how policy decisions have long-range impact on generations; specifically for children and youth of color. Students will have the opportunity to apply this critical lens to their current field placement and the youth populations they serve. As an elective course, the class is open to all GSSW students; however, students concentrating in child welfare, children and youth, and families are especially encouraged to take the course.

**SOWK 4240 Intergenerational Justice (3 Credits)**

This course engages students in the conversation, scholarship, and social work practice issues related to how social justice is promoted across age groups and generational cohorts (i.e., baby boomers, generation X, millennial generation). While looking at debates for how families, local communities, states, and nations link age to power, decision-making, funding, and access to resources, the course also examines what within age group issues of injustice and inequality persist. Topics include: generational equity in terms of government budgets and debt, intergenerational issues related to sustainability and ecological justice, age-based versus need-based service delivery models, interventions to address intergenerational conflicts within families, and best practices in intergenerational social service models. This course is designed as a seminar course for social work students from any concentration to explore values related to social justice as they play out across all levels of practice.

**SOWK 4245 Restorative Approaches in Social Work Practice (3 Credits)**

This course applies the conceptual framework, strategies, and benefits of restorative approaches to social worker roles and responsibilities. This course is designed to help students develop a historical and theoretical understanding of restorative approaches, build restorative-based skills that can be used in a variety of roles, and apply restorative approaches to a variety of client population systems, settings, and needs. Ethical dilemmas, cultural competence, and decision-making in restorative approaches, and the impact this has on oppressed populations, will be discussed. This course fulfills the Values for Practice requirement, and is a general elective with relevance to all social work concentrations. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4250 Concentration Seminar (1 Credit)**

This course is taken (by distance education students only) concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. This is also an evolving seminar co-created between faculty and students. Clinical issues and skill development at a more advanced clinical level is integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first year learning. Prerequisite: SOWK 4150 or 4153 or SOWK 4299.

**SOWK 4251 Concentration Seminar I (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed.

**SOWK 4252 Concentration Seminar II (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4251.

**SOWK 4253 Concentration Seminar III (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4252.

**SOWK 4260 Contemporary Social Work Issues in Western Colorado (3 Credits)**

In this hybrid seminar course, students will learn about the disproportionate burdens of environmental injustices in communities across the Western Slope of Colorado. From a social justice and human rights perspective, students will critically explore, analyze and discuss current environmental health disparities and relevant social work interventions. Students will review environmental health and environmental justice theories and perspectives as they bear on place-based case studies from the region. Students will use contemporary media and relevant web 2.0 platforms, including social media to demonstrate understanding of applied e-advocacy social work practice while exploring such case studies.

**SOWK 4299 Advanced Standing Seminar (3 Credits)**

The seminar reviews knowledge, skills and values that form the basis of GSSW concentration year curricula in clinical practice, community practice and policy practice. The seminar combines content planned by instructors with individualized guided study and planning for field instruction based on student self-assessments. Prerequisite: Admission to advanced standing program.

**SOWK 4302 Advanced Evidence for Practice (3 Credits)**

This course engages continuing social work students in further developing skills for using research evidence in social work practice. These skills support social workers' need to engage in practice-informed research and research-informed practice, as well as facilitates access to resources in the evidence base to support all aspects of social work practice. This course invites students to consider the place of scientific inquiry and research evidence in the resolution of social problems at various levels (e.g. individual, group, organization, community, or societal). This course further develops student skills in identifying, analyzing, and applying empirical evidence to inform their social work practice. The course focuses on studies designed to examine the effectiveness of interventions, aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may assess the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4303 Advanced Standing: Engaging Anti-oppressive Social Work (3 Credits)**

This course examines the individual, family, community, and societal factors that are linked to the dehumanizing of people engaged with social work institutions. The course is intended to increase analytical skills in the context of individuals, families, organizations, and communities in the preparation for engaging in anti-oppressive practices in micro and macro social work processes. This course uses an ecological systems approach to introduce students to the dynamics of power related to social problems and social action and its impact on social work's engagement with human communities and the environment.

**SOWK 4305 Child Maltreatment: Causes and Developmental Consequences (3 Credits)**

This course examines theory and research concerning causes and developmental consequences of child maltreatment, as well as theory and research concerning attachment and the developmental consequences of separation and loss that often follow intervention in child maltreatment.

**SOWK 4315 Critical Theories of Child and Adolescent Development (3 Credits)**

This course provides students with knowledge of critical theories of child and adolescent development. The course focuses on understanding development in context, considering the concepts of trauma, damage, resilience, potential, difference, resources, and healing. Ecological factors, including systemic conditions, that are deleterious to development and those that promote healthy development will be considered. The role of oppression in enabling or constraining children and adolescents' progressive developmental trajectories will be highlighted.

**SOWK 4320 Family Systems Theories for Social Work Practices (3 Credits)**

This course introduces systems theory as it is applied to family contexts which may include traditional therapeutic settings, home-based practices, parenting approaches, family religious/spiritual strength and conflict, and transgenerational family processes. Emphasis is given to the integration of theory, practice, and skill development. Students will also explore family organization and development and family subsystems, as they apply to assessment, case conceptualization, and intervention from a family systems perspective with clients, individuals, couples, families, organizations, constituencies, and communities. This course analyzes intersecting issues of power, privilege, and oppression, and requires that students examine their own personal characteristics, preferences, experiences, biases, predispositions, and affective reactions that influence the professional relationship.

**SOWK 4323 Psychopharmacology (1 Credit)**

This course is intended for social work students who plan to work in mental health and health care settings. Students will be introduced to a basic understanding of neurobiology and pharmacotherapy addressing the more common DSM-5 diagnoses. Key medications, including indications, symptom management, and side effects will be addressed. Students will be introduced to the most common medications that providers in medicine and psychiatry use to help improve clients' functioning. The course will provide the basics of the language used to discuss pharmacotherapy and will improve students' ability to interact with prescribers in order to improve care and coordination. The course will emphasize the role of the social worker in alerting medical providers to adverse side effects experienced by the clients, as well as improvement or lack thereof. Critical thinking about pharmacotherapy will emphasize that a good differential diagnostic process must precede any attempt to prescribe medication, just as it precedes the selection of a psychotherapeutic modality. The course will also explore cultural and ethical considerations around the prescription of psychotropic medications.

**SOWK 4325 Evolving Perspectives and Trends in Health and Wellness (3 Credits)**

This course provides an overview of the frameworks that inform social work practice in the area of health and wellness. The broad concept of health is examined for its understanding and meaning in communities and cultures along with the historical and conceptual bases of public health. There is a focus on understanding racism in health and the impact of health inequities for historically marginalized and oppressed communities. While studying evolving trends in health, a range of topics are covered including a systems perspective along with the integration of health, mental health & wellness. There is a focus on health equity, the social determinants of health, prevention, wellness, complementary and alternative practices with an emphasis on social work's role as change agents working towards solutions and promoting equity.

**SOWK 4330 Assessment of Mental Health in Adults (3 Credits)**

Focuses on the assessment of psychological, social and biological contributors to mental health disorders in adults and the use of this assessment as a guide for treatment/clinical interventions. Examines the strengths and weaknesses of the DSM-IV classification system in terms of social work values and ethics. Examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category, and reviews a variety of assessment tools in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged populations.

**SOWK 4334 Assessment of Mental Health in Children and Adolescents (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children and adolescents and the use of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a guide for mental health assessment. The course examines the strengths and weaknesses of the DSM-5 classification system for children and adolescents, especially in the context of culture and social work values. It examines symptoms, theories of etiology, and prognosis within each diagnostic category and reviews diagnostic challenges in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged children and adolescents.

**SOWK 4338 Assessment of Mental Health Across the Lifespan (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children, youth, adults, and older adults and the use of this assessment as a guide for treatment/clinical interventions. It examines the strengths and weaknesses of the DSM-5 classification system in the context of social work values and ethics. It examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category and reviews a variety of assessment tools in the context of gender identity and expression, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged population.

**SOWK 4340 Leadership and Supervision Skills (3 Credits)**

This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

**SOWK 4345 Intersections of Mental Health, Substance Use and, Trauma (3 Credits)**

This course is an advanced theory for practice course with builds upon foundation courses in Human Behavior in the Social Environment (HBSE) and clinical theories, and covers conceptualization, dynamics of, and interventions in mental health, substance use, and trauma. The course examines the independent and intersecting theory bases of mental health, trauma and substance use approaches. It also explores recent evidence about individual and environmental risks associated with these conditions and evidence about both specific therapeutic interventions and the importance of common relational factors. Social workers make up one of the largest professional groups working with clients living with mental health concerns, and bring a unique person-in-environment and strengths perspective to that work, which fits well with a recovery philosophy. Clinical frameworks and interventions common across these fields, such as harm reduction, motivational interviewing, self-determination theory, and the transtheoretical model of changes are presented, and students are introduced to integrative approaches that show promise in responding to client conditions.

**SOWK 4350 Evolving Perspectives and Trends in Aging (3 Credits)**

This course provides an overview of how theories of aging inform the role of social workers with older adults and their families across a range of service settings, including emerging fields of practice. The course examines multiple perspectives on the late life adult years, spanning the period from middle adulthood and on into late life, including: historical, biological, psychological, social, cross-cultural, and spiritual theories and related empirical evidence. While addressing evolving trends, the importance of difference, and ethical implications the topical issues include: work and retirement; economic status; residence and housing location; education and learning styles; interpersonal relationships with partners, families, and peers; creativity, spirituality, and religiosity; political beliefs and ideologies (including the formation, maintenance and alteration of prejudice and racism); the experience of chronic illness, disability, and death; and wisdom attained during adulthood and aging.

**SOWK 4355 Genocide: A Social Justice Issue (3 Credits)**

Genocide is both the gravest of crimes under international law and the ultimate violation of human rights. After the Holocaust during WWII, a strong cry of "never again" became the symbol for the world's desire to stop genocide and other crimes against humanity. Unfortunately genocides and other atrocities continue to happen around the globe, including during our present day. This course will study the role that nationalism, propaganda, the media and film have played and continue to play in genocide. We will study how these factors played out in Armenia, the Holocaust, Rwanda and Bosnia, as well as the current situation with the Rohingya people. The role of the United Nations will be studied. We will seek to understand the role of power, privilege and oppression as well as political forces in defining a crime against humanity as a genocide or not. The stages of genocide will be studied and applied to current situations around the globe, including the United States of America. We will pay close attention to how mass atrocities end as well as how they might be prevented.

**SOWK 4360 Social-Ecological Resilience: Connecting Human and Environmental Wellbeing (3 Credits)**

Social-Ecological Resilience: Connecting Human and Environmental Wellbeing is a required theory-for-practice course in the Sustainable Development and Global Practice concentration. This course builds a social ecology perspective that emphasizes integrated social-ecological systems as a necessary theoretical framework for understanding the inter-connectedness of human health, wellbeing and resilience with that of other species and the natural environment. This course reviews and analyzes theoretical concepts and models for contextualizing the important social and ecological issues impacting our global environment as well as the societal implications of global environmental change. Using an integrated social science approach that highlights regenerative development as a paradigm that acknowledges the interdependence and interconnection between humans and the more-than-human world, social workers practicing in local and global communities will be prepared to implement effective, strengths-based solutions to support sustainable development and capacity-building efforts at various scales. This course promotes systems and critical thinking and develops a knowledge base for resilience-oriented prevention and intervention strategies, environmental awareness, sense of belonging in a social-ecological community, adaptation and advocacy.

**SOWK 4361 Adapting and Implementing Interventions (3 Credits)**

Although evidence-based practice has been increasingly integrated in social work practice, the growing area of implementation science is relatively new. An important part of implementation science is the process of deciding whether, and how, to implement an intervention. Existing interventions do not well serve all communities and service settings. The course begins with an introduction to implementation science, emphasizing the role of research practices that engage communities in the data collection and implementation process. The course focuses more deeply on using data collection strategies to inform practice-relevant adaptation and implementation research questions with communities including: 1) whether an existing intervention is a good fit for a specific community or context, 2) whether an adaptation or a completely new intervention is warranted, and 3) how to adapt an intervention. This project-based course includes the opportunity for students to focus on individual, family, organizational, or community-focused interventions. Students learn basic skills in specific data collection strategies including conducting surveys, interviews, and focus groups. Over the course of the quarter, students will select an adaptation research question, design a study, pilot a data collection strategy, and identify implementation supports for their intervention.

**SOWK 4362 EmBODYed Practice: Ethical Approaches to Fatness and the Body (3 Credits)**

Weight-based discrimination is a significant source of social inequity (e.g., economic, healthcare, educational). This class explores body-based oppressions through a lens of weight stigma, body image, & body liberation. Course topics include weight stigma & eating disorders, weight science & associations between weight & health, neoliberal origins of the healthism, racial origins of fat phobia, queering & crippling fatness, indigenous perspectives on embodiment, size-inclusive care, & ethical responses to weight stigma. Students will participate in a photo-voice reflection project to increase awareness of fat discrimination, tell their own body story using traditional or digital mediums, participate in a book club, & write an "ethics brief" documenting their approach to body diversity within the scope of their professional practice.

**SOWK 4370 Community and Organizational Change: Theory for Practice (3 Credits)**

This course presents key theoretical frameworks for students to be informed and innovative in responding to changing community, organizational and societal contexts. Theories of social change are presented that can assist social work leaders in promoting positive social change in the lives of vulnerable populations through the development of policy, community interventions and human services organizations. Students apply theories to understanding organizational change and innovation and the promotion of social and economic justice through community and policy practice.

**SOWK 4390 Cultural and Linguistic Competency in Integrated Behavioral Health (3 Credits)**

This course provides students with the skill and tools to deliver culturally responsive and linguistically appropriate services to diverse, vulnerable populations in Integrated Behavioral Health. The course builds on concepts taught in the foundational Power, Privilege, and Oppression course (prerequisite) and integrates key foundational concepts of the Intercultural Development Continuum (Hammer, 2009). Prerequisite: SOWK 4132 and SOWK 4303.

**SOWK 4401 Integrated Health Care: Models and Practice (3 Credits)**

This course provides an overview of the knowledge, skills and theory of integrated health care social work practice, where physical and behavioral health services are most often provided in a primary care medical environment. Students will learn roles/functions of the behavioral health professional and their effectiveness as a member of the collaborative care team. Incorporating knowledge of evidence-based practice models of care and behavior change theory, they will increase their practice abilities to effectively work at an advanced level of skill as an integrated care behavioral health provider. Strategies and skills in patient engagement, motivational enhancement and advocacy will be taught through case studies and group activities. Cultural competency and effective care planning in an integrated healthcare environment will be emphasized.

**SOWK 4410 Prevention & Treatment of Adolescent Substance Abuse (3 Credits)**

This course examines causal factors and theories that seek to explain why some adolescents develop problems with alcohol and other drugs. Effective substance abuse prevention and treatment approaches are identified at the individual, family, school and community level.

**SOWK 4412 Practice Elements in Interventions with Children and Youth (3 Credits)**

This course offers an integrative framework of theory and research to intervene with children and adolescents in school, family, and community-based agencies. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include common elements across empirically-supported interventions such as cognitive-behavioral therapy, behavioral treatment, client centered treatment, social skills training, and parent management training. Intervention strategies are described across four primary problem areas common among children/adolescents: anxiety, depression, disruptive behavior, and attention deficit disorder. For each of these problem areas, intervention techniques are demonstrated, practiced in class, implemented in field placements, and monitored for client progress. The use of empirically-supported interventions is discussed from a multidimensional perspective with consideration for cultural context and adaptations necessary for particular client groups.

**SOWK 4413 Virtual Field Experience Seminar I (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to beginning a live agency field placement.

**SOWK 4414 Virtual Field Experience Seminar II (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to actually beginning a live agency field placement. Prerequisite: SOWK 4413.

**SOWK 4416 Foster Care and Permanency Planning (3 Credits)**

This course presents strategies for culturally competent assessment and intervention with children who are in foster care, adoption, or with their families. It focuses on permanency planning, involving extended families in making case decisions and caring for children, family reunification, relinquishment of children for adoption, termination of parental rights, preparing children and parents for adoption or guardianship, working with young adults nearing emancipation, and providing post-adoption/guardianship services. Prerequisites: SOWK 4305 and SOWK 4600 or permission of the instructor.

**SOWK 4418 Child Welfare Practice: Assessment & Intervention (3 Credits)**

This course provides an overview of the continuum of care of child welfare practice from entry to exit. The course uses an evidence-based approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. The course is required for students in the child welfare track. The prerequisite is SOWK 4600 (Child Welfare Policy and Services, or permission from the instructor.

**SOWK 4419 Rural Child Welfare Practice: Assessment and Intervention (3 Credits)**

This course provides an overview of the continuum of care of rural child welfare practice from entry to exit. The course will provide students with a brief overview of the history of child welfare and relevant major federal legislation that impacts child welfare practice. The course uses an evidence-based and theoretical approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. It focuses on the unique challenges of child welfare practice in rural counties across America. The course is required for students receiving the Title IV-E Child Welfare Stipend in the Four Corners, Western Colorado, or Online MSW programs. It is an elective option for Denver campus students.

**SOWK 4420 Multisystemic Social Work Practice and Advocacy with Families (3 Credits)**

This course facilitates the development of family systems practice skills with clients, individuals, couples, families, organizations, constituencies, and communities. This course focuses on the development of multisystemic strategies and techniques utilizing family systems theory as part of the ongoing process of engagement, assessment, and preliminary interventions. It emphasizes the integration of research, theory, and practice through experiential learning and skill building. Students will learn strategies and techniques through role play demonstrations practicing intake/assessment/goal setting, preliminary intervention development, and professional documentation. Students will be asked to discuss their own "use of self" development throughout the class and reflect on personal bias, cultural bias, assumptions, values and affective reactions that may influence the relationship with client systems or constituencies. Prerequisite: SOWK 4320.

**SOWK 4425 Positive Youth Development Programming (3 Credits)**

This course provides an overview of the positive youth development (PYD) approach to working with young people diverse in age, gender, race, ethnicity, sexual orientation, disability status, socioeconomic status, geographic location/neighborhood, religion/faith and culture. Many services provided for young people focus on reducing societally-deemed negative outcomes such as teen parenthood, violence, substance use, and school dropout. Instead of focusing on deficits or reducing problem behaviors, the PYD approach reframes the historical pathological approach to treating deviance and focuses on youth's strengths and building assets and skills. PYD programming employs an intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive. It promotes positive outcomes by providing opportunities, fostering positive relationships, and harnessing youth leadership. The PYD approach draws attention to opportunity gaps that social workers can address in partnership with young people. Students in this course will design an innovative PYD program, taking into account how such an approach to social work practice can be applied across different community settings to promote young people's well-being.

**SOWK 4430 Substance Use Interventions (3 Credits)**

There is widespread recognition that substance use is one of America's most pressing social problems. Social workers increasingly find themselves attempting to help individuals and families resolve substance use problems, as well as directly or indirectly related issues. This course introduces students to current and emerging substance use treatment approaches so they can conduct their practices from an informed perspective.

**SOWK 4435 Grassroots Organizing for Social Justice (3 Credits)**

This course examines grassroots approaches to community organizing and social change for social justice. Topics include: power and empowerment theory, insider/outsider considerations, development of critical consciousness and popular education techniques for organizing, history and genealogy of community organizing and social movements related to social work, direct action tactics and strategies, arts-based organizing, campaign development, and ethics and skills for working with diverse communities.



**SOWK 4445 Social Work Assessment and Intervention in Aging (3 Credits)**

This course focuses on biological, neurological, psychological, social, spiritual, and environmental aspects of late life as a foundation for the delivery of assessments and interventions to older adults. This course presents information on demographic projections, population trends, and theoretical perspectives that inform gerontological social work practice. This class additionally focuses on the unique nature of social work with this diverse population including a continuum of care services for older adults, interdisciplinary nature of helping services, dynamic nature of aging for multiple vulnerable older adults such as those facing institutionalized oppression, and specific attention to elder wellness.

**SOWK 4454 Child and Adolescent Trauma (3 Credits)**

This course introduces students to the common concepts (general theory and foundational knowledge), components (intervention and treatment elements) and skills (practitioner skills) underlying evidence-based treatment for children and adolescents who have experienced trauma. Trauma is broadly defined, and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, witnessing interpersonal crime (e.g. intimate partner violence), and other traumatic events. The course highlights the role of development, culture, and empirical evidence in trauma-specific interventions with children, adolescents, and their families. It addresses the level of functioning of primary care giving environments and assesses the capacity of the community to facilitate restorative processes. The course focuses on assessment and intervention as a foundation for subsequent learning about treatment. This course incorporates the new National Child Traumatic Stress Network (NCTSN) core curriculum on child trauma (CCCT). The course conveys the crucial evidence-based concepts, components, and skills designed by NCTSN to strengthen competency in assessment, referral, and treatment.

**SOWK 4465 Human Security (3 Credits)**

Human security is a new paradigm for understanding complex global vulnerabilities. Human security goes beyond traditional notions of national security and highlights the security of the individual rather than that of the nation state. Human security uses a person, entitlement and human rights centered view of security. It is essential for national, regional and global stability and sustainability. In defining human security, the United Nations stressed “the right of all people to live in freedom and dignity, free from poverty and despair”, and recognized that “all individuals, in particular vulnerable people, are entitled to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential” (A/RES/60/1). “Human security aims at ensuring the survival, livelihood and dignity of people in response to current and emerging threats - threats that are widespread and cross cutting. Such threats are not limited to those living in absolute poverty or conflict.” (UN-OCHA) Today, the impacts of natural disasters, climate change and other forms of environmental change, and global economic crises, among others, are considered to threaten human security in developing as well as developed countries. The increasing numbers of internal violent conflicts, forced migration, natural disasters and environmental degradation have resulted in national and international security failings that reflect the challenges of the post-Cold War security environment. The failure of mainstream development models to generate growth, particularly in Least Developed Countries (LDCs), or to deal with the consequences of complex new threats (e.g., HIV/AIDS, climate change, social and economic inequality) reinforced the sense that international institutions and states are not organized to address such problems in an integrated way. Social workers focusing on human, social and economic issues in global settings will use various human development strategies and other capacity-building approaches in practice. This course will develop students’ skills in human and social development strategies, sustainable livelihood and conflict management strategies, and other capacity-building community strategies, and fosters a solid understanding of the programmatic and practical requirements for human security in a global context.

**SOWK 4480 Social Justice in Mental Health (3 Credits)**

This course builds skills in identifying, analyzing, and attempting to remedy social justice challenges in mental health practice. These challenges include practices that risk marginalizing, oppressing or doing other harm to people with mental health challenges. Using research, theory, and extensive case studies, the course reviews perceived conflicts between clinical social work’s focus on mental health practice and the larger social work profession’s commitment to social justice. The course then provides an overview of mental health practices that raise ethical and social justice issues, reviews the justifications provided for such practices, and examines the efforts of critics to change them. Special attention is paid to controversial practices with vulnerable populations such as children, older adults, racial and ethnic minorities, and sexual minorities.

**SOWK 4500 Foundations of Play Therapy with Young Children (3 Credits)**

This course offers an integrative framework of theory and research to understand and intervene in the major mental health problems experienced by children. This course is also designed as an introductory experience to play therapy. Interventions include both direct work with children and collaborative/conjoint work with parents. Play therapy techniques include both directive and non-directive approaches including but not limited to child-centered play therapy and cognitive-behavioral interventions. Children’s development is considered from a multidimensional perspective including cultural context, risk and protective factors, and the development of psychopathology with an emphasis on early and middle childhood.

**SOWK 4501 Wellness Assessment & Promotion Across the Lifespan (3 Credits)**

This course builds students’ skills and strategies to enhance wellness for individuals, organizations and communities. Students will explore differences and beliefs related to health and wellness in both their internal/personal experience and in social work practice. The western medical industrial complex of ableism and “moral and physical fitness” is focused on illness treatment. In contrast, holistic health models of assessment focus on wellness promotion. Course topics include soul and nature based human development models, Eastern and Indigenous medicine models, and traditional or evidenced based wellness frameworks. Students, use complementary and holistic approaches to assess and address gaps found in public health data, community health, organizational and public policies. The course emphasizes the application of interdisciplinary knowledge and skills, professional ethics and values, and the role of social workers as change agents in creating solutions for public health issues at micro, mezzo and macro levels.

**SOWK 4505 Relationship Therapy (3 Credits)**

This course focuses on assessment, problem/solution path identification, intervention strategies and outcome evaluation in counseling heterosexual, gay and lesbian couples. Identifies common relationship patterns and explores intervention strategies including behavioral, strategic, structural, narrative, transpersonal and feminist. Also covered are issues such as conflict management, relationship enhancement, intimacy, power and control, domestic abuse, infidelity and divorce. Students will analyze the intersecting issues of oppression: sexism, racism, classism, heterosexism and ageism.

**SOWK 4520 Advanced Clinical Social Work Practice with Families (3 Credits)**

This course is an advanced skill-based course that extends students' knowledge and application of family systems therapy. The course engages the activate participation of students in role-play scenarios and the discussion and deconstruction of actual cases enhancing their developing skills as family therapists-in-training. In this course, students have the opportunity to plan and implement an entire course of treatment for a family. This allows the development of a conceptual understanding of family therapy practice, treatment skills and interventions, and utilization of self-as-therapist that influences the therapeutic system. Students have multiple opportunities to practice family interventions and receive feedback from both classmates and the instructor through the use of the clinical family therapy methods of 'live supervision' and 'reflecting teams'. Students will experience the connection between theory and practice and learn to integrate multiple theories. Issues related to transference, culture based countertransference, resistance, and working with involuntary clients are discussed. Advanced Clinical Social Work Skills with Families builds on the family systems theory and practice applications learned in the required family systems concentration courses and expands students' opportunity to apply theory to cases in diverse practice and client situations. An emphasis is placed on the development of personal theory, professional development, and therapeutic change/outcome as it relates to common factors in family therapy. This course also builds upon SOWK 4505: Relationship Therapy and aspects unique to couple's therapy. Prerequisites: SOWK 4320 and SOWK 4420.

**SOWK 4521 Advanced Skills for Working with Military Families (3 Credits)**

The class is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

**SOWK 4523 Care Management Skills and Resources to Promote Community Living (3 Credits)**

Many individuals and their families of all ages cope with physical and mental health conditions that impede their ability to live in the community. A vast array of formal and informal resources, public programs, and privately funded services can promote community living. Social workers often provide care management to enhance access, coordinate care, and ensure equality of these long-term services and supports. This course will develop students' skill at care management and knowledge of resources, including resources for persons with developmental disabilities, chronic mental health conditions, physical disabilities, and age-related functional impairments.

**SOWK 4530 Poverty and Community Economic Development (3 Credits)**

This is an advanced community practice class focused on poverty, low-income neighborhoods and local economic development. The class begins with a thorough review of the scholarly literature related to poverty, sustainability, and the concentration of poverty in low-income neighborhoods. Then, public and private responses to poverty are examined. The class focuses on both governmental policies and programs supported by the private sector. Next, the class turns to local responses to the concentration of poverty in low-income neighborhoods. The class focuses on the interdisciplinary nature of programs and interventions aimed at community economic development in low-income neighborhoods.

**SOWK 4535 Planning and Program Development (3 Credits)**

This course prepares students to engage in strategic planning and program development roles and practice within a social work community, organizational, or policy practice setting. Students in this course gain knowledge in the principles of planning, social enterprise, the engagement of stakeholders in planning processes, community collaboration and the elements of designing and implementing programs. Students have the opportunity to put this knowledge base into practice by developing a comprehensive program proposal applying the skills of strategic thinking, planning, critically evaluating research informed practice and practice informed research. In addition, students engage in communicating professional judgment in both written and oral formats.

**SOWK 4545 Social Work Practice with LGBTQIA Communities (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of LGBTQIA identities and communities. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of these identities. This course will explore the social construction of sexual orientation and gender identity, examine the idea of binaries, engage in historical analysis of LGBTQIA histories, and will familiarize students with legal and societal barriers and challenges facing members of the LGBTQIA community. Students will learn definitions around these identities, learn more about the spectrum of sexual orientation and gender, and utilize critical theoretical perspectives. Students will engage in critical dialogue around the representation of LGBTQIA people in our culture and media. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to LGBTQIA individuals, explore various facets of self-determination, social justice, dignity and worth of a person, the role of family, friends and community, and how power, privilege and oppression may impact the lives of LGBTQIA people. Lastly, students will synthesize this information to envision how their social work practice will be inclusive of LGBTQIA individuals and communities, including those who hold other marginalized identities. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4555 Spirituality and Social Work (3 Credits)**

The purpose of this course is to provide students with a nondiscriminatory framework of knowledge to respond competently and ethically to populations with diverse spiritual perspectives and religious cultures in social work practice. This social justice-informed course underlines and respects the diversity of all spiritualities with special attention to spiritual populations historically marginalized and neglected by Eurocentric assumptions common to social work. This course builds on the generalist approach of our foundation curriculum and integrates theories of multiculturalism, human development, and identity development while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spirituality and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4565 Social and Environmental Impact Assessments (3 Credits)**

Social and environmental impact assessments are important tools for analyzing and managing both the intended and unintended consequences of development projects on human and ecological systems in order to bring about a more equitable and sustainable social ecological system. This class will incorporate an understanding of the history and concepts of the three levels of impact assessments (micro, mezzo, and macro) into the research process that is the core of social impact assessments. Students will be able to prepare and evaluate social ecological impact assessments through learning to identify and define problems, select theoretical frameworks appropriate to the problem, identify research questions, design a study appropriate for the identified questions, gather and analyze data, and write the final assessment. Particular attention will be paid to assessing the effects of interventions on vulnerable populations. Other topics will focus on the practical aspects of project team selection and management, timelines, and the communication of findings to stakeholders.

**SOWK 4600 Child Welfare History & Policies (3 Credits)**

This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of policies and proposals for change in policies, considering empirical evidence, values and ethics. Provides a framework to analyze policy choices and encourages students to advocate for needed policy changes.

**SOWK 4610 Policies and Programs for Children and Youth (3 Credits)**

This course examines the history and evolution of social policies and programs targeting high-risk youth. Students will seek to critically analyze the effects of current and recent policies in the context of youth offending and other adolescent problem behaviors. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4630 Family Policies and Services (3 Credits)**

Identifies challenges contemporary American families are experiencing and presents strategies for developing policies and services to meet these challenges. Examines specific policies and services that most affect families, as well as broader questions concerning power and its distribution, allocation of resources and the role of government in promoting individual and family well-being. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4635 Immigration Policies and Services (3 Credits)**

This course identifies challenges for immigrants and presents strategies for developing policies and services to meet these challenges. It not only examines specific policies and services that most affect immigrants but also considers broader questions concerning power and its distribution, allocation of resources, and the role of government in promoting individual and family well-being. This is a concentration policy course for all concentrations.

**SOWK 4640 Mental Health and Substance Use Policies (3 Credits)**

This course provides a comprehensive understanding of policies related to mental health and/or substance use, their historical antecedents, and the socio-political forces that influence their development. This course also introduces students to emerging controversies concerning these policies.

**SOWK 4641 An Introduction to Prison-Industrial Complex Abolition (3 Credits)**

Grace Lee Boggs said we must “transform ourselves to transform the world,” and this course is rooted in this belief. Prison-industrial complex (PIC) abolition is a philosophy, a daily practice, and an organizing strategy. It requires us to examine our default frameworks (built by settler colonialism, racial capitalism, and white supremacy) for relating to one another, and to create entirely new ways of being with and caring for one another. My aim is to co-create a space with all of you where we can think collectively and speak boldly about how, as the writer, performer, and activist Morgan Bassichis states, “The very systems we are working to dismantle live inside of us.” It’s easier to look outward and critique an institution/system than it is to look inward and be honest about—and work to disassemble—the dangerous carceral logics embedded in our.

**SOWK 4642 Global Trauma (3 Credits)**

Social workers often find themselves working with people who have experienced, endured, and survived traumatic events such as terrorist attacks, sexual violence, refugee camps, food scarcity, and war. People are fleeing their homes and communities, most often unwillingly, due to forced migration, war, food insecurity, and environmental degradation. Some are unable to leave and are continuously retraumatized. All of this has resulted in increasing numbers of people experiencing trauma on a collective and global scale. Most of this is not new but it is exacerbated by current events, including a global pandemic. This course examines ways in which people collectively experience trauma and the impact on them within their cultural context. The context of peoples' lives will be examined and the unique impact of collective trauma on children will be explored. This course is designed to challenge assumptions about those who have experienced collective trauma and the meaning they place on their experiences. We will also explore the role of international and national policies and communities in causing situations that result in collective trauma as well as their response to it. The role of social work in prevention, advocacy, and intervention will be explored. Resilience of survivors will be studied and the need for self-care will be incorporated into this course.

**SOWK 4643 Digital Justice in Social Work (3 Credits)**

Should internet access be a universal right? What will be the next "internet"? And what does social work have to do with any of this? Transformation or revolution, the digitalization of the human project is progressing rapidly and demands of social work's leadership and contributions. As tele-practice evolves across industry, social workers not only require a specific skill set to meet consumer and service delivery demand, but a mindset and approach prepared for an uncertain, innovative, and networked future. This includes the evolution of power, privilege, and oppression and what inclusion and equity mean in a digital ecosystem. This course will explore the possibilities of digital social work practice and opportunities for micro, mezzo, and macro change, while providing students with constructs and strategies for promoting equity.

**SOWK 4645 Health Care Policy (3 Credits)**

This policy course provides an overview of health care policy as it is relevant to social work practice in multiple health and behavioral care settings. With the advent of health care reform and the implementation and operationalization of the Patient Protection and Affordable Care Act (PPACA), there are rapidly changing policy issues related to this innovative integration and delivery of health care services. Students in this course critically analyze the practice of policy in this new and quickly evolving service arena. This course explores key health policy strategies to foster integrated delivery system development and sustainability in line with health policy goals to reduce cost of care, improve population health and improve quality of integrated care services, with special emphasis on the integration of primary care, behavioral health services and wellness/health promotion initiatives. Strategies for students to influence policies and promote change in the interest of the individual/family/community, agency/organization and the communities they serve are presented. Critical thinking skills in developing and analyzing proposals to improve integrated health policy are encouraged. The course builds on policy content offered in the professional foundation year and links policy to practice and research skills.

**SOWK 4650 Aging Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in gerontology. It includes a critical review of rapidly developing policy issues, as well as an overview of U.S. health care and social service delivery systems serving older adults. The course encourages students to participate in critical analysis of issues and to develop and analyze innovative proposals to improve policy and programs for older adults. This course fulfills the policy requirement for the Aging Services and Policy concentration.

**SOWK 4655 Mental Health and Health Care Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in mental health and health care, with emphasis on achieving quality and addressing disparities. It includes a critical review of United States' historic and developing policy issues, as well as mental health and health care financing and delivery systems and other key issues in the field. Students will participate in critical analysis of issues and will examine various proposals to improve mental health and health care policy and programs. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4660 Social Policy Advocacy (3 Credits)**

Facilitates student learning within policy-making arenas. Students are paired with health and social service agencies and coalitions to assist in agenda-setting, legislative research, and issue-advocacy development and implementation in the state legislature and bureaucracy.

**SOWK 4670 Policy Development & Analysis (3 Credits)**

Focuses on the development and analysis of social welfare policy. Reviews the structure of the policy-making and implementation process, and examines perspectives on the definition of social problems and approaches to the development and analysis of social welfare policies. Students apply the perspectives and frameworks as they analyze a specific social problem and policy directed toward it, identify needed change in policy, select place and strategy for change in policy, and communicate knowledge to central actors in the policy-making and implementation process. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4680 Native Peoples Practice: History and Policy (3 Credits)**

This course is designed as the background to practice with Native Peoples. It will explore the relationship between theory and practice, socio-economic, political, and health issues, and the dynamics of changes in reservation and urban Native communities. Historical trauma, federal policies, impacting Native people, and laws and regulations that impact social service delivery will be reviewed. Social services delivery systems will be analyzed with the uniqueness of the cultural parameters of tribal communities. Guest lecturers from tribal communities may partner with faculty to teach the course. Prerequisites: SOWK 4132.

**SOWK 4681 Cultural Connectedness: A Journey Into Native American Country (3 Credits)**

This course provides an immersion experience into the Native American cultures of the Southern Ute, Ute Mountain Ute and Navajo Nation tribes. It provides a mixture of experiential and academic learning based on a community-learning model. The course begins with orientation at GSSW and/or the Four Corners Social Work program in Durango, Colorado. The course is open to foundation, advanced standing, and concentration students. Students must have completed their first year of the academic program. Slots will be distributed proportionately to main campus, Glenwood Springs and Four Corners programs, with priority given to Four Corners students. This course is designed for students in all tracks who have an interest in understanding current and historical issues that impact social work practice with indigenous populations, particularly those who have suffered intergenerational legacies of oppression and genocide. The course will emphasize the development of cultural responsiveness in social work practice with populations who come from a different historical context where oppression and historical trauma have occurred.

**SOWK 4682 Values for Social Work Practice Native Peoples (3 Credits)**

This course addresses culturally responsive practices with Native individuals, families, and communities. The focus will be on the problem-solving processes across a variety of social systems within Native communities. Social problems that are common in tribal communities will be presented, equipping the student with awareness, a knowledge base, and multilevel practice skills, so that they can effectively engage professionally in Native communities. Students will explore the cultural expectations, understand cultural biases, and standards of practice necessary for assessment, interventions, and evaluation of ethical social work with Native Peoples. Tribal communities and cultures span a wide range of cultural histories, belief systems and practices creating a rich and individual cultural context. It is beyond the scope of this course to address all tribal cultures or a depth of knowledge about any one tribal community. However, foundational perspective that will include values, principles, assumptions and cultural beliefs shared by Native Peoples will be addressed. Given that many tribes experience similar spiritual, physical and mental health consequence as a result of historical and modern colonial violence, content on needed services and delivery systems that are applicable across most tribes, locations, and geographies will be presented. This course provides content relevant to Native Peoples living on their sovereign lands as well as those living in rural and urban areas occupied by the United States. At the end of this course, students will have appropriate skills, processes, and resources required to engage in their own discovery of cultural variations among tribes to address their Native client's needs. Pre-requisite: SOWK 4680: Native Peoples Practice: History and Policy.

**SOWK 4700 Solution Focused Brief Therapy (3 Credits)**

This course explores solution-focused brief therapy (SFBT) and its application in a variety of settings and populations. Focusing on strategies for assessment, intervention, evaluation, and termination, the course applies solution-focused therapy to specific client systems, drawing on knowledge of appropriate techniques, sociocultural factors, and types of problems presented. Solution-Focused Brief Therapy is an elective course in the Mental Health and Trauma Concentration and the Health Equity & Wellness Concentration.

**SOWK 4705 Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders (3 Credits)**

Presents and applies a framework for assessing and intervening with offender populations. This risk and containment framework takes a community safety and victim-centered perspective and focuses on assessing and intervening with multiple systems surrounding offenders. The framework is then applied to specific interventions with domestic violence abuse offenders and with adult and adolescent sexual offenders.

**SOWK 4710 Intimate Partner Violence (3 Credits)**

This is a concentration year practice elective focusing on understanding, assessing, and intervening with domestic violence, understood as violence occurring in the context of intimate relationships. The purpose of this course is to provide students with the theoretical understanding and practice skills necessary to establish a beginning competence in assessing and intervening with domestic violence and in developing community, systemic, and policy responses.

**SOWK 4712 Social Work & the Law (3 Credits)**

Examines legal principles and procedures relevant to social work practice with families and children: structure and operation of the American legal system, principles to follow in conducting legal research, basic principles of constitutional law and law related to juvenile delinquency, child protection, child adoption, education and domestic relations. Covers legal aspects of social work practice including licensing, confidentiality and professional liability.

**SOWK 4713 Interdisciplinary Approaches to School, Family and Community Prevention (3 Credits)**

Behavioral health problems in childhood and adolescence take a heavy toll on millions of lives. These problems range widely – from anxiety and depression to alcohol, tobacco, and drug abuse; delinquent and violent behavior; dropping out of school; and risky sexual activity and unwanted pregnancies. SOWK 4713 presents an overview of practices and policies aimed at preventing behavioral health problems in young people. Emphasis is placed on developing the practice and policy skills that are necessary to deliver preventive interventions and programs in schools, families, and communities. Students will select an effective program, learn the skills necessary to deliver the program, and then implement the program in a classroom setting. Class content will emphasize the importance of increasing the role of social work practitioners and social work values in the interdisciplinary field of prevention practice.

**SOWK 4715 School Social Work Interventions (3 Credits)**

Designed to give students the ability to identify, understand and apply the varied roles of school social worker. Examines politics of education, the educational organizational structure, special education law and process, collaborative teamwork with school and community professionals and intersystem case coordination. Emphasis placed on meeting the needs of special education populations through assessment, intervention and evaluation and on preventive programs for children and youth at risk for school failure, truancy and dropping out.

**SOWK 4718 School Social Work Assessment and Realities (3 Credits)**

This concentration course is the third in the School Social Work Certification. Both SOWK 4715 (School Social Work Interventions) and SOWK 4712 (Social Work and the Law) are prerequisites for this class. The class provides advanced skills in assessment pertinent to the school ecosystem. It also juxtaposes these skills with field trips to several schools to interact with School Social Workers in a variety of settings and work roles to understand how these assessments are used in the school setting. The course emphasizes the written tasks and social work skills that School Social Workers need to perform on a regular basis, as well as how these skills are used to help the student, family, and school environment. Prerequisites: SOWK 4712 and SOWK 4715.

**SOWK 4720 Prevention and Treatment of Juvenile Delinquency and Youth Violence (3 Credits)**

Examines causal factors and theories that seek to explain why some adolescents engage in delinquent conduct and/or violent behavior. Effective delinquency and violence prevention and treatment approaches are identified at the individual, family, school and community levels.

**SOWK 4721 Existential Social Work Practice (3 Credits)**

The problems facing people can be understood in the context of situations and meanings they give to them. This course seeks to identify useful ways to clarify and validate the client's unique "world view", bypassing the many dangers and misuses of diagnostic categorization and empowering clients in relation to themselves and problem definition.

**SOWK 4723 Social Work Practice in Health (3 Credits)**

This course is designed to explore and develop advanced social work knowledge, skills and practice in diverse health care settings. It includes an examination of the social work role on interdisciplinary teams and how to impact change in the health care system and support positive health outcomes for patients and their families. There is an emphasis on patient and family-centered care and interprofessional collaborative practice to reflect social work values in various health settings by focusing on health literacy, evidence based clinical interventions, and responsive multi-cultural practice for acute and chronically ill patients and their families across the lifespan. Modules include content on bioethics, trauma informed care, grief and loss, self-compassion, and special contemporary topics relevant to a social justice approach to advance health and well-being.

**SOWK 4725 Mind-Body Connections and Social Work Practice (3 Credits)**

This course teaches skills for implementing mind-body techniques, models for wellness assessments, and evidence-based mind-body strategies for intervention in client and community problems. An evidence-based approach creates a foundation for: 1) understanding the mind-body connection that influences an individual's and community's physical, emotional, and social well-being and 2) the most efficacious methods for mind-body social work practice skills. Research evidence demonstrates that mind-body strategies are helpful for an array of concerns such as, military personnel with PTSD, adults with emotional regulation issues, academic concerns of stressed-urban youth, community mobilization, and emancipatory practice.

**SOWK 4726 Experiential Therapy (3 Credits)**

This course provides students with knowledge and skills to facilitate experiential-based therapy with children, youth, families and couples with a focus on environmentally sound practices. This is considered a service learning class since we are partnering with nature. Please wear comfortable clothes and comfortable closed toed shoes for all classes and bring a water bottle.

**SOWK 4727 Experiential Therapy in Nature (3 Credits)**

SOWK 4727 is a methods/skills course which provides students with knowledge and skills to facilitate experiential therapy with groups with a focus on environmentally sound practices in the outdoors.

**SOWK 4730 Cognitive Behavioral Therapies (3 Credits)**

This course examines major cognitive behavioral therapies (CBT) suggesting methods focusing on clients' problem-solving abilities, building on client strengths, targeting specific thought patterns that impede clients from reaching goals, and assessing outcomes in terms of changes in thinking and behavior. Theory is applied to individuals, dyads, families, and groups. Additionally, this course examines relevant research suggesting both indication and counter-indications of approaches.

**SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice (3 Credits)**

This course, building on the theoretical foundation in SOWK 4132 Multicultural Social Work Practice, examines the barriers to the professional use of self as an ally to historically disenfranchised groups, both in the context of day-to-day relationships with clients as well as in the context of community and macro-level interventions. The course is intended to assist in understanding the personal, situational, structural, and cultural influences that impede justice-oriented social work practice. The course supports students in developing strategies, skills, and approaches to anti-oppressive practice. Anti-oppressive social work practice is a range of practice approaches that adopt a critical and structural perspective on issues of social inequality, oppression, power, privilege, and domination. It encompasses approaches such as feminist, anti-racist, Afrocentric, disability practice, and critical social work frameworks to name a few (Campbell, 2003). It attends to both process and outcome (Dominelli, 1998), and links the provision of individual assistance to people from marginalized groups with involvement in social movements corresponding to the marginalization (Carniol, 2000). "The [anti-oppressive] framework enables links to be made between individual action and social structures. It informs practice by enabling the worker to evaluate differences that exist at an individual level and within society and how these impact on each other. It provides the means of making accurate assessments by taking into account the inequalities that texture the lives of those denied access to society's resources because of their defined social status and the exclusionary practices of the dominant system. It demands that we consistently engage in the process of critical self examination, which in turn enables us to engage in the process of change." (Dalrymple and Burke, 1995, p. 18). Prerequisites: SOWK 4132 or SOWK 4303.

**SOWK 4735 Interpersonal Approaches to Counseling (3 Credits)**

This course is an elective course which utilizes the interpersonal models of psychotherapy and neurobiology, drawing upon psychodynamic theories and techniques. The course examines traditional and contemporary psychotherapy theories and techniques. Interpersonal interventions are grounded within the values, ethics and standards of practice for clinical social work.

**SOWK 4741 Grief and Loss Across the Lifespan (3 Credits)**

This course is designed to prepare students to understand social work roles and practice (engagement, assessment, intervention and evaluation) in working with those experiencing loss across the life span. Whether the loss is related to health or functioning, family system, developmental stage or an actual death, this course prepares students to be culturally responsive to diverse perspectives and bereavement needs. Students will learn theoretical models of grief and loss and how to effectively evaluate the needs of grieving individuals, families, communities and their support systems.

**SOWK 4742 Disability Studies (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of disability. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of the epistemology of the notion of disability. This course will explore the social construction of concepts of ableism and identity, engage in historical analysis of disability (both domestically and internationally), and familiarize students with pertinent legislation/policies that impact persons with disability (PWD). Students will learn definitions of disability, come to know more about the spectrum of disability and utilize critical theoretical perspectives. The study of disability includes persons with disability (PWD), including the broad range of categorizations related to mental health, physical health, and cognitive ability. Students will engage in critical dialogue around the representation of PWD in our culture. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to PWD and explore various facets of self-determination, independent living, relationships and sexuality, and the role of family, power and privilege in the lives of persons with disabilities. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4749 Culturally Responsive Practice with LatinX (3 Credits)**

Addresses issues related to mental health needs within Latinx populations in the US, as well as intervention and theoretical approaches for working with Latinx communities. Covers a selection of interventions and strategies for cross-cultural use in adequately addressing the needs of Latinx communities. A required course for the Latinx Social Work Certificate. Prerequisite: SOWK 4750.

**SOWK 4750 Critical Perspectives on the Latinx Context (3 Credits)**

This course provides a framework for culturally responsive social work practice designed to meet the needs of the Latinx community. Students acquire core principles grounded in an understanding of social justice, privilege and oppression, including the interconnection between human and civil rights, globalization, immigration and poverty. Students learn about the diversity of Latinx cultures, community development, historical patterns of oppression, spirituality, and the role of Latinx movements. In an effort to decolonize the classroom, the students are invited to engage as full co-creators of the curriculum and class experience through social, emotional and somatic learning. As a result of this course, students understand how to advocate for nondiscriminatory cultural, social and economic practices within a Latinx context and experience. The course is designed for students who have an interest in understanding issues facing the Latinx community. Enrollment preference is given to Latinx Social Work Certificate students. Interested students not in the certificate should contact the Latinx Social Work Certificate coordinator.

**SOWK 4752 Trauma Informed Assessment and Interventions (3 Credits)**

This course provides an overview of multi-system level definitions of traumatic experience—historical, individual, interpersonal, family, organizational, and community. The emphasis is on social work practice that is culturally responsive, growth-oriented, and strengths based, in which the study of trauma is approached from a theoretical base that perceives the trauma response as a "response" rather than a "disorder." Trauma informed assessment and interventions are examined, incorporating a social justice perspective on historical trauma, poverty, and interpersonal violence. This course promotes the unique contribution social workers offer through the lenses of strength, resilience, and coping as well as commitments to cultural responsiveness and ecological/systems factors. Students will identify how secondary trauma impacts social workers and the importance of professional accountability to self-care and ongoing growth and development.

**SOWK 4753 Social Development in Latin America (3 Credits)**

This course examines social development in Latin America. Knowledge acquisition is focused on social, political, economic and cultural realities of this region and on the skills required to be an active participant in effective change efforts. This course is required for students in the LatinX Social Work Certificate Program and is open to all students with shared interest.

**SOWK 4757 Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (1-3 Credits)**

This required course (health and travel alerts permitting) for the Latinx Social Work Certificate combines academic classroom instruction with experiential and conversational learning. Country location for this study abroad course is determined based on yearly certificate objectives and travel advisories. The course has previously travel dot Chiapas, Mexico to explore human rights, development, economic policy, culture and language. Students engage and learn alongside community partners, including nonprofit's that focus on hunger and education, gender equity, sustainability as well as nongovernmental organizations that defend human rights by accompaniment with indigenous communities.

**SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (1-3 Credits)**

This course is designed to introduce students to the social, cultural and conservation issues of Kenya and East Africa. This course is field-based with strong emphasis on service learning and direct experiences. Course readings, lectures, classroom discussions, service learning projects and field work in rural Kenya provide participants firsthand experience in the social, cultural, historical, political, environmental, ecological and economic realities that exist in Kenya. This course is open to qualified concentration and advanced standing Graduate School of Social Work students. The course meets on campus for four sessions before traveling to Nairobi, Voi, and Kasigau, Kenya. Due to the intensive nature, remote travel logistics and costs for this course, direct communication with the professors is required. Qualifications include: willingness to sign International Travel Agreement, willingness to receive required medical authorization and immunization, academic good standing, and readiness for the physical and emotional demands of traveling in rural and remote Africa.

**SOWK 4759 Global Cultural Perspectives: Ethical Considerations (3 Credits)**

Social workers increasingly practice in global communities both nationally and internationally. Changes in practice environments demand that social work practitioners are informed citizens of comparative cultures and societies. This course examines the values and ethics of social work practice in a global context of power, privilege and oppression. Course materials and educational experiences are used to challenge students to examine ethical and value-based conundrums when practicing in global settings and to develop practice skills to enhance the health, well-being and sustainability of communities. Through the use of case studies, critical thinking, cultural inventories and reflexivity the course supports and challenges students' personal growth and professional practice.

**SOWK 4760 Resource Development and Fundraising (3 Credits)**

This course examines strategies and tactics around skill building in fundraising, resource-development strategies, grant-proposal writing, budgeting, and fiscal processes common to not-for-profit or governmental organizations. Topics include resource development and acquisition (fundraising) and discussions on the budget process required resource management for nonprofit organizations.

**SOWK 4762 Bosnia in Transition: The Social Work Response (1-3 Credits)**

This course provides students with the unique opportunity to learn firsthand about the social work response in post-war Bosnia through a social justice lens. The social, cultural, historical, political, economic, religious, legal and ethnic characteristics of the former Yugoslavia will be explored as context for studying the genocide that occurred in the 1990s. Learning will occur in the classroom at GSSW, followed by travel to Bosnia. Students will be exposed firsthand to the local, national and international efforts toward rebuilding and healing, through lectures provided by faculty at the University of Sarajevo School of Social Work, interaction with Bosnian social work students, visits to NGOs focused on the post-war efforts, visits to sites important during the war, visits to war tribunal sites, and exposure to current legal, economic and human service processes.

**SOWK 4763 Social Work and Social Justice in South Africa (1-3 Credits)**

This three-credit course will be conducted in partnership with Educo Africa in Cape Town, South Africa. The course will provide experiential and service learning social work experiences. Course activities will encourage cross cultural learning experiences and increase knowledge pertinent to South Africa's social, cultural, environmental, political and historical reality. It will expose students to Community Development challenges as well as environmental and social justice issues in a South African context. The goal of the course is to increase personal, community and global leadership potential of social work and social development professionals. This course in partnership to Educo Africa will use a community-based context to increase the effectiveness and expertise of students and will support student's engagement in program development and building international networks and partnerships.

**SOWK 4764 Historical Trauma and Healing (3 Credits)**

This course is designed to provide students with a context for practice with communities experiencing historical trauma. We learn about the conceptualization of historical trauma, its impact on communities as well as community responses to it. We also discuss the importance of cultural protective factors, strengths, and culturally relevant models of healing around multigenerational, collective experiences of trauma. A number of practice approaches found useful with communities experiencing historical trauma are presented and discussed. Class format includes presentations, small group discussions, films, poetry, movement, and experiential learning in the community. This course is built upon the concepts of empowerment practice, indigenous models of social work, and narrative theory and practice. We use these perspectives as we explore work around historical trauma in communities. This class provides social work direct practice skills on individual, family, community and policy levels.

**SOWK 4765 Global Social Change (3 Credits)**

Social development is a process of planned change intended to bring about a better correspondence between human needs and social policies and programs. This class has a fully global focus with particular emphasis on transitioning economies to align with human wellbeing. Practice-oriented, the class is geared toward a knowledge of policy-making for global human security within a dramatically changing environment and the skills required for local social development.

**SOWK 4782 Feminisms in Social Work Practice (3 Credits)**

This course engages students in the conversation of scholarship and social work practice issues related to social justice and the oppression of women. The course is designed to expand the knowledge of theory, research, policy and practice for working with diverse groups of women in multiple settings. Feminist social work perspectives for social work practice at micro, meso and macro practice levels will be critically examined. Topics include feminist theories, or feminisms, including eco-feminism and womanism, clinical and community feminist practice models, globalization and women, and the value of feminist research. These topics will be informed by knowledge and awareness of intersectionality, oppression and privilege. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4784 Suicide Assessment and Interventions (3 Credits)**

This course builds students' competencies in assessing suicide risk, planning for safety, and providing counseling to individuals who are thinking about suicide or have made a suicide attempt. This class examines theories of suicide causation, methods of suicide risk assessment, and models of techniques for intervention. Students will learn practices for eliciting sensitive information about troubling thoughts, assessing and documenting a client's level of suicide risk, and using cognitive-behavioral and other methods to help reduce suicide risk.

**SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 Credits)**

This course meets the values for practice requirement and is relevant for students who are interested in trauma, human rights, international issues, prevention of child abuse, intervention with victims of violence, interventions with child abuse, interventions with high-risk youth, and PTSD. This class investigates human trafficking from a social work perspective: prevention, intervention, and support of victims. Additionally, this course investigates regional differences in both labor and sex trafficking. The class also studies how prevention, intervention, and giving support to victims change from different regional (Asian, African, European, and Latin American) perspectives. The course also investigates human trafficking in the US, both with domestic and international victims. Prerequisite: SOWK 4132 or SOWK 4303.



**SOWK 4790 Human Sexuality (3 Credits)**

Integrates human sexuality in the thinking and practice of social workers. By viewing sexual behavior from the social work perspective, the student is prepared to assume a significant role in helping clients deal with issues of human sexuality. Focuses on clients experiencing sexual dysfunction and on sexually oppressed client groups including the elderly, the homosexually or bisexually oriented, the physically or developmentally challenged and the sexually abused. An elective course.

**SOWK 4795 Foundations for Human-Animal-Environment Interactions in Social Work (3 Credits)**

Foundational course with broad survey of the field and value exploration. Introduction to cultural and social justice aspects of human-animal-environment interactions. Formation of personal HAEI-SW vision and ethical framework, and beginning of culmination project concept development. This is the initial required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate.

**SOWK 4796 Human-Animal-Environment Interventions in Social Work Practice (3 Credits)**

Focus on skill development for the integration of animals in social work practice with a primary focus on treatment. Exploration of clinical and community practice frameworks across the lifespan. This is the second required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate. Prerequisite: SOWK 4795 or permission of instructor.

**SOWK 4797 Professional Integration of Human-Animal-Environment Interactions in Social Work (3 Credits)**

Culmination course with a focus on applying knowledge and demonstrating competence through service or program design. Includes professional development and job search preparation, unique to HAEIs in social work. Prerequisites: SOWK 4795 and SOWK 4796.

**SOWK 4900 Methods for Evaluating Practice and Programs (1-3 Credits)**

Provides students with strategies for evaluating social work practice at multiple system levels. Prerequisite: SOWK 4201 or admission to advanced standing program.

**SOWK 4901 Applied Practice Evaluation Research (3 Credits)**

Provides students with the opportunity to conduct a practice evaluation project in their field setting. Prerequisite: SOWK 4900.

**SOWK 4902 Public Impact for Policy, Community Organizing, and Research Dissemination (3 Credits)**

This course examines strategies for translating research for non-academic audiences. Topics include identifying the best approaches based on audience and goal of dissemination, ethical issues in translating complex research findings, and issues in working with media. A central value of dissemination for public impact is bridging the academy and communities most impacted by the research with particular attention to communities experiencing marginalization.

**SOWK 4903 Photovoice as Intervention and Research Methodology (3 Credits)**

This course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research.

**SOWK 4904 Introduction to Human-Centered Design for Evaluation & Program Development (3 Credits)**

This course will provide an introduction to the Human-Centered Design process and its application in developing and evaluating programs. Human-Centered Design is both a creative and practical process for generating solutions that place the people you serve at the center of the design process. During this course, you will move through the human-centered design process with a team, empathizing, prototyping, iterating, and finally pitching to a community partner from GSSW for whom you will be evaluating and developing a solution. You will first build insight and understanding about a focal issue through interviews with experts and end users, in-person observation, and other creative exercises intended to evaluate existing processes and experiences. Teams will utilize this knowledge to take a fresh look at the presented issue and generate breakthrough ideas in partnership with the end user and the GSSW groups who serve them. An iterative process of ideating and prototyping solutions, eliciting feedback, and refining ideas will culminate in pitch presentations at the end of the course. Your team will document its design process and final solutions in detail, which will then be delivered to the GSSW partner for potential implementation.

**SOWK 4950 Foundation Field Internship (0-15 Credits)**

This required practicum provides foundation students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4965 International Field Practicum (0-18 Credits)**

This international course fulfills partial requirement for a student's concentration year practicum. In an international social work setting, the practicum provides students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4970 Concentration Field Internship (0-18 Credits)**

Concentration students participate in planned practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics, and values. Prerequisite for 2-year students: successful completion of foundation-year course work and field internship. Prerequisite for students with advanced standing: successful completion of advanced standing prerequisite courses and BSW-year internship. Field must be taken concurrently with concentration-year course work, or after core concentration course work. Concentration-year field requires a minimum of 20 hours a week experience at the assigned field agency. Any deviation from this standard requirement must be approved by the Director of Field Education. Prerequisite: SOWK 4950 or 4299.

**SOWK 4971 Experimental Class (3 Credits)**

Experimental courses allow GSSW to provide a wide variety of course offerings that respond to current issues and themes in the profession as they arise, as well as providing specialized courses that relate to the interests and areas of expertise of our faculty. All experimental courses are offered as electives open to all students. Prerequisite: determined by each instructor.

**SOWK 4990 Topics in Social Work (1-4 Credits)**

This topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard MSW curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year that have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to social work practice, theory, or research. Topics vary from term to term and may be limited by program administrators, faculty, or by student interest.

**SOWK 4999 Capstone (0-1 Credits)**

This course is a 0-1 credit (Pass-Fail) required course in which students document their work through the development of an individual portfolio. Students are asked to upload artifacts (papers, presentations and field accomplishments) from both classroom and field internship that demonstrate how they have met the CSWE foundation and concentration specific EPAS competencies and practice behaviors. Students complete a reflection statement on their learning as it relates to the EPAS competencies.

**SOWK 5000 Seminar in Professional Social Work Issues (2-6 Credits)**

Examines the dilemmas and challenges confronting the social work profession and social work education. Examines the nature of professional education, the nature of the profession itself and the forces internal and external to the profession that have an impact upon practice and education. Required.

**SOWK 5001 Grant Writing for Soc Science (3 Credits)**

This course provides foundational knowledge for social work researchers preparing to engage in grant seeking and proposal development. This course is designed to help students develop the knowledge and skills to identify targeted research funding opportunities, navigate Requests for Proposals from government and foundation funding sources, develop tailored proposals to fit a particular problem definition and funding source, prepare a budget and management plan to support a research project, work collaboratively with community partners, and understand university grants management mechanisms. Ethical dilemmas in grant seeking, grant writing, and grants management will be discussed. This course is a general elective with relevance to social work students entering a research profession.

**SOWK 5005 Categorical Data Analysis (4 Credits)**

This course is an intermediate statistics class for doctoral students in the social sciences. The course is designed to provide a general understanding of categorical data analysis. Course content will focus on regression analyses for categorical dependent variables/outcomes. Students are often familiar with linear regression analyses that are used for continuous dependent variables/outcomes, but these data analysis methods are inappropriate when working with binary, ordinal, multi-categorical (i.e., nominal with >2 categories), and count dependent variables/outcomes. This course will cover a range of data analysis methods to examine categorical dependent variables/outcomes, such as logistic, ordinal, multinomial, and poisson/negative binomial regression analyses. For each method, students will learn the background; statistical underpinnings/assumptions; computation of statistics; interpretation and reporting of statistical results. Students also learn computer applications that are used to perform these statistical analyses. Data analysis using computer software (Stata) is required.

**SOWK 5101 Social Welfare Policy Analysis and Development (3 Credits)**

Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. Required.

**SOWK 5110 Introduction to Advanced Quantitative Research Methods (3 Credits)**

This required doctoral course introduces students to quantitative approaches to conducting social research. The course includes material related to measurement, sampling, research design, data collection, and data analysis. While each of these topics encompasses technical issues to be mastered by doctoral students, the logic and underlying rationale of these research methods is of prime importance in this course. A second component of the course requires students to define and begin to develop a substantive area of intended study and research during their enrollment in the doctoral program. Elements of articulating a substantive research area and steps toward defining key research questions in a topical area are reviewed. Aspects of conducting literature reviews leading to the articulation of a substantive research area are discussed in class sessions.

**SOWK 5111 Quantitative Methods for Assessing Social Interventions (3 Credits)**

Social work researchers are in a unique position to contribute to knowledge about the causes of individual and societal problems and to test interventions that seek to prevent or ameliorate such problems. A variety of qualitative and quantitative research methods are used to advance knowledge about etiological factors contributing to individual and social problems and to assess the outcomes of specific social policies and practice strategies. This course presents a detailed examination of quantitative methods and designs that are useful in assessing the effects of social interventions. Measurement, sampling and design issues in generating and testing research questions and hypothesis are explored. Experimental, quasi-experimental, and survey research designs are assessed and applied to practice and policy issues and problems. Special emphasis is placed on developing skills necessary to conduct intervention research. Cognate students may be permitted on a case by case basis, space permitting.

**SOWK 5120 Introduction to Advanced Qualitative Research Methods (1-3 Credits)**

This course provides a substantive doctoral-level review of content on qualitative research methods and strategies. It is developed for students from social science disciplines. The content includes the nature of the method, the epistemological implications and assumptions, and appropriate applications. Student learning and evaluation includes the experience of developing a research proposal based on qualitative methodology and conducting data collection for a mini-research project. This course is required for social work doctoral students. Students from other departments may register with permission from the professor.

**SOWK 5121 Qualitative Data Analysis (1-3 Credits)**

The focus of this course is on data analysis and interpretation, demonstration of the science of the analysis, and presentation of findings in oral and written forms. Students are expected to conduct qualitative analyses on textual data they collected as part of SOWK 5120 or as a result of some other qualitative data collection experience. Over the course of the term students learn to code and analyze their data, interpret findings, orally present those findings, and write a final paper in which they demonstrate a rigorous engagement with qualitative data analysis and the literature relevant to their topic. This course is for SOWK PhD students only. Cognate students may be permitted on a case by case basis, space permitting. Prerequisite: SOWK 5120.

**SOWK 5130 Mixed Methods Research in Social Work (3 Credits)**

This course introduces doctoral students to mixed methods research in social work and the social sciences. Students explore mixed methods as a third research paradigm that strategically combines both quantitative and qualitative methods within a single inquiry. The course encourages students to actively reflect on previous quantitative and qualitative research training. Specific topics for the course include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination consideration. SOWK PhD students only. Cognate Students will be allowed to register on a case by case basis, space permitting.

**SOWK 5131 InDIGQualitative RsrchMethods (3 Credits)**

This course is designed to provide students with a foundation for advanced qualitative research methods with Indigenous and other minoritized communities using arts-based inquiry and interpretive methods for collecting and analyzing data. Grounded in an Indigenous epistemological framework applied across intersectional and diverse communities, students will explore deeply contextualized questions about individual and social phenomena. Consistent with Indigenous ways of knowing, self-reflexivity and location of self-in-relation to community and knowledge will be prioritized as questions are developed and considered. We will explore auto-ethnography and auto-archaeology as methodologies while also engaging in performative, creative expression and visual praxis methods for inquiry and analysis. Class format will include presentations, small group discussions, films, poetry, movement, and collaborative pedagogical techniques.

**SOWK 5201 Intro to Statistical Methods in Social Work (5 Credits)**

Examines the use and interpretation of statistics in educational and human services research, including descriptive and inferential statistics. Required.

**SOWK 5202 Correlation and Regression (4 Credits)**

Examines correlational and multiple regression research designs and their application to social work and social science problems. Cross-listed with RMS 4911, SOWK 5952. Prerequisite: SOWK 5201.

**SOWK 5204 Intro to Multilevel Modelling (4 Credits)**

This course is an advanced course in statistics for doctoral students and an introductory course in multilevel modelling. It is an applied course designed for students with a thorough knowledge of ordinary least squares (OLS) regression (SOWK5202 and SOWK 5005 or equivalent). The course will cover not only the traditional theories and application regarding two-level models for continuous outcomes and binary outcomes, and growth curve models, but also the innovative methodology in using multilevel modelling to address socioeconomic intersectionality and disparities, i.e., multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA). The goals of the course are to develop the skills necessary to identify an appropriate technique for multilevel data analysis, estimate models, conduct diagnostics, and interpret results for continuous and binary outcomes. We will use Stata 15 (or any later version) to perform the analyses. Pre-requisites: SOWK 5202 and SOWK 5005 or equivalent.

**SOWK 5300 Social Science Theory and the Philosophy of Science (3 Credits)**

This foundation doctoral level course introduces traditional issues and recent developments in the philosophy of science, and provides an overview of social science theory and theoretical frameworks. It examines philosophical questions on scientific inquiry and the consequences modern science imposes on our basic understanding of knowledge and nature. The course analyzes and critiques the social-and-behavioral-science foundations that undergird the social work knowledge base and current social work theories. There are no prerequisites for this course. This course is required to social work doctoral students.

**SOWK 5301 Social Work Theory in Research and Practice (3 Credits)**

This course builds on SOWK 5300, Philosophy of Science and Social Work Theory, to examine how theories, conceptual frameworks, perspectives, and models are used specifically within social work research, education, and practice. This course explores how theories are used in research and in social work interventions on individual, family, group, organizational, community, and policy levels. The course analyzes and critiques the social work knowledge base and the current state of social work theories. This course is required for social work doctoral students. Prerequisite: SOWK 5300.

**SOWK 5401 Quantitative Research Methods (4 Credits)**

Focuses on basic elements of quantitative social research methods: measurement, sampling, research designs, data collection and data analysis. Emphasizes logic and underlying rationale, as well as technical issues. Prior understanding of computer-based statistical analysis is helpful. Required.

**SOWK 5405 Advance Qualitative Analysis (3 Credits)**

Provides an understanding of analysis methods used to draw meaning from qualitative data, methods that must be practical, applicable and understandable to other observers. Prepares students to use a systematic, scientific process of analysis that captures the meaning of data while avoiding research self-delusion and unreliable or invalid conclusions. Topics include data collection, data reduction, data display, and conclusion drawing and verification. Methods include application of computer software. Prerequisite: SOWK 5121. Required.

**SOWK 5406 Critical Perspectives on Quantitative Research Methods (3 Credits)**

This required doctoral level course introduces students to critical perspectives on quantitative approaches to conducting social research. The course is the 2nd course in the required quantitative research methods sequence and will examine what it means to be a social scientist with a specific focus on critical perspectives in quantitative methods. The course includes material related to data processing, interpretation of results, use of results for non-academic audiences, and intersectionality, as well as an overview of experiments, surveys, and secondary data analysis. Students should gain mastery in these areas while critically examining the rationale and ethics of quantitative methods. Prerequisite: SOWK 5110.

**SOWK 5450 Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective (1-3 Credits)**

The focus of this course is to help you frame, organize, develop, and complete a proposal for your comprehensive exam, with a particular emphasis on building your skills in integration, synthesis, and critical thinking related to the social justice implications of your work. Students will receive support and feedback about how to integrate theory, policy and empirical research when stating the aims and implications of their proposal. Additionally, students will learn to apply a critical social work perspective to analyze the limitations of existing understandings of their substantive areas of interest. Students will learn to acknowledge complexity and bias of vantage and values in social work scholarship, identify the influence of context and question assumptions about dominant policy, research, and theoretical frameworks, and demonstrate a general understanding of the ways societal privilege and prejudice set the frame for analysis and intervention with the problem. Advisors and mentors participate in class presentations and critiques as a part of preparing the student for the comprehensive exam proposal meeting.

**SOWK 5500 Pedagogy in Social Work Education (3 Credits)**

This foundation course examines philosophies, theories, and pedagogical models that are utilized in social work education. It explores how various perspectives shape the approaches and techniques used and how these in turn impact classroom effectiveness and issues of classroom management. The course incorporates concepts and develops skills based on evidence-based teaching. This course is a required course for social work students and has no prerequisite. This course is for SOWK PhD students only.

**SOWK 5600 Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies (3 Credits)**

This course introduces students to anti-racist, feminist, queer, anti-oppressive and other critical perspectives on facilitation and pedagogy. The course is organized in four sections: theoretical frameworks; the role of identities in facilitation, training, and teaching; facilitation and course design and strategies; and supporting social action. Prerequisite: SOWK 5500.

**SOWK 5700 Teaching Practicum (3 Credits)**

This 3-hour required course provides classroom instruction and teaching opportunities designed to prepare doctoral students for faculty positions in undergraduate and graduate level social work education. Students work with a faculty mentor to pursue practicum placements that match their substantive interests. Students are expected to devote approximately 8 hours to the practicum per week. Restricted to Ph.D. students only.

**SOWK 5903 Photovoice as Intervention and Research Methodology (3 Credits)**

This doctoral level course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research. Finally, students will make an actionable plan for integrating photovoice into their doctoral-level research.

**SOWK 5990 Special Topics (1-5 Credits)**

This special topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard PhD curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year which have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to advanced social work theory, pedagogy, or research. Topics vary from term to term and may be initiated by program administrators, faculty, or by student interest.

**SOWK 5991 Independent Study (1-10 Credits)**

This is an opportunity for MSW students to undertake special study in a defined area of interest with faculty consultation.

**SOWK 5995 Independent Research (1-10 Credits)****SOWK 6991 Independent Study (1-10 Credits)**

PhD students undertake special study in a defined area of interest with faculty consultation. By arrangement.

**SOWK 6995 Independent Research (1-18 Credits)**

The formal mechanism for undertaking the dissertation, providing for faculty support through the appointment of a dissertation committee. By arrangement.

## Foundation Curriculum

SOWK 4000	Professional Development Seminar	1
SOWK 4001	Clinical Social Work Skills	3

SOWK 4003	Clinical Social Work Theory and Practice	3
SOWK 4006	Human Behavior and the Social Environment: Theory and Practice	3
SOWK 4007	Community and Macro Social Work Theory and Practice	4
SOWK 4020	Integrated Social Work Practice for Social Justice	4
SOWK 4050	Introduction to the Graduate Internship	1
SOWK 4120	Social Policy Analysis, Advocacy, and Practice	3
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective	3
SOWK 4150	Foundation Seminar	1-2
SOWK 4151	Foundation Seminar I	1
SOWK 4152	Foundation Seminar II	1
SOWK 4153	Foundation Seminar III	1
SOWK 4201	Evidence for Practice	3
SOWK 4413	Virtual Field Experience Seminar I	1-4
SOWK 4414	Virtual Field Experience Seminar II	1-4
SOWK 4950	Foundation Field Internship	1-15

## Concentration Curriculum

SOWK 4202	Creating a Regenerative Future	3
SOWK 4203	Environmental Change Impacts and Resilience Strategies for Mental Health	3
SOWK 4204	Policy Advocacy for Ecological Justice in the U.S.	3
SOWK 4205	Contemporary Ecological Justice Issues and Social Work Practice	3
SOWK 4232	Critical Race Theory Praxis and Social Work	3
SOWK 4235	Disproportionality and Disparities Across Systems: The Impact on Children and Youth	3
SOWK 4240	Intergenerational Justice	3
SOWK 4245	Restorative Approaches in Social Work Practice	3
SOWK 4250	Concentration Seminar	1
SOWK 4251	Concentration Seminar I	1
SOWK 4252	Concentration Seminar II	1
SOWK 4253	Concentration Seminar III	1
SOWK 4260	Contemporary Social Work Issues in Western Colorado	3
SOWK 4299	Advanced Standing Seminar	3
SOWK 4302	Advanced Evidence for Practice	3
SOWK 4303	Advanced Standing: Engaging Anti-oppressive Social Work	3
SOWK 4315	Critical Theories of Child and Adolescent Development	3
SOWK 4320	Family Systems Theories for Social Work Practices	3
SOWK 4323	Psychopharmacology	1
SOWK 4325	Evolving Perspectives and Trends in Health and Wellness	3
SOWK 4330	Assessment of Mental Health in Adults	3
SOWK 4334	Assessment of Mental Health in Children and Adolescents	3
SOWK 4338	Assessment of Mental Health Across the Lifespan	3
SOWK 4340	Leadership and Supervision Skills	3
SOWK 4345	Intersections of Mental Health, Substance Use and, Trauma	3
SOWK 4350	Evolving Perspectives and Trends in Aging	3
SOWK 4355	Genocide: A Social Justice Issue	3
SOWK 4360	Social-Ecological Resilience: Connecting Human and Environmental Wellbeing	3
SOWK 4361	Adapting and Implementing Interventions	3
SOWK 4362	EmBODYed Practice: Ethical Approaches to Fatness and the Body	3
SOWK 4370	Community and Organizational Change: Theory for Practice	3
SOWK 4390	Cultural and Linguistic Competency in Integrated Behavioral Health	3
SOWK 4401	Integrated Health Care: Models and Practice	3
SOWK 4410	Prevention & Treatment of Adolescent Substance Abuse	3
SOWK 4412	Practice Elements in Interventions with Children and Youth	3

SOWK 4418	Child Welfare Practice: Assessment & Intervention	3
SOWK 4419	Rural Child Welfare Practice: Assessment and Intervention	3
SOWK 4420	Multisystemic Social Work Practice and Advocacy with Families	3
SOWK 4425	Positive Youth Development Programming	3
SOWK 4430	Substance Use Interventions	3
SOWK 4435	Grassroots Organizing for Social Justice	3
SOWK 4445	Social Work Assessment and Intervention in Aging	3
SOWK 4454	Child and Adolescent Trauma	3
SOWK 4465	Human Security	3
SOWK 4480	Social Justice in Mental Health	3
SOWK 4500	Foundations of Play Therapy with Young Children	3
SOWK 4501	Wellness Assessment & Promotion Across the Lifespan	3
SOWK 4505	Relationship Therapy	3
SOWK 4520	Advanced Clinical Social Work Practice with Families	3
SOWK 4521	Advanced Skills for Working with Military Families	3
SOWK 4523	Care Management Skills and Resources to Promote Community Living	3
SOWK 4530	Poverty and Community Economic Development	3
SOWK 4535	Planning and Program Development	3
SOWK 4545	Social Work Practice with LGBTQIA Communities	3
SOWK 4555	Spirituality and Social Work	3
SOWK 4565	Social and Environmental Impact Assessments	3
SOWK 4600	Child Welfare History & Policies	3
SOWK 4610	Policies and Programs for Children and Youth	3
SOWK 4630	Family Policies and Services	3
SOWK 4635	Immigration Policies and Services	3
SOWK 4640	Mental Health and Substance Use Policies	3
SOWK 4641	An Introduction to Prison-Industrial Complex Abolition	3
SOWK 4642	Global Trauma	3
SOWK 4643	Digital Justice in Social Work	3
SOWK 4645	Health Care Policy	3
SOWK 4650	Aging Policy	3
SOWK 4655	Mental Health and Health Care Policy	3
SOWK 4660	Social Policy Advocacy	3
SOWK 4670	Policy Development & Analysis	3
SOWK 4680	Native Peoples Practice: History and Policy	3
SOWK 4681	Cultural Connectedness: A Journey Into Native American Country	3
SOWK 4682	Values for Social Work Practice Native Peoples	3
SOWK 4700	Solution Focused Brief Therapy	3
SOWK 4705	Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders	3
SOWK 4710	Intimate Partner Violence	3
SOWK 4712	Social Work & the Law	3
SOWK 4713	Interdisciplinary Approaches to School, Family and Community Prevention	3
SOWK 4715	School Social Work Interventions	3
SOWK 4718	School Social Work Assessment and Realities	3
SOWK 4720	Prevention and Treatment of Juvenile Delinquency and Youth Violence	3
SOWK 4721	Existential Social Work Practice	3
SOWK 4723	Social Work Practice in Health	3
SOWK 4725	Mind-Body Connections and Social Work Practice	3
SOWK 4726	Experiential Therapy	3
SOWK 4727	Experiential Therapy in Nature	3
SOWK 4730	Cognitive Behavioral Therapies	3
SOWK 4732	Disrupting Privilege through Anti-Oppressive Practice	3

SOWK 4735	Interpersonal Approaches to Counseling	3
SOWK 4741	Grief and Loss Across the Lifespan	3
SOWK 4742	Disability Studies	3
SOWK 4749	Culturally Responsive Practice with LatinX	3
SOWK 4750	Critical Perspectives on the Latinx Context	3
SOWK 4752	Trauma Informed Assessment and Interventions	3
SOWK 4753	Social Development in Latin America	3
SOWK 4757	Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course	1-3
SOWK 4758	Social Work in Kenya: Context, Conservation, Empowerment, Sustainability	1-3
SOWK 4759	Global Cultural Perspectives: Ethical Considerations	3
SOWK 4760	Resource Development and Fundraising	3
SOWK 4762	Bosnia in Transition: The Social Work Response	1-3
SOWK 4763	Social Work and Social Justice in South Africa	1-3
SOWK 4764	Historical Trauma and Healing	3
SOWK 4765	Global Social Change	3
SOWK 4782	Feminisms in Social Work Practice	3
SOWK 4784	Suicide Assessment and Interventions	3
SOWK 4786	Human Trafficking: Prevention, Intervention, and Support of Its Victims	3
SOWK 4790	Human Sexuality	3
SOWK 4795	Foundations for Human-Animal-Environment Interactions in Social Work	3
SOWK 4796	Human-Animal-Environment Interventions in Social Work Practice	3
SOWK 4797	Professional Integration of Human-Animal-Environment Interactions in Social Work	3
SOWK 4900	Methods for Evaluating Practice and Programs	1-3
SOWK 4901	Applied Practice Evaluation Research	3
SOWK 4902	Public Impact for Policy, Community Organizing, and Research Dissemination	3
SOWK 4903	Photovoice as Intervention and Research Methodology	3
SOWK 4904	Introduction to Human-Centered Design for Evaluation & Program Development	3
SOWK 4970	Concentration Field Internship	0-18
SOWK 4971	Experimental Class	3
SOWK 4990	Topics in Social Work	1-4
SOWK 5991	Independent Study	1-10

## Doctoral Curriculum

SOWK 5000	Seminar in Professional Social Work Issues	2-6
SOWK 5001	Grant Writing for Soc Science	3
SOWK 5005	Categorical Data Analysis	4
SOWK 5101	Social Welfare Policy Analysis and Development	3
SOWK 5110	Introduction to Advanced Quantitative Research Methods	3
SOWK 5111	Quantitative Methods for Assessing Social Interventions	3
SOWK 5120	Introduction to Advanced Qualitative Research Methods	1-3
SOWK 5121	Qualitative Data Analysis	1-3
SOWK 5130	Mixed Methods Research in Social Work	3
SOWK 5201	Intro to Statistical Methods in Social Work	5
SOWK 5131	InDIGIQualitative RsrchMethods	3
SOWK 5202	Correlation and Regression	4
SOWK 5204	Intro to Multilevel Modelling	4
SOWK 5300	Social Science Theory and the Philosophy of Science	3
SOWK 5301	Social Work Theory in Research and Practice	3
SOWK 5401	Quantitative Research Methods	4
SOWK 5405	Advance Qualitative Analysis	3
SOWK 5406	Critical Perspectives on Quantitative Research Methods	3
SOWK 5450	Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective	1-3

SOWK 5500	Pedagogy in Social Work Education	3
SOWK 5600	Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies	3
SOWK 5700	Teaching Practicum	3
SOWK 5903	Photovoice as Intervention and Research Methodology	3
SOWK 5990	Special Topics	1-5
SOWK 6991	Independent Study	1-10

## Courses

### **SOWK 4000 Professional Development Seminar (1 Credit)**

The Professional Development Seminar prepares students to develop a reflective practice and to make connections between applicable lived experience and the learning process, emphasizing professional social work identity. The course provides a supplement to the foundation curriculum and an opportunity for students to discuss their professional growth as social workers. The seminar provides opportunities to reflect on social work values and ethics, populations served, and the many fields and career pathways of social work practice. In conjunction with the foundation curriculum, key ethical issues and requirements are discussed so that students can deepen their understanding of ethics in practice with consideration of local, national, and global contexts. The course also gives an opportunity to reflect on their learning styles, participation in group work and the developmental process of practice. The ideas of conscious use of self and self-care concepts will be explored through a variety of learning modalities.

### **SOWK 4001 Clinical Social Work Skills (3 Credits)**

This foundation course focuses on basic skills for micro social work practice with individuals and small groups. The framework of intentional interviewing teaches students to think critically about applying the skills for engagement, assessment and intervention. Attention focuses on use of these skills with clients from multiple social identities (e.g. ethnic, racial, sexual orientation, gender affiliation) and the pitfalls of practitioner micro-aggressions. An active learning approach requires students to participate in role-play exercises both in and outside of class. Students digitally record some of those exercises and share them with the class and instructor.

### **SOWK 4003 Clinical Social Work Theory and Practice (3 Credits)**

This foundation course helps students develop a multi-dimensional assessment and intervention framework for clinical social work practice. This course builds upon knowledge of human behavior in the social environment and adds a focus on theories of change - at the individual and family level. The course is grounded in empirical information about the importance of relationship skills, across a variety of classic and modern approaches to intervention. We use a social work lens to emphasize the importance of context in client lives, including their socioeconomic status, cultural history, and experiences of oppression. Since no single theory captures the totality of human experiences, we integrate a variety of intervention techniques from multiple human behavior theories and ground them in a social work framework for ethical and effective clinical practice. Pre-requisite courses: SOWK 4020 and SOWK 4006 and SOWK 4001.

### **SOWK 4006 Human Behavior and the Social Environment: Theory and Practice (3 Credits)**

This foundation course provides an overview of theoretical frameworks for understanding human behavior from a social work perspective. Theories reviewed include the developmental stages across the life cycle in terms of psychological, cognitive, moral, spiritual, identity and social development. Students apply a biopsychological assessment across the life span. The course emphasizes a social work perspective and key frameworks for social work, with an emphasis on the person in environment and systems theory as they describe diverse individual behavior in relation to social class, race and ethnicity, age, gender orientation, sexual orientation, and other multicultural backgrounds. The course aims to develop students' foundational understanding of how theories are used to promote relationship development with diverse individuals and to guide interventions across all system levels. Students may test out of this course and substitute an advanced course in human development, with advisor approval, if they have already successfully completed an equivalent course in human development.

### **SOWK 4007 Community and Macro Social Work Theory and Practice (4 Credits)**

This foundation course provides students with a foundational level understanding of macro social work practice and roles. The course builds upon knowledge of human behavior in the social environment, and adds theories of change to understand diverse communities and social service networks and the relationship of local, national and global interventions. The course introduces students to empirically supported models and emerging interventions that address macro level social issues. Students complete community/organizational assessments and also participate in work groups to learn how to engage, assess, and intervene in communities and organizations.

### **SOWK 4020 Integrated Social Work Practice for Social Justice (4 Credits)**

This foundation course focuses on professional development and identity for social work practice. The course emphasizes values, ethics and ethical decision making in the context of the history of the profession. Students are introduced to person-in-environment, critical theory and empowerment perspectives and apply these concepts to current field of practice and social work roles. Through integration of field placement experiences, students analyze and apply social work frameworks and generalist practice theories to current social justice challenges and diverse contexts that social workers face.

### **SOWK 4050 Introduction to the Graduate Internship (1 Credit)**

The Introduction to the Graduate Internship seminar prepares students to enter the profession of social work at a graduate level. The course provides an overview of social work values and ethics, populations served, and issues that concern social workers. Through engagement in the course content, students will complete a readiness for field assessment, including their personal and professional motivations to join the profession and serve diverse communities. Students will be exposed to the social work profession's signature pedagogy, field education, and the stages of experiential learning. The course will also help students develop learning goals for field education and identify potential internship sites.



**SOWK 4120 Social Policy Analysis, Advocacy, and Practice (3 Credits)**

This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.

**SOWK 4132 Power, Privilege and Oppression from a Critical Multicultural Perspective (3 Credits)**

This foundation course examines the phenomena of power, privilege and oppression and their effect on individuals, families and communities in the context of the values of social and economic justice and the social work profession. The course is intended to increase awareness of the intersectionality of multiple oppressions with a focus on race/ethnicity, gender, socioeconomic status and sexual orientation. Students will gain a beginning self-awareness to identify the influence of personal biases and values that impact practice with diverse groups.

**SOWK 4150 Foundation Seminar (1-2 Credits)**

Required seminar format used to facilitate the integration of the foundation field practicum and the professional foundation course content; emphasis on linking classroom learning with practice in the field, integrating theory with professional practice; field practicum situations and issues used for discussion and deliberation. Co-requisite: SOWK 4950.

**SOWK 4151 Foundation Seminar I (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation.

**SOWK 4152 Foundation Seminar II (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4151.

**SOWK 4153 Foundation Seminar III (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, with emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4152.

**SOWK 4201 Evidence for Practice (3 Credits)**

This foundation course focuses on developing student skills in identifying, analyzing, and applying empirical evidence in order to inform their social work practice. The course introduces students to studies designed to examine the effectiveness of interventions. The course aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may critique the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4202 Creating a Regenerative Future (3 Credits)**

This course explores how we can create a regenerative future that is life-renewing for people and planet—a future in which all people, species, and ecosystems thrive. The concept of a “regenerative future” will be examined for how it goes beyond the limitations of a sustainability paradigm and analyzed from the lenses of ecological justice and power, privilege, and oppression. This course will use frameworks of permaculture, regenerative design, and futures thinking to move beyond “fixing” climate change or other planetary emergencies to a more robust, holistic framework for planning socio-ecological change. Students will gain skills of regenerative design, regenerative mapping, and emergent theories of change. These skills will be discussed in a vast array of applications (with both social and ecological systems) to focus on integration and regeneration of humans and the more-than-human world.

**SOWK 4203 Environmental Change Impacts and Resilience Strategies for Mental Health (3 Credits)**

The impacts of the climate crisis and global environmental degradation are becoming increasingly apparent upon mental health. Social workers are well positioned to address the mental health implications of the climate crisis, ecological injustice, and environmental degradation. Understanding how these phenomena bear upon the mental wellbeing of clients and communities will be explored in this required choice methods/skills class. Emphasis will be placed on building resilience to climate grief, solastalgia, eco-anxiety, and climate trauma utilizing a strengths-based perspective. Students will develop knowledge and awareness of how climate change impacts our thoughts, emotions, and behavior to be of support to clients and foster self-care as social work practitioners.

**SOWK 4204 Policy Advocacy for Ecological Justice in the U.S. (3 Credits)**

Contemporary policies in the U.S. are critically analyzed for how they promote or hinder human well-being, environmental sustainability, and ecological justice. Students will analyze policies and develop advocacy skills, with emphasis on intervening at local and state levels of U.S. policy making.

**SOWK 4205 Contemporary Ecological Justice Issues and Social Work Practice (3 Credits)**

This course is designed to support student learning by providing a dynamic review and exploration of contemporary social work issues with a focus on communication and intervention skills for ecological justice social work practice. Current events related to contemporary ecological justice social work practice, theory, or research will be covered included but not limited to: global environmental change, climate justice, environmental degradation and eco-systems loss, disasters, and instances of environmental and ecological injustice. Contemporary social work practice problems and possibilities are elevated, especially in the regard of trending and emerging interventions in social work practice. In this course, students will learn about the disproportionate burdens of ecological injustices in communities at the local, state, national, and international levels. From a social justice perspective, students will critically explore, analyze, and discuss current ecological injustices and relevant social work interventions and communicate them ethically and effectively utilizing web 2.0 platforms and social media outlets.

**SOWK 4232 Critical Race Theory Praxis and Social Work (3 Credits)**

An advanced multicultural social work practice course, this uses the fundamentals of Critical Race Theory (CRT) as a framework for contextualizing and intervening with client systems at the micro, mezzo, and macro levels. This course is a values elective for all concentrations. CRT is used as a framework to examine, critique, and challenge the way that race and racism is unwittingly sustained and perpetuated by traditional social work approaches to the amelioration of personal and social ills. Through this course, students learn the central tenets of CRT, how to evaluate traditional social work practice using these tenets, and begin to design to design a professional social work practice that uses CRT tenets as a foundation for micro-, mezzo-, and macro-level interventions. This course is offered within the concentration curriculum as a Values for Practice course to assist in the training and preparation of social workers practicing with historical underrepresented and marginalized clients and communities of color. Students develop skills and techniques grounded in anti-oppressive culturally grounded social work practice.

**SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth (3 Credits)**

This course will explore the interrelatedness of institutional racism and discrimination across major social systems within the U.S., focusing on the historical context of current racial disproportionalities and disparities in youth service systems such as child welfare, juvenile justice, mental health, education, and health. Using a critical lens, the course is designed to help students analyze how policy decisions have long-range impact on generations; specifically for children and youth of color. Students will have the opportunity to apply this critical lens to their current field placement and the youth populations they serve. As an elective course, the class is open to all GSSW students; however, students concentrating in child welfare, children and youth, and families are especially encouraged to take the course.

**SOWK 4240 Intergenerational Justice (3 Credits)**

This course engages students in the conversation, scholarship, and social work practice issues related to how social justice is promoted across age groups and generational cohorts (i.e., baby boomers, generation X, millennial generation). While looking at debates for how families, local communities, states, and nations link age to power, decision-making, funding, and access to resources, the course also examines what within age group issues of injustice and inequality persist. Topics include: generational equity in terms of government budgets and debt, intergenerational issues related to sustainability and ecological justice, age-based versus need-based service delivery models, interventions to address intergenerational conflicts within families, and best practices in intergenerational social service models. This course is designed as a seminar course for social work students from any concentration to explore values related to social justice as they play out across all levels of practice.

**SOWK 4245 Restorative Approaches in Social Work Practice (3 Credits)**

This course applies the conceptual framework, strategies, and benefits of restorative approaches to social worker roles and responsibilities. This course is designed to help students develop a historical and theoretical understanding of restorative approaches, build restorative-based skills that can be used in a variety of roles, and apply restorative approaches to a variety of client population systems, settings, and needs. Ethical dilemmas, cultural competence, and decision-making in restorative approaches, and the impact this has on oppressed populations, will be discussed. This course fulfills the Values for Practice requirement, and is a general elective with relevance to all social work concentrations. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4250 Concentration Seminar (1 Credit)**

This course is taken (by distance education students only) concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. This is also an evolving seminar co-created between faculty and students. Clinical issues and skill development at a more advanced clinical level is integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first year learning. Prerequisite: SOWK 4150 or 4153 or SOWK 4299.

**SOWK 4251 Concentration Seminar I (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed.

**SOWK 4252 Concentration Seminar II (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4251.

**SOWK 4253 Concentration Seminar III (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4252.

**SOWK 4260 Contemporary Social Work Issues in Western Colorado (3 Credits)**

In this hybrid seminar course, students will learn about the disproportionate burdens of environmental injustices in communities across the Western Slope of Colorado. From a social justice and human rights perspective, students will critically explore, analyze and discuss current environmental health disparities and relevant social work interventions. Students will review environmental health and environmental justice theories and perspectives as they bear on place-based case studies from the region. Students will use contemporary media and relevant web 2.0 platforms, including social media to demonstrate understanding of applied e-advocacy social work practice while exploring such case studies.

**SOWK 4299 Advanced Standing Seminar (3 Credits)**

The seminar reviews knowledge, skills and values that form the basis of GSSW concentration year curricula in clinical practice, community practice and policy practice. The seminar combines content planned by instructors with individualized guided study and planning for field instruction based on student self-assessments. Prerequisite: Admission to advanced standing program.

**SOWK 4302 Advanced Evidence for Practice (3 Credits)**

This course engages continuing social work students in further developing skills for using research evidence in social work practice. These skills support social workers' need to engage in practice-informed research and research-informed practice, as well as facilitates access to resources in the evidence base to support all aspects of social work practice. This course invites students to consider the place of scientific inquiry and research evidence in the resolution of social problems at various levels (e.g. individual, group, organization, community, or societal). This course further develops student skills in identifying, analyzing, and applying empirical evidence to inform their social work practice. The course focuses on studies designed to examine the effectiveness of interventions, aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may assess the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4303 Advanced Standing: Engaging Anti-oppressive Social Work (3 Credits)**

This course examines the individual, family, community, and societal factors that are linked to the dehumanizing of people engaged with social work institutions. The course is intended to increase analytical skills in the context of individuals, families, organizations, and communities in the preparation for engaging in anti-oppressive practices in micro and macro social work processes. This course uses an ecological systems approach to introduce students to the dynamics of power related to social problems and social action and its impact on social work's engagement with human communities and the environment.

**SOWK 4305 Child Maltreatment: Causes and Developmental Consequences (3 Credits)**

This course examines theory and research concerning causes and developmental consequences of child maltreatment, as well as theory and research concerning attachment and the developmental consequences of separation and loss that often follow intervention in child maltreatment.

**SOWK 4315 Critical Theories of Child and Adolescent Development (3 Credits)**

This course provides students with knowledge of critical theories of child and adolescent development. The course focuses on understanding development in context, considering the concepts of trauma, damage, resilience, potential, difference, resources, and healing. Ecological factors, including systemic conditions, that are deleterious to development and those that promote healthy development will be considered. The role of oppression in enabling or constraining children and adolescents' progressive developmental trajectories will be highlighted.

**SOWK 4320 Family Systems Theories for Social Work Practices (3 Credits)**

This course introduces systems theory as it is applied to family contexts which may include traditional therapeutic settings, home-based practices, parenting approaches, family religious/spiritual strength and conflict, and transgenerational family processes. Emphasis is given to the integration of theory, practice, and skill development. Students will also explore family organization and development and family subsystems, as they apply to assessment, case conceptualization, and intervention from a family systems perspective with clients, individuals, couples, families, organizations, constituencies, and communities. This course analyzes intersecting issues of power, privilege, and oppression, and requires that students examine their own personal characteristics, preferences, experiences, biases, predispositions, and affective reactions that influence the professional relationship.

**SOWK 4323 Psychopharmacology (1 Credit)**

This course is intended for social work students who plan to work in mental health and health care settings. Students will be introduced to a basic understanding of neurobiology and pharmacotherapy addressing the more common DSM-5 diagnoses. Key medications, including indications, symptom management, and side effects will be addressed. Students will be introduced to the most common medications that providers in medicine and psychiatry use to help improve clients' functioning. The course will provide the basics of the language used to discuss pharmacotherapy and will improve students' ability to interact with prescribers in order to improve care and coordination. The course will emphasize the role of the social worker in alerting medical providers to adverse side effects experienced by the clients, as well as improvement or lack thereof. Critical thinking about pharmacotherapy will emphasize that a good differential diagnostic process must precede any attempt to prescribe medication, just as it precedes the selection of a psychotherapeutic modality. The course will also explore cultural and ethical considerations around the prescription of psychotropic medications.

**SOWK 4325 Evolving Perspectives and Trends in Health and Wellness (3 Credits)**

This course provides an overview of the frameworks that inform social work practice in the area of health and wellness. The broad concept of health is examined for its understanding and meaning in communities and cultures along with the historical and conceptual bases of public health. There is a focus on understanding racism in health and the impact of health inequities for historically marginalized and oppressed communities. While studying evolving trends in health, a range of topics are covered including a systems perspective along with the integration of health, mental health & wellness. There is a focus on health equity, the social determinants of health, prevention, wellness, complementary and alternative practices with an emphasis on social work's role as change agents working towards solutions and promoting equity.

**SOWK 4330 Assessment of Mental Health in Adults (3 Credits)**

Focuses on the assessment of psychological, social and biological contributors to mental health disorders in adults and the use of this assessment as a guide for treatment/clinical interventions. Examines the strengths and weaknesses of the DSM-IV classification system in terms of social work values and ethics. Examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category, and reviews a variety of assessment tools in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged populations.

**SOWK 4334 Assessment of Mental Health in Children and Adolescents (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children and adolescents and the use of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a guide for mental health assessment. The course examines the strengths and weaknesses of the DSM-5 classification system for children and adolescents, especially in the context of culture and social work values. It examines symptoms, theories of etiology, and prognosis within each diagnostic category and reviews diagnostic challenges in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged children and adolescents.

**SOWK 4338 Assessment of Mental Health Across the Lifespan (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children, youth, adults, and older adults and the use of this assessment as a guide for treatment/clinical interventions. It examines the strengths and weaknesses of the DSM-5 classification system in the context of social work values and ethics. It examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category and reviews a variety of assessment tools in the context of gender identity and expression, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged population.

**SOWK 4340 Leadership and Supervision Skills (3 Credits)**

This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

**SOWK 4345 Intersections of Mental Health, Substance Use and, Trauma (3 Credits)**

This course is an advanced theory for practice course with builds upon foundation courses in Human Behavior in the Social Environment (HBSE) and clinical theories, and covers conceptualization, dynamics of, and interventions in mental health, substance use, and trauma. The course examines the independent and intersecting theory bases of mental health, trauma and substance use approaches. It also explores recent evidence about individual and environmental risks associated with these conditions and evidence about both specific therapeutic interventions and the importance of common relational factors. Social workers make up one of the largest professional groups working with clients living with mental health concerns, and bring a unique person-in-environment and strengths perspective to that work, which fits well with a recovery philosophy. Clinical frameworks and interventions common across these fields, such as harm reduction, motivational interviewing, self-determination theory, and the transtheoretical model of changes are presented, and students are introduced to integrative approaches that show promise in responding to client conditions.

**SOWK 4350 Evolving Perspectives and Trends in Aging (3 Credits)**

This course provides an overview of how theories of aging inform the role of social workers with older adults and their families across a range of service settings, including emerging fields of practice. The course examines multiple perspectives on the late life adult years, spanning the period from middle adulthood and on into late life, including: historical, biological, psychological, social, cross-cultural, and spiritual theories and related empirical evidence. While addressing evolving trends, the importance of difference, and ethical implications the topical issues include: work and retirement; economic status; residence and housing location; education and learning styles; interpersonal relationships with partners, families, and peers; creativity, spirituality, and religiosity; political beliefs and ideologies (including the formation, maintenance and alteration of prejudice and racism); the experience of chronic illness, disability, and death; and wisdom attained during adulthood and aging.

**SOWK 4355 Genocide: A Social Justice Issue (3 Credits)**

Genocide is both the gravest of crimes under international law and the ultimate violation of human rights. After the Holocaust during WWII, a strong cry of "never again" became the symbol for the world's desire to stop genocide and other crimes against humanity. Unfortunately genocides and other atrocities continue to happen around the globe, including during our present day. This course will study the role that nationalism, propaganda, the media and film have played and continue to play in genocide. We will study how these factors played out in Armenia, the Holocaust, Rwanda and Bosnia, as well as the current situation with the Rohingya people. The role of the United Nations will be studied. We will seek to understand the role of power, privilege and oppression as well as political forces in defining a crime against humanity as a genocide or not. The stages of genocide will be studied and applied to current situations around the globe, including the United States of America. We will pay close attention to how mass atrocities end as well as how they might be prevented.

**SOWK 4360 Social-Ecological Resilience: Connecting Human and Environmental Wellbeing (3 Credits)**

Social-Ecological Resilience: Connecting Human and Environmental Wellbeing is a required theory-for-practice course in the Sustainable Development and Global Practice concentration. This course builds a social ecology perspective that emphasizes integrated social-ecological systems as a necessary theoretical framework for understanding the inter-connectedness of human health, wellbeing and resilience with that of other species and the natural environment. This course reviews and analyzes theoretical concepts and models for contextualizing the important social and ecological issues impacting our global environment as well as the societal implications of global environmental change. Using an integrated social science approach that highlights regenerative development as a paradigm that acknowledges the interdependence and interconnection between humans and the more-than-human world, social workers practicing in local and global communities will be prepared to implement effective, strengths-based solutions to support sustainable development and capacity-building efforts at various scales. This course promotes systems and critical thinking and develops a knowledge base for resilience-oriented prevention and intervention strategies, environmental awareness, sense of belonging in a social-ecological community, adaptation and advocacy.

**SOWK 4361 Adapting and Implementing Interventions (3 Credits)**

Although evidence-based practice has been increasingly integrated in social work practice, the growing area of implementation science is relatively new. An important part of implementation science is the process of deciding whether, and how, to implement an intervention. Existing interventions do not well serve all communities and service settings. The course begins with an introduction to implementation science, emphasizing the role of research practices that engage communities in the data collection and implementation process. The course focuses more deeply on using data collection strategies to inform practice-relevant adaptation and implementation research questions with communities including: 1) whether an existing intervention is a good fit for a specific community or context, 2) whether an adaptation or a completely new intervention is warranted, and 3) how to adapt an intervention. This project-based course includes the opportunity for students to focus on individual, family, organizational, or community-focused interventions. Students learn basic skills in specific data collection strategies including conducting surveys, interviews, and focus groups. Over the course of the quarter, students will select an adaptation research question, design a study, pilot a data collection strategy, and identify implementation supports for their intervention.

**SOWK 4362 EmBODYed Practice: Ethical Approaches to Fatness and the Body (3 Credits)**

Weight-based discrimination is a significant source of social inequity (e.g., economic, healthcare, educational). This class explores body-based oppressions through a lens of weight stigma, body image, & body liberation. Course topics include weight stigma & eating disorders, weight science & associations between weight & health, neoliberal origins of the healthism, racial origins of fat phobia, queering & crippling fatness, indigenous perspectives on embodiment, size-inclusive care, & ethical responses to weight stigma. Students will participate in a photo-voice reflection project to increase awareness of fat discrimination, tell their own body story using traditional or digital mediums, participate in a book club, & write an "ethics brief" documenting their approach to body diversity within the scope of their professional practice.

**SOWK 4370 Community and Organizational Change: Theory for Practice (3 Credits)**

This course presents key theoretical frameworks for students to be informed and innovative in responding to changing community, organizational and societal contexts. Theories of social change are presented that can assist social work leaders in promoting positive social change in the lives of vulnerable populations through the development of policy, community interventions and human services organizations. Students apply theories to understanding organizational change and innovation and the promotion of social and economic justice through community and policy practice.

**SOWK 4390 Cultural and Linguistic Competency in Integrated Behavioral Health (3 Credits)**

This course provides students with the skill and tools to deliver culturally responsive and linguistically appropriate services to diverse, vulnerable populations in Integrated Behavioral Health. The course builds on concepts taught in the foundational Power, Privilege, and Oppression course (prerequisite) and integrates key foundational concepts of the Intercultural Development Continuum (Hammer, 2009). Prerequisite: SOWK 4132 and SOWK 4303.

**SOWK 4401 Integrated Health Care: Models and Practice (3 Credits)**

This course provides an overview of the knowledge, skills and theory of integrated health care social work practice, where physical and behavioral health services are most often provided in a primary care medical environment. Students will learn roles/functions of the behavioral health professional and their effectiveness as a member of the collaborative care team. Incorporating knowledge of evidence-based practice models of care and behavior change theory, they will increase their practice abilities to effectively work at an advanced level of skill as an integrated care behavioral health provider. Strategies and skills in patient engagement, motivational enhancement and advocacy will be taught through case studies and group activities. Cultural competency and effective care planning in an integrated healthcare environment will be emphasized.

**SOWK 4410 Prevention & Treatment of Adolescent Substance Abuse (3 Credits)**

This course examines causal factors and theories that seek to explain why some adolescents develop problems with alcohol and other drugs. Effective substance abuse prevention and treatment approaches are identified at the individual, family, school and community level.

**SOWK 4412 Practice Elements in Interventions with Children and Youth (3 Credits)**

This course offers an integrative framework of theory and research to intervene with children and adolescents in school, family, and community-based agencies. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include common elements across empirically-supported interventions such as cognitive-behavioral therapy, behavioral treatment, client centered treatment, social skills training, and parent management training. Intervention strategies are described across four primary problem areas common among children/adolescents: anxiety, depression, disruptive behavior, and attention deficit disorder. For each of these problem areas, intervention techniques are demonstrated, practiced in class, implemented in field placements, and monitored for client progress. The use of empirically-supported interventions is discussed from a multidimensional perspective with consideration for cultural context and adaptations necessary for particular client groups.

**SOWK 4413 Virtual Field Experience Seminar I (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to beginning a live agency field placement.

**SOWK 4414 Virtual Field Experience Seminar II (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to actually beginning a live agency field placement. Prerequisite: SOWK 4413.

**SOWK 4416 Foster Care and Permanency Planning (3 Credits)**

This course presents strategies for culturally competent assessment and intervention with children who are in foster care, adoption, or with their families. It focuses on permanency planning, involving extended families in making case decisions and caring for children, family reunification, relinquishment of children for adoption, termination of parental rights, preparing children and parents for adoption or guardianship, working with young adults nearing emancipation, and providing post-adoption/guardianship services. Prerequisites: SOWK 4305 and SOWK 4600 or permission of the instructor.

**SOWK 4418 Child Welfare Practice: Assessment & Intervention (3 Credits)**

This course provides an overview of the continuum of care of child welfare practice from entry to exit. The course uses an evidence-based approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. The course is required for students in the child welfare track. The prerequisite is SOWK 4600 (Child Welfare Policy and Services, or permission from the instructor).

**SOWK 4419 Rural Child Welfare Practice: Assessment and Intervention (3 Credits)**

This course provides an overview of the continuum of care of rural child welfare practice from entry to exit. The course will provide students with a brief overview of the history of child welfare and relevant major federal legislation that impacts child welfare practice. The course uses an evidence-based and theoretical approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. It focuses on the unique challenges of child welfare practice in rural counties across America. The course is required for students receiving the Title IV-E Child Welfare Stipend in the Four Corners, Western Colorado, or Online MSW programs. It is an elective option for Denver campus students.

**SOWK 4420 Multisystemic Social Work Practice and Advocacy with Families (3 Credits)**

This course facilitates the development of family systems practice skills with clients, individuals, couples, families, organizations, constituencies, and communities. This course focuses on the development of multisystemic strategies and techniques utilizing family systems theory as part of the ongoing process of engagement, assessment, and preliminary interventions. It emphasizes the integration of research, theory, and practice through experiential learning and skill building. Students will learn strategies and techniques through role play demonstrations practicing intake/assessment/goal setting, preliminary intervention development, and professional documentation. Students will be asked to discuss their own "use of self" development throughout the class and reflect on personal bias, cultural bias, assumptions, values and affective reactions that may influence the relationship with client systems or constituencies. Prerequisite: SOWK 4320.

**SOWK 4425 Positive Youth Development Programming (3 Credits)**

This course provides an overview of the positive youth development (PYD) approach to working with young people diverse in age, gender, race, ethnicity, sexual orientation, disability status, socioeconomic status, geographic location/neighborhood, religion/faith and culture. Many services provided for young people focus on reducing societally-deemed negative outcomes such as teen parenthood, violence, substance use, and school dropout. Instead of focusing on deficits or reducing problem behaviors, the PYD approach reframes the historical pathological approach to treating deviance and focuses on youth's strengths and building assets and skills. PYD programming employs an intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive. It promotes positive outcomes by providing opportunities, fostering positive relationships, and harnessing youth leadership. The PYD approach draws attention to opportunity gaps that social workers can address in partnership with young people. Students in this course will design an innovative PYD program, taking into account how such an approach to social work practice can be applied across different community settings to promote young people's well-being.

**SOWK 4430 Substance Use Interventions (3 Credits)**

There is widespread recognition that substance use is one of America's most pressing social problems. Social workers increasingly find themselves attempting to help individuals and families resolve substance use problems, as well as directly or indirectly related issues. This course introduces students to current and emerging substance use treatment approaches so they can conduct their practices from an informed perspective.

**SOWK 4435 Grassroots Organizing for Social Justice (3 Credits)**

This course examines grassroots approaches to community organizing and social change for social justice. Topics include: power and empowerment theory, insider/outsider considerations, development of critical consciousness and popular education techniques for organizing, history and genealogy of community organizing and social movements related to social work, direct action tactics and strategies, arts-based organizing, campaign development, and ethics and skills for working with diverse communities.

**SOWK 4445 Social Work Assessment and Intervention in Aging (3 Credits)**

This course focuses on biological, neurological, psychological, social, spiritual, and environmental aspects of late life as a foundation for the delivery of assessments and interventions to older adults. This course presents information on demographic projections, population trends, and theoretical perspectives that inform gerontological social work practice. This class additionally focuses on the unique nature of social work with this diverse population including a continuum of care services for older adults, interdisciplinary nature of helping services, dynamic nature of aging for multiple vulnerable older adults such as those facing institutionalized oppression, and specific attention to elder wellness.

**SOWK 4454 Child and Adolescent Trauma (3 Credits)**

This course introduces students to the common concepts (general theory and foundational knowledge), components (intervention and treatment elements) and skills (practitioner skills) underlying evidence-based treatment for children and adolescents who have experienced trauma. Trauma is broadly defined, and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, witnessing interpersonal crime (e.g. intimate partner violence), and other traumatic events. The course highlights the role of development, culture, and empirical evidence in trauma-specific interventions with children, adolescents, and their families. It addresses the level of functioning of primary care giving environments and assesses the capacity of the community to facilitate restorative processes. The course focuses on assessment and intervention as a foundation for subsequent learning about treatment. This course incorporates the new National Child Traumatic Stress Network (NCTSN) core curriculum on child trauma (CCCT). The course conveys the crucial evidence-based concepts, components, and skills designed by NCTSN to strengthen competency in assessment, referral, and treatment.

**SOWK 4465 Human Security (3 Credits)**

Human security is a new paradigm for understanding complex global vulnerabilities. Human security goes beyond traditional notions of national security and highlights the security of the individual rather than that of the nation state. Human security uses a person, entitlement and human rights centered view of security. It is essential for national, regional and global stability and sustainability. In defining human security, the United Nations stressed “the right of all people to live in freedom and dignity, free from poverty and despair”, and recognized that “all individuals, in particular vulnerable people, are entitled to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential” (A/RES/60/1). “Human security aims at ensuring the survival, livelihood and dignity of people in response to current and emerging threats - threats that are widespread and cross cutting. Such threats are not limited to those living in absolute poverty or conflict.” (UN-OCHA) Today, the impacts of natural disasters, climate change and other forms of environmental change, and global economic crises, among others, are considered to threaten human security in developing as well as developed countries. The increasing numbers of internal violent conflicts, forced migration, natural disasters and environmental degradation have resulted in national and international security failings that reflect the challenges of the post-Cold War security environment. The failure of mainstream development models to generate growth, particularly in Least Developed Countries (LDCs), or to deal with the consequences of complex new threats (e.g., HIV/AIDS, climate change, social and economic inequality) reinforced the sense that international institutions and states are not organized to address such problems in an integrated way. Social workers focusing on human, social and economic issues in global settings will use various human development strategies and other capacity-building approaches in practice. This course will develop students’ skills in human and social development strategies, sustainable livelihood and conflict management strategies, and other capacity-building community strategies, and fosters a solid understanding of the programmatic and practical requirements for human security in a global context.

**SOWK 4480 Social Justice in Mental Health (3 Credits)**

This course builds skills in identifying, analyzing, and attempting to remedy social justice challenges in mental health practice. These challenges include practices that risk marginalizing, oppressing or doing other harm to people with mental health challenges. Using research, theory, and extensive case studies, the course reviews perceived conflicts between clinical social work’s focus on mental health practice and the larger social work profession’s commitment to social justice. The course then provides an overview of mental health practices that raise ethical and social justice issues, reviews the justifications provided for such practices, and examines the efforts of critics to change them. Special attention is paid to controversial practices with vulnerable populations such as children, older adults, racial and ethnic minorities, and sexual minorities.

**SOWK 4500 Foundations of Play Therapy with Young Children (3 Credits)**

This course offers an integrative framework of theory and research to understand and intervene in the major mental health problems experienced by children. This course is also designed as an introductory experience to play therapy. Interventions include both direct work with children and collaborative/conjoint work with parents. Play therapy techniques include both directive and non-directive approaches including but not limited to child-centered play therapy and cognitive-behavioral interventions. Children’s development is considered from a multidimensional perspective including cultural context, risk and protective factors, and the development of psychopathology with an emphasis on early and middle childhood.

**SOWK 4501 Wellness Assessment & Promotion Across the Lifespan (3 Credits)**

This course builds students’ skills and strategies to enhance wellness for individuals, organizations and communities. Students will explore differences and beliefs related to health and wellness in both their internal/personal experience and in social work practice. The western medical industrial complex of ableism and “moral and physical fitness” is focused on illness treatment. In contrast, holistic health models of assessment focus on wellness promotion. Course topics include soul and nature based human development models, Eastern and Indigenous medicine models, and traditional or evidenced based wellness frameworks. Students, use complementary and holistic approaches to assess and address gaps found in public health data, community health, organizational and public policies. The course emphasizes the application of interdisciplinary knowledge and skills, professional ethics and values, and the role of social workers as change agents in creating solutions for public health issues at micro, mezzo and macro levels.

**SOWK 4505 Relationship Therapy (3 Credits)**

This course focuses on assessment, problem/solution path identification, intervention strategies and outcome evaluation in counseling heterosexual, gay and lesbian couples. Identifies common relationship patterns and explores intervention strategies including behavioral, strategic, structural, narrative, transpersonal and feminist. Also covered are issues such as conflict management, relationship enhancement, intimacy, power and control, domestic abuse, infidelity and divorce. Students will analyze the intersecting issues of oppression: sexism, racism, classism, heterosexism and ageism.

**SOWK 4520 Advanced Clinical Social Work Practice with Families (3 Credits)**

This course is an advanced skill-based course that extends students' knowledge and application of family systems therapy. The course engages the activate participation of students in role-play scenarios and the discussion and deconstruction of actual cases enhancing their developing skills as family therapists-in-training. In this course, students have the opportunity to plan and implement an entire course of treatment for a family. This allows the development of a conceptual understanding of family therapy practice, treatment skills and interventions, and utilization of self-as-therapist that influences the therapeutic system. Students have multiple opportunities to practice family interventions and receive feedback from both classmates and the instructor through the use of the clinical family therapy methods of 'live supervision' and 'reflecting teams'. Students will experience the connection between theory and practice and learn to integrate multiple theories. Issues related to transference, culture based countertransference, resistance, and working with involuntary clients are discussed. Advanced Clinical Social Work Skills with Families builds on the family systems theory and practice applications learned in the required family systems concentration courses and expands students' opportunity to apply theory to cases in diverse practice and client situations. An emphasis is placed on the development of personal theory, professional development, and therapeutic change/outcome as it relates to common factors in family therapy. This course also builds upon SOWK 4505: Relationship Therapy and aspects unique to couple's therapy. Prerequisites: SOWK 4320 and SOWK 4420.

**SOWK 4521 Advanced Skills for Working with Military Families (3 Credits)**

The class is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

**SOWK 4523 Care Management Skills and Resources to Promote Community Living (3 Credits)**

Many individuals and their families of all ages cope with physical and mental health conditions that impede their ability to live in the community. A vast array of formal and informal resources, public programs, and privately funded services can promote community living. Social workers often provide care management to enhance access, coordinate care, and ensure equality of these long-term services and supports. This course will develop students' skill at care management and knowledge of resources, including resources for persons with developmental disabilities, chronic mental health conditions, physical disabilities, and age-related functional impairments.

**SOWK 4530 Poverty and Community Economic Development (3 Credits)**

This is an advanced community practice class focused on poverty, low-income neighborhoods and local economic development. The class begins with a thorough review of the scholarly literature related to poverty, sustainability, and the concentration of poverty in low-income neighborhoods. Then, public and private responses to poverty are examined. The class focuses on both governmental policies and programs supported by the private sector. Next, the class turns to local responses to the concentration of poverty in low-income neighborhoods. The class focuses on the interdisciplinary nature of programs and interventions aimed at community economic development in low-income neighborhoods.

**SOWK 4535 Planning and Program Development (3 Credits)**

This course prepares students to engage in strategic planning and program development roles and practice within a social work community, organizational, or policy practice setting. Students in this course gain knowledge in the principles of planning, social enterprise, the engagement of stakeholders in planning processes, community collaboration and the elements of designing and implementing programs. Students have the opportunity to put this knowledge base into practice by developing a comprehensive program proposal applying the skills of strategic thinking, planning, critically evaluating research informed practice and practice informed research. In addition, students engage in communicating professional judgment in both written and oral formats.

**SOWK 4545 Social Work Practice with LGBTQIA Communities (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of LGBTQIA identities and communities. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of these identities. This course will explore the social construction of sexual orientation and gender identity, examine the idea of binaries, engage in historical analysis of LGBTQIA histories, and will familiarize students with legal and societal barriers and challenges facing members of the LGBTQIA community. Students will learn definitions around these identities, learn more about the spectrum of sexual orientation and gender, and utilize critical theoretical perspectives. Students will engage in critical dialogue around the representation of LGBTQIA people in our culture and media. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to LGBTQIA individuals, explore various facets of self-determination, social justice, dignity and worth of a person, the role of family, friends and community, and how power, privilege and oppression may impact the lives of LGBTQIA people. Lastly, students will synthesize this information to envision how their social work practice will be inclusive of LGBTQIA individuals and communities, including those who hold other marginalized identities. Prerequisite: SOWK 4132 or SOWK 4303.



**SOWK 4555 Spirituality and Social Work (3 Credits)**

The purpose of this course is to provide students with a nondiscriminatory framework of knowledge to respond competently and ethically to populations with diverse spiritual perspectives and religious cultures in social work practice. This social justice-informed course underlines and respects the diversity of all spiritualities with special attention to spiritual populations historically marginalized and neglected by Eurocentric assumptions common to social work. This course builds on the generalist approach of our foundation curriculum and integrates theories of multiculturalism, human development, and identity development while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spirituality and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4565 Social and Environmental Impact Assessments (3 Credits)**

Social and environmental impact assessments are important tools for analyzing and managing both the intended and unintended consequences of development projects on human and ecological systems in order to bring about a more equitable and sustainable social ecological system. This class will incorporate an understanding of the history and concepts of the three levels of impact assessments (micro, mezzo, and macro) into the research process that is the core of social impact assessments. Students will be able to prepare and evaluate social ecological impact assessments through learning to identify and define problems, select theoretical frameworks appropriate to the problem, identify research questions, design a study appropriate for the identified questions, gather and analyze data, and write the final assessment. Particular attention will be paid to assessing the effects of interventions on vulnerable populations. Other topics will focus on the practical aspects of project team selection and management, timelines, and the communication of findings to stakeholders.

**SOWK 4600 Child Welfare History & Policies (3 Credits)**

This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of policies and proposals for change in policies, considering empirical evidence, values and ethics. Provides a framework to analyze policy choices and encourages students to advocate for needed policy changes.

**SOWK 4610 Policies and Programs for Children and Youth (3 Credits)**

This course examines the history and evolution of social policies and programs targeting high-risk youth. Students will seek to critically analyze the effects of current and recent policies in the context of youth offending and other adolescent problem behaviors. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4630 Family Policies and Services (3 Credits)**

Identifies challenges contemporary American families are experiencing and presents strategies for developing policies and services to meet these challenges. Examines specific policies and services that most affect families, as well as broader questions concerning power and its distribution, allocation of resources and the role of government in promoting individual and family well-being. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4635 Immigration Policies and Services (3 Credits)**

This course identifies challenges for immigrants and presents strategies for developing policies and services to meet these challenges. It not only examines specific policies and services that most affect immigrants but also considers broader questions concerning power and its distribution, allocation of resources, and the role of government in promoting individual and family well-being. This is a concentration policy course for all concentrations.

**SOWK 4640 Mental Health and Substance Use Policies (3 Credits)**

This course provides a comprehensive understanding of policies related to mental health and/or substance use, their historical antecedents, and the socio-political forces that influence their development. This course also introduces students to emerging controversies concerning these policies.

**SOWK 4641 An Introduction to Prison-Industrial Complex Abolition (3 Credits)**

Grace Lee Boggs said we must “transform ourselves to transform the world,” and this course is rooted in this belief. Prison-industrial complex (PIC) abolition is a philosophy, a daily practice, and an organizing strategy. It requires us to examine our default frameworks (built by settler colonialism, racial capitalism, and white supremacy) for relating to one another, and to create entirely new ways of being with and caring for one another. My aim is to co-create a space with all of you where we can think collectively and speak boldly about how, as the writer, performer, and activist Morgan Bassichis states, “The very systems we are working to dismantle live inside of us.” It’s easier to look outward and critique an institution/system than it is to look inward and be honest about—and work to disassemble—the dangerous carceral logics embedded in our.

**SOWK 4642 Global Trauma (3 Credits)**

Social workers often find themselves working with people who have experienced, endured, and survived traumatic events such as terrorist attacks, sexual violence, refugee camps, food scarcity, and war. People are fleeing their homes and communities, most often unwillingly, due to forced migration, war, food insecurity, and environmental degradation. Some are unable to leave and are continuously retraumatized. All of this has resulted in increasing numbers of people experiencing trauma on a collective and global scale. Most of this is not new but it is exacerbated by current events, including a global pandemic. This course examines ways in which people collectively experience trauma and the impact on them within their cultural context. The context of peoples' lives will be examined and the unique impact of collective trauma on children will be explored. This course is designed to challenge assumptions about those who have experienced collective trauma and the meaning they place on their experiences. We will also explore the role of international and national policies and communities in causing situations that result in collective trauma as well as their response to it. The role of social work in prevention, advocacy, and intervention will be explored. Resilience of survivors will be studied and the need for self-care will be incorporated into this course.

**SOWK 4643 Digital Justice in Social Work (3 Credits)**

Should internet access be a universal right? What will be the next "internet"? And what does social work have to do with any of this? Transformation or revolution, the digitalization of the human project is progressing rapidly and demands of social work's leadership and contributions. As tele-practice evolves across industry, social workers not only require a specific skill set to meet consumer and service delivery demand, but a mindset and approach prepared for an uncertain, innovative, and networked future. This includes the evolution of power, privilege, and oppression and what inclusion and equity mean in a digital ecosystem. This course will explore the possibilities of digital social work practice and opportunities for micro, mezzo, and macro change, while providing students with constructs and strategies for promoting equity.

**SOWK 4645 Health Care Policy (3 Credits)**

This policy course provides an overview of health care policy as it is relevant to social work practice in multiple health and behavioral care settings. With the advent of health care reform and the implementation and operationalization of the Patient Protection and Affordable Care Act (PPACA), there are rapidly changing policy issues related to this innovative integration and delivery of health care services. Students in this course critically analyze the practice of policy in this new and quickly evolving service arena. This course explores key health policy strategies to foster integrated delivery system development and sustainability in line with health policy goals to reduce cost of care, improve population health and improve quality of integrated care services, with special emphasis on the integration of primary care, behavioral health services and wellness/health promotion initiatives. Strategies for students to influence policies and promote change in the interest of the individual/family/community, agency/organization and the communities they serve are presented. Critical thinking skills in developing and analyzing proposals to improve integrated health policy are encouraged. The course builds on policy content offered in the professional foundation year and links policy to practice and research skills.

**SOWK 4650 Aging Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in gerontology. It includes a critical review of rapidly developing policy issues, as well as an overview of U.S. health care and social service delivery systems serving older adults. The course encourages students to participate in critical analysis of issues and to develop and analyze innovative proposals to improve policy and programs for older adults. This course fulfills the policy requirement for the Aging Services and Policy concentration.

**SOWK 4655 Mental Health and Health Care Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in mental health and health care, with emphasis on achieving quality and addressing disparities. It includes a critical review of United States' historic and developing policy issues, as well as mental health and health care financing and delivery systems and other key issues in the field. Students will participate in critical analysis of issues and will examine various proposals to improve mental health and health care policy and programs. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4660 Social Policy Advocacy (3 Credits)**

Facilitates student learning within policy-making arenas. Students are paired with health and social service agencies and coalitions to assist in agenda-setting, legislative research, and issue-advocacy development and implementation in the state legislature and bureaucracy.

**SOWK 4670 Policy Development & Analysis (3 Credits)**

Focuses on the development and analysis of social welfare policy. Reviews the structure of the policy-making and implementation process, and examines perspectives on the definition of social problems and approaches to the development and analysis of social welfare policies. Students apply the perspectives and frameworks as they analyze a specific social problem and policy directed toward it, identify needed change in policy, select place and strategy for change in policy, and communicate knowledge to central actors in the policy-making and implementation process. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4680 Native Peoples Practice: History and Policy (3 Credits)**

This course is designed as the background to practice with Native Peoples. It will explore the relationship between theory and practice, socio-economic, political, and health issues, and the dynamics of changes in reservation and urban Native communities. Historical trauma, federal policies, impacting Native people, and laws and regulations that impact social service delivery will be reviewed. Social services delivery systems will be analyzed with the uniqueness of the cultural parameters of tribal communities. Guest lecturers from tribal communities may partner with faculty to teach the course. Prerequisites: SOWK 4132.

**SOWK 4681 Cultural Connectedness: A Journey Into Native American Country (3 Credits)**

This course provides an immersion experience into the Native American cultures of the Southern Ute, Ute Mountain Ute and Navajo Nation tribes. It provides a mixture of experiential and academic learning based on a community-learning model. The course begins with orientation at GSSW and/or the Four Corners Social Work program in Durango, Colorado. The course is open to foundation, advanced standing, and concentration students. Students must have completed their first year of the academic program. Slots will be distributed proportionately to main campus, Glenwood Springs and Four Corners programs, with priority given to Four Corners students. This course is designed for students in all tracks who have an interest in understanding current and historical issues that impact social work practice with indigenous populations, particularly those who have suffered intergenerational legacies of oppression and genocide. The course will emphasize the development of cultural responsiveness in social work practice with populations who come from a different historical context where oppression and historical trauma have occurred.

**SOWK 4682 Values for Social Work Practice Native Peoples (3 Credits)**

This course addresses culturally responsive practices with Native individuals, families, and communities. The focus will be on the problem-solving processes across a variety of social systems within Native communities. Social problems that are common in tribal communities will be presented, equipping the student with awareness, a knowledge base, and multilevel practice skills, so that they can effectively engage professionally in Native communities. Students will explore the cultural expectations, understand cultural biases, and standards of practice necessary for assessment, interventions, and evaluation of ethical social work with Native Peoples. Tribal communities and cultures span a wide range of cultural histories, belief systems and practices creating a rich and individual cultural context. It is beyond the scope of this course to address all tribal cultures or a depth of knowledge about any one tribal community. However, foundational perspective that will include values, principles, assumptions and cultural beliefs shared by Native Peoples will be addressed. Given that many tribes experience similar spiritual, physical and mental health consequence as a result of historical and modern colonial violence, content on needed services and delivery systems that are applicable across most tribes, locations, and geographies will be presented. This course provides content relevant to Native Peoples living on their sovereign lands as well as those living in rural and urban areas occupied by the United States. At the end of this course, students will have appropriate skills, processes, and resources required to engage in their own discovery of cultural variations among tribes to address their Native client's needs. Pre-requisite: SOWK 4680: Native Peoples Practice: History and Policy.

**SOWK 4700 Solution Focused Brief Therapy (3 Credits)**

This course explores solution-focused brief therapy (SFBT) and its application in a variety of settings and populations. Focusing on strategies for assessment, intervention, evaluation, and termination, the course applies solution-focused therapy to specific client systems, drawing on knowledge of appropriate techniques, sociocultural factors, and types of problems presented. Solution-Focused Brief Therapy is an elective course in the Mental Health and Trauma Concentration and the Health Equity & Wellness Concentration.

**SOWK 4705 Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders (3 Credits)**

Presents and applies a framework for assessing and intervening with offender populations. This risk and containment framework takes a community safety and victim-centered perspective and focuses on assessing and intervening with multiple systems surrounding offenders. The framework is then applied to specific interventions with domestic violence abuse offenders and with adult and adolescent sexual offenders.

**SOWK 4710 Intimate Partner Violence (3 Credits)**

This is a concentration year practice elective focusing on understanding, assessing, and intervening with domestic violence, understood as violence occurring in the context of intimate relationships. The purpose of this course is to provide students with the theoretical understanding and practice skills necessary to establish a beginning competence in assessing and intervening with domestic violence and in developing community, systemic, and policy responses.

**SOWK 4712 Social Work & the Law (3 Credits)**

Examines legal principles and procedures relevant to social work practice with families and children: structure and operation of the American legal system, principles to follow in conducting legal research, basic principles of constitutional law and law related to juvenile delinquency, child protection, child adoption, education and domestic relations. Covers legal aspects of social work practice including licensing, confidentiality and professional liability.

**SOWK 4713 Interdisciplinary Approaches to School, Family and Community Prevention (3 Credits)**

Behavioral health problems in childhood and adolescence take a heavy toll on millions of lives. These problems range widely – from anxiety and depression to alcohol, tobacco, and drug abuse; delinquent and violent behavior; dropping out of school; and risky sexual activity and unwanted pregnancies. SOWK 4713 presents an overview of practices and policies aimed at preventing behavioral health problems in young people. Emphasis is placed on developing the practice and policy skills that are necessary to deliver preventive interventions and programs in schools, families, and communities. Students will select an effective program, learn the skills necessary to deliver the program, and then implement the program in a classroom setting. Class content will emphasize the importance of increasing the role of social work practitioners and social work values in the interdisciplinary field of prevention practice.

**SOWK 4715 School Social Work Interventions (3 Credits)**

Designed to give students the ability to identify, understand and apply the varied roles of school social worker. Examines politics of education, the educational organizational structure, special education law and process, collaborative teamwork with school and community professionals and intersystem case coordination. Emphasis placed on meeting the needs of special education populations through assessment, intervention and evaluation and on preventive programs for children and youth at risk for school failure, truancy and dropping out.

**SOWK 4718 School Social Work Assessment and Realities (3 Credits)**

This concentration course is the third in the School Social Work Certification. Both SOWK 4715 (School Social Work Interventions) and SOWK 4712 (Social Work and the Law) are prerequisites for this class. The class provides advanced skills in assessment pertinent to the school ecosystem. It also juxtaposes these skills with field trips to several schools to interact with School Social Workers in a variety of settings and work roles to understand how these assessments are used in the school setting. The course emphasizes the written tasks and social work skills that School Social Workers need to perform on a regular basis, as well as how these skills are used to help the student, family, and school environment. Prerequisites: SOWK 4712 and SOWK 4715.

**SOWK 4720 Prevention and Treatment of Juvenile Delinquency and Youth Violence (3 Credits)**

Examines causal factors and theories that seek to explain why some adolescents engage in delinquent conduct and/or violent behavior. Effective delinquency and violence prevention and treatment approaches are identified at the individual, family, school and community levels.

**SOWK 4721 Existential Social Work Practice (3 Credits)**

The problems facing people can be understood in the context of situations and meanings they give to them. This course seeks to identify useful ways to clarify and validate the client's unique "world view", bypassing the many dangers and misuses of diagnostic categorization and empowering clients in relation to themselves and problem definition.

**SOWK 4723 Social Work Practice in Health (3 Credits)**

This course is designed to explore and develop advanced social work knowledge, skills and practice in diverse health care settings. It includes an examination of the social work role on interdisciplinary teams and how to impact change in the health care system and support positive health outcomes for patients and their families. There is an emphasis on patient and family-centered care and interprofessional collaborative practice to reflect social work values in various health settings by focusing on health literacy, evidence based clinical interventions, and responsive multi-cultural practice for acute and chronically ill patients and their families across the lifespan. Modules include content on bioethics, trauma informed care, grief and loss, self-compassion, and special contemporary topics relevant to a social justice approach to advance health and well-being.

**SOWK 4725 Mind-Body Connections and Social Work Practice (3 Credits)**

This course teaches skills for implementing mind-body techniques, models for wellness assessments, and evidence-based mind-body strategies for intervention in client and community problems. An evidence-based approach creates a foundation for: 1) understanding the mind-body connection that influences an individual's and community's physical, emotional, and social well-being and 2) the most efficacious methods for mind-body social work practice skills. Research evidence demonstrates that mind-body strategies are helpful for an array of concerns such as, military personnel with PTSD, adults with emotional regulation issues, academic concerns of stressed-urban youth, community mobilization, and emancipatory practice.

**SOWK 4726 Experiential Therapy (3 Credits)**

This course provides students with knowledge and skills to facilitate experiential-based therapy with children, youth, families and couples with a focus on environmentally sound practices. This is considered a service learning class since we are partnering with nature. Please wear comfortable clothes and comfortable closed toed shoes for all classes and bring a water bottle.

**SOWK 4727 Experiential Therapy in Nature (3 Credits)**

SOWK 4727 is a methods/skills course which provides students with knowledge and skills to facilitate experiential therapy with groups with a focus on environmentally sound practices in the outdoors.

**SOWK 4730 Cognitive Behavioral Therapies (3 Credits)**

This course examines major cognitive behavioral therapies (CBT) suggesting methods focusing on clients' problem-solving abilities, building on client strengths, targeting specific thought patterns that impede clients from reaching goals, and assessing outcomes in terms of changes in thinking and behavior. Theory is applied to individuals, dyads, families, and groups. Additionally, this course examines relevant research suggesting both indication and counter-indications of approaches.

**SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice (3 Credits)**

This course, building on the theoretical foundation in SOWK 4132 Multicultural Social Work Practice, examines the barriers to the professional use of self as an ally to historically disenfranchised groups, both in the context of day-to-day relationships with clients as well as in the context of community and macro-level interventions. The course is intended to assist in understanding the personal, situational, structural, and cultural influences that impede justice-oriented social work practice. The course supports students in developing strategies, skills, and approaches to anti-oppressive practice. Anti-oppressive social work practice is a range of practice approaches that adopt a critical and structural perspective on issues of social inequality, oppression, power, privilege, and domination. It encompasses approaches such as feminist, anti-racist, Afrocentric, disability practice, and critical social work frameworks to name a few (Campbell, 2003). It attends to both process and outcome (Dominelli, 1998), and links the provision of individual assistance to people from marginalized groups with involvement in social movements corresponding to the marginalization (Carniol, 2000). "The [anti-oppressive] framework enables links to be made between individual action and social structures. It informs practice by enabling the worker to evaluate differences that exist at an individual level and within society and how these impact on each other. It provides the means of making accurate assessments by taking into account the inequalities that texture the lives of those denied access to society's resources because of their defined social status and the exclusionary practices of the dominant system. It demands that we consistently engage in the process of critical self examination, which in turn enables us to engage in the process of change." (Dalrymple and Burke, 1995, p. 18). Prerequisites: SOWK 4132 or SOWK 4303.

**SOWK 4735 Interpersonal Approaches to Counseling (3 Credits)**

This course is an elective course which utilizes the interpersonal models of psychotherapy and neurobiology, drawing upon psychodynamic theories and techniques. The course examines traditional and contemporary psychotherapy theories and techniques. Interpersonal interventions are grounded within the values, ethics and standards of practice for clinical social work.

**SOWK 4741 Grief and Loss Across the Lifespan (3 Credits)**

This course is designed to prepare students to understand social work roles and practice (engagement, assessment, intervention and evaluation) in working with those experiencing loss across the life span. Whether the loss is related to health or functioning, family system, developmental stage or an actual death, this course prepares students to be culturally responsive to diverse perspectives and bereavement needs. Students will learn theoretical models of grief and loss and how to effectively evaluate the needs of grieving individuals, families, communities and their support systems.

**SOWK 4742 Disability Studies (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of disability. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of the epistemology of the notion of disability. This course will explore the social construction of concepts of ableism and identity, engage in historical analysis of disability (both domestically and internationally), and familiarize students with pertinent legislation/policies that impact persons with disability (PWD). Students will learn definitions of disability, come to know more about the spectrum of disability and utilize critical theoretical perspectives. The study of disability includes persons with disability (PWD), including the broad range of categorizations related to mental health, physical health, and cognitive ability. Students will engage in critical dialogue around the representation of PWD in our culture. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to PWD and explore various facets of self-determination, independent living, relationships and sexuality, and the role of family, power and privilege in the lives of persons with disabilities. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4749 Culturally Responsive Practice with LatinX (3 Credits)**

Addresses issues related to mental health needs within Latinx populations in the US, as well as intervention and theoretical approaches for working with Latinx communities. Covers a selection of interventions and strategies for cross-cultural use in adequately addressing the needs of Latinx communities. A required course for the Latinx Social Work Certificate. Prerequisite: SOWK 4750.

**SOWK 4750 Critical Perspectives on the Latinx Context (3 Credits)**

This course provides a framework for culturally responsive social work practice designed to meet the needs of the Latinx community. Students acquire core principles grounded in an understanding of social justice, privilege and oppression, including the interconnection between human and civil rights, globalization, immigration and poverty. Students learn about the diversity of Latinx cultures, community development, historical patterns of oppression, spirituality, and the role of Latinx movements. In an effort to decolonize the classroom, the students are invited to engage as full co-creators of the curriculum and class experience through social, emotional and somatic learning. As a result of this course, students understand how to advocate for nondiscriminatory cultural, social and economic practices within a Latinx context and experience. The course is designed for students who have an interest in understanding issues facing the Latinx community. Enrollment preference is given to Latinx Social Work Certificate students. Interested students not in the certificate should contact the Latinx Social Work Certificate coordinator.

**SOWK 4752 Trauma Informed Assessment and Interventions (3 Credits)**

This course provides an overview of multi-system level definitions of traumatic experience—historical, individual, interpersonal, family, organizational, and community. The emphasis is on social work practice that is culturally responsive, growth-oriented, and strengths based, in which the study of trauma is approached from a theoretical base that perceives the trauma response as a "response" rather than a "disorder." Trauma informed assessment and interventions are examined, incorporating a social justice perspective on historical trauma, poverty, and interpersonal violence. This course promotes the unique contribution social workers offer through the lenses of strength, resilience, and coping as well as commitments to cultural responsiveness and ecological/systems factors. Students will identify how secondary trauma impacts social workers and the importance of professional accountability to self-care and ongoing growth and development.

**SOWK 4753 Social Development in Latin America (3 Credits)**

This course examines social development in Latin America. Knowledge acquisition is focused on social, political, economic and cultural realities of this region and on the skills required to be an active participant in effective change efforts. This course is required for students in the LatinX Social Work Certificate Program and is open to all students with shared interest.

**SOWK 4757 Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (1-3 Credits)**

This required course (health and travel alerts permitting) for the Latinx Social Work Certificate combines academic classroom instruction with experiential and conversational learning. Country location for this study abroad course is determined based on yearly certificate objectives and travel advisories. The course has previously travel dot Chiapas, Mexico to explore human rights, development, economic policy, culture and language. Students engage and learn alongside community partners, including nonprofit's that focus on hunger and education, gender equity, sustainability as well as nongovernmental organizations that defend human rights by accompaniment with indigenous communities.

**SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (1-3 Credits)**

This course is designed to introduce students to the social, cultural and conservation issues of Kenya and East Africa. This course is field-based with strong emphasis on service learning and direct experiences. Course readings, lectures, classroom discussions, service learning projects and field work in rural Kenya provide participants firsthand experience in the social, cultural, historical, political, environmental, ecological and economic realities that exist in Kenya. This course is open to qualified concentration and advanced standing Graduate School of Social Work students. The course meets on campus for four sessions before traveling to Nairobi, Voi, and Kasigau, Kenya. Due to the intensive nature, remote travel logistics and costs for this course, direct communication with the professors is required. Qualifications include: willingness to sign International Travel Agreement, willingness to receive required medical authorization and immunization, academic good standing, and readiness for the physical and emotional demands of traveling in rural and remote Africa.

**SOWK 4759 Global Cultural Perspectives: Ethical Considerations (3 Credits)**

Social workers increasingly practice in global communities both nationally and internationally. Changes in practice environments demand that social work practitioners are informed citizens of comparative cultures and societies. This course examines the values and ethics of social work practice in a global context of power, privilege and oppression. Course materials and educational experiences are used to challenge students to examine ethical and value-based conundrums when practicing in global settings and to develop practice skills to enhance the health, well-being and sustainability of communities. Through the use of case studies, critical thinking, cultural inventories and reflexivity the course supports and challenges students' personal growth and professional practice.

**SOWK 4760 Resource Development and Fundraising (3 Credits)**

This course examines strategies and tactics around skill building in fundraising, resource-development strategies, grant-proposal writing, budgeting, and fiscal processes common to not-for-profit or governmental organizations. Topics include resource development and acquisition (fundraising) and discussions on the budget process required resource management for nonprofit organizations.

**SOWK 4762 Bosnia in Transition: The Social Work Response (1-3 Credits)**

This course provides students with the unique opportunity to learn firsthand about the social work response in post-war Bosnia through a social justice lens. The social, cultural, historical, political, economic, religious, legal and ethnic characteristics of the former Yugoslavia will be explored as context for studying the genocide that occurred in the 1990s. Learning will occur in the classroom at GSSW, followed by travel to Bosnia. Students will be exposed firsthand to the local, national and international efforts toward rebuilding and healing, through lectures provided by faculty at the University of Sarajevo School of Social Work, interaction with Bosnian social work students, visits to NGOs focused on the post-war efforts, visits to sites important during the war, visits to war tribunal sites, and exposure to current legal, economic and human service processes.

**SOWK 4763 Social Work and Social Justice in South Africa (1-3 Credits)**

This three-credit course will be conducted in partnership with Educo Africa in Cape Town, South Africa. The course will provide experiential and service learning social work experiences. Course activities will encourage cross cultural learning experiences and increase knowledge pertinent to South Africa's social, cultural, environmental, political and historical reality. It will expose students to Community Development challenges as well as environmental and social justice issues in a South African context. The goal of the course is to increase personal, community and global leadership potential of social work and social development professionals. This course in partnership to Educo Africa will use a community-based context to increase the effectiveness and expertise of students and will support student's engagement in program development and building international networks and partnerships.

**SOWK 4764 Historical Trauma and Healing (3 Credits)**

This course is designed to provide students with a context for practice with communities experiencing historical trauma. We learn about the conceptualization of historical trauma, its impact on communities as well as community responses to it. We also discuss the importance of cultural protective factors, strengths, and culturally relevant models of healing around multigenerational, collective experiences of trauma. A number of practice approaches found useful with communities experiencing historical trauma are presented and discussed. Class format includes presentations, small group discussions, films, poetry, movement, and experiential learning in the community. This course is built upon the concepts of empowerment practice, indigenous models of social work, and narrative theory and practice. We use these perspectives as we explore work around historical trauma in communities. This class provides social work direct practice skills on individual, family, community and policy levels.

**SOWK 4765 Global Social Change (3 Credits)**

Social development is a process of planned change intended to bring about a better correspondence between human needs and social policies and programs. This class has a fully global focus with particular emphasis on transitioning economies to align with human wellbeing. Practice-oriented, the class is geared toward a knowledge of policy-making for global human security within a dramatically changing environment and the skills required for local social development.

**SOWK 4782 Feminisms in Social Work Practice (3 Credits)**

This course engages students in the conversation of scholarship and social work practice issues related to social justice and the oppression of women. The course is designed to expand the knowledge of theory, research, policy and practice for working with diverse groups of women in multiple settings. Feminist social work perspectives for social work practice at micro, meso and macro practice levels will be critically examined. Topics include feminist theories, or feminisms, including eco-feminism and womanism, clinical and community feminist practice models, globalization and women, and the value of feminist research. These topics will be informed by knowledge and awareness of intersectionality, oppression and privilege. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4784 Suicide Assessment and Interventions (3 Credits)**

This course builds students' competencies in assessing suicide risk, planning for safety, and providing counseling to individuals who are thinking about suicide or have made a suicide attempt. This class examines theories of suicide causation, methods of suicide risk assessment, and models of techniques for intervention. Students will learn practices for eliciting sensitive information about troubling thoughts, assessing and documenting a client's level of suicide risk, and using cognitive-behavioral and other methods to help reduce suicide risk.

**SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 Credits)**

This course meets the values for practice requirement and is relevant for students who are interested in trauma, human rights, international issues, prevention of child abuse, intervention with victims of violence, interventions with child abuse, interventions with high-risk youth, and PTSD. This class investigates human trafficking from a social work perspective: prevention, intervention, and support of victims. Additionally, this course investigates regional differences in both labor and sex trafficking. The class also studies how prevention, intervention, and giving support to victims change from different regional (Asian, African, European, and Latin American) perspectives. The course also investigates human trafficking in the US, both with domestic and international victims. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4790 Human Sexuality (3 Credits)**

Integrates human sexuality in the thinking and practice of social workers. By viewing sexual behavior from the social work perspective, the student is prepared to assume a significant role in helping clients deal with issues of human sexuality. Focuses on clients experiencing sexual dysfunction and on sexually oppressed client groups including the elderly, the homosexually or bisexually oriented, the physically or developmentally challenged and the sexually abused. An elective course.

**SOWK 4795 Foundations for Human-Animal-Environment Interactions in Social Work (3 Credits)**

Foundational course with broad survey of the field and value exploration. Introduction to cultural and social justice aspects of human-animal-environment interactions. Formation of personal HAEI-SW vision and ethical framework, and beginning of culmination project concept development. This is the initial required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate.

**SOWK 4796 Human-Animal-Environment Interventions in Social Work Practice (3 Credits)**

Focus on skill development for the integration of animals in social work practice with a primary focus on treatment. Exploration of clinical and community practice frameworks across the lifespan. This is the second required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate. Prerequisite: SOWK 4795 or permission of instructor.

**SOWK 4797 Professional Integration of Human-Animal-Environment Interactions in Social Work (3 Credits)**

Culmination course with a focus on applying knowledge and demonstrating competence through service or program design. Includes professional development and job search preparation, unique to HAEIs in social work. Prerequisites: SOWK 4795 and SOWK 4796.

**SOWK 4900 Methods for Evaluating Practice and Programs (1-3 Credits)**

Provides students with strategies for evaluating social work practice at multiple system levels. Prerequisite: SOWK 4201 or admission to advanced standing program.

**SOWK 4901 Applied Practice Evaluation Research (3 Credits)**

Provides students with the opportunity to conduct a practice evaluation project in their field setting. Prerequisite: SOWK 4900.

**SOWK 4902 Public Impact for Policy, Community Organizing, and Research Dissemination (3 Credits)**

This course examines strategies for translating research for non-academic audiences. Topics include identifying the best approaches based on audience and goal of dissemination, ethical issues in translating complex research findings, and issues in working with media. A central value of dissemination for public impact is bridging the academy and communities most impacted by the research with particular attention to communities experiencing marginalization.

**SOWK 4903 Photovoice as Intervention and Research Methodology (3 Credits)**

This course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research.

**SOWK 4904 Introduction to Human-Centered Design for Evaluation & Program Development (3 Credits)**

This course will provide an introduction to the Human-Centered Design process and its application in developing and evaluating programs. Human-Centered Design is both a creative and practical process for generating solutions that place the people you serve at the center of the design process. During this course, you will move through the human-centered design process with a team, empathizing, prototyping, iterating, and finally pitching to a community partner from GSSW for whom you will be evaluating and developing a solution. You will first build insight and understanding about a focal issue through interviews with experts and end users, in-person observation, and other creative exercises intended to evaluate existing processes and experiences. Teams will utilize this knowledge to take a fresh look at the presented issue and generate breakthrough ideas in partnership with the end user and the GSSW groups who serve them. An iterative process of ideating and prototyping solutions, eliciting feedback, and refining ideas will culminate in pitch presentations at the end of the course. Your team will document its design process and final solutions in detail, which will then be delivered to the GSSW partner for potential implementation.

**SOWK 4950 Foundation Field Internship (0-15 Credits)**

This required practicum provides foundation students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4965 International Field Practicum (0-18 Credits)**

This international course fulfills partial requirement for a student's concentration year practicum. In an international social work setting, the practicum provides students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4970 Concentration Field Internship (0-18 Credits)**

Concentration students participate in planned practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics, and values. Prerequisite for 2-year students: successful completion of foundation-year course work and field internship. Prerequisite for students with advanced standing: successful completion of advanced standing prerequisite courses and BSW-year internship. Field must be taken concurrently with concentration-year course work, or after core concentration course work. Concentration-year field requires a minimum of 20 hours a week experience at the assigned field agency. Any deviation from this standard requirement must be approved by the Director of Field Education. Prerequisite: SOWK 4950 or 4299.

**SOWK 4971 Experimental Class (3 Credits)**

Experimental courses allow GSSW to provide a wide variety of course offerings that respond to current issues and themes in the profession as they arise, as well as providing specialized courses that relate to the interests and areas of expertise of our faculty. All experimental courses are offered as electives open to all students. Prerequisite: determined by each instructor.

**SOWK 4990 Topics in Social Work (1-4 Credits)**

This topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard MSW curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year that have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to social work practice, theory, or research. Topics vary from term to term and may be limited by program administrators, faculty, or by student interest.

**SOWK 4999 Capstone (0-1 Credits)**

This course is a 0-1 credit (Pass-Fail) required course in which students document their work through the development of an individual portfolio. Students are asked to upload artifacts (papers, presentations and field accomplishments) from both classroom and field internship that demonstrate how they have met the CSWE foundation and concentration specific EPAS competencies and practice behaviors. Students complete a reflection statement on their learning as it relates to the EPAS competencies.

**SOWK 5000 Seminar in Professional Social Work Issues (2-6 Credits)**

Examines the dilemmas and challenges confronting the social work profession and social work education. Examines the nature of professional education, the nature of the profession itself and the forces internal and external to the profession that have an impact upon practice and education. Required.

**SOWK 5001 Grant Writing for Soc Science (3 Credits)**

This course provides foundational knowledge for social work researchers preparing to engage in grant seeking and proposal development. This course is designed to help students develop the knowledge and skills to identify targeted research funding opportunities, navigate Requests for Proposals from government and foundation funding sources, develop tailored proposals to fit a particular problem definition and funding source, prepare a budget and management plan to support a research project, work collaboratively with community partners, and understand university grants management mechanisms. Ethical dilemmas in grant seeking, grant writing, and grants management will be discussed. This course is a general elective with relevance to social work students entering a research profession.

**SOWK 5005 Categorical Data Analysis (4 Credits)**

This course is an intermediate statistics class for doctoral students in the social sciences. The course is designed to provide a general understanding of categorical data analysis. Course content will focus on regression analyses for categorical dependent variables/outcomes. Students are often familiar with linear regression analyses that are used for continuous dependent variables/outcomes, but these data analysis methods are inappropriate when working with binary, ordinal, multi-categorical (i.e., nominal with >2 categories), and count dependent variables/outcomes. This course will cover a range of data analysis methods to examine categorical dependent variables/outcomes, such as logistic, ordinal, multinomial, and poisson/negative binomial regression analyses. For each method, students will learn the background; statistical underpinnings/assumptions; computation of statistics; interpretation and reporting of statistical results. Students also learn computer applications that are used to perform these statistical analyses. Data analysis using computer software (Stata) is required.

**SOWK 5101 Social Welfare Policy Analysis and Development (3 Credits)**

Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. Required.

**SOWK 5110 Introduction to Advanced Quantitative Research Methods (3 Credits)**

This required doctoral course introduces students to quantitative approaches to conducting social research. The course includes material related to measurement, sampling, research design, data collection, and data analysis. While each of these topics encompasses technical issues to be mastered by doctoral students, the logic and underlying rationale of these research methods is of prime importance in this course. A second component of the course requires students to define and begin to develop a substantive area of intended study and research during their enrollment in the doctoral program. Elements of articulating a substantive research area and steps toward defining key research questions in a topical area are reviewed. Aspects of conducting literature reviews leading to the articulation of a substantive research area are discussed in class sessions.

**SOWK 5111 Quantitative Methods for Assessing Social Interventions (3 Credits)**

Social work researchers are in a unique position to contribute to knowledge about the causes of individual and societal problems and to test interventions that seek to prevent or ameliorate such problems. A variety of qualitative and quantitative research methods are used to advance knowledge about etiological factors contributing to individual and social problems and to assess the outcomes of specific social policies and practice strategies. This course presents a detailed examination of quantitative methods and designs that are useful in assessing the effects of social interventions. Measurement, sampling and design issues in generating and testing research questions and hypothesis are explored. Experimental, quasi-experimental, and survey research designs are assessed and applied to practice and policy issues and problems. Special emphasis is placed on developing skills necessary to conduct intervention research. Cognate students may be permitted on a case by case basis, space permitting.



**SOWK 5120 Introduction to Advanced Qualitative Research Methods (1-3 Credits)**

This course provides a substantive doctoral-level review of content on qualitative research methods and strategies. It is developed for students from social science disciplines. The content includes the nature of the method, the epistemological implications and assumptions, and appropriate applications. Student learning and evaluation includes the experience of developing a research proposal based on qualitative methodology and conducting data collection for a mini-research project. This course is required for social work doctoral students. Students from other departments may register with permission from the professor.

**SOWK 5121 Qualitative Data Analysis (1-3 Credits)**

The focus of this course is on data analysis and interpretation, demonstration of the science of the analysis, and presentation of findings in oral and written forms. Students are expected to conduct qualitative analyses on textual data they collected as part of SOWK 5120 or as a result of some other qualitative data collection experience. Over the course of the term students learn to code and analyze their data, interpret findings, orally present those findings, and write a final paper in which they demonstrate a rigorous engagement with qualitative data analysis and the literature relevant to their topic. This course is for SOWK PhD students only. Cognate students may be permitted on a case by case basis, space permitting. Prerequisite: SOWK 5120.

**SOWK 5130 Mixed Methods Research in Social Work (3 Credits)**

This course introduces doctoral students to mixed methods research in social work and the social sciences. Students explore mixed methods as a third research paradigm that strategically combines both quantitative and qualitative methods within a single inquiry. The course encourages students to actively reflect on previous quantitative and qualitative research training. Specific topics for the course include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination consideration. SOWK PhD students only. Cognate Students will be allowed to register on a case by case basis, space permitting.

**SOWK 5131 InDIGQualitative RsrchMethods (3 Credits)**

This course is designed to provide students with a foundation for advanced qualitative research methods with Indigenous and other minoritized communities using arts-based inquiry and interpretive methods for collecting and analyzing data. Grounded in an Indigenous epistemological framework applied across intersectional and diverse communities, students will explore deeply contextualized questions about individual and social phenomena. Consistent with Indigenous ways of knowing, self-reflexivity and location of self-in-relation to community and knowledge will be prioritized as questions are developed and considered. We will explore auto-ethnography and auto-archaeology as methodologies while also engaging in performative, creative expression and visual praxis methods for inquiry and analysis. Class format will include presentations, small group discussions, films, poetry, movement, and collaborative pedagogical techniques.

**SOWK 5201 Intro to Statistical Methods in Social Work (5 Credits)**

Examines the use and interpretation of statistics in educational and human services research, including descriptive and inferential statistics. Required.

**SOWK 5202 Correlation and Regression (4 Credits)**

Examines correlational and multiple regression research designs and their application to social work and social science problems. Cross-listed with RMS 4911, SOWK 5952. Prerequisite: SOWK 5201.

**SOWK 5204 Intro to Multilevel Modelling (4 Credits)**

This course is an advanced course in statistics for doctoral students and an introductory course in multilevel modelling. It is an applied course designed for students with a thorough knowledge of ordinary least squares (OLS) regression (SOWK5202 and SOWK 5005 or equivalent). The course will cover not only the traditional theories and application regarding two-level models for continuous outcomes and binary outcomes, and growth curve models, but also the innovative methodology in using multilevel modelling to address socioeconomic intersectionality and disparities, i.e., multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA). The goals of the course are to develop the skills necessary to identify an appropriate technique for multilevel data analysis, estimate models, conduct diagnostics, and interpret results for continuous and binary outcomes. We will use Stata 15 (or any later version) to perform the analyses. Pre-requisites: SOWK 5202 and SOWK 5005 or equivalent.

**SOWK 5300 Social Science Theory and the Philosophy of Science (3 Credits)**

This foundation doctoral level course introduces traditional issues and recent developments in the philosophy of science, and provides an overview of social science theory and theoretical frameworks. It examines philosophical questions on scientific inquiry and the consequences modern science imposes on our basic understanding of knowledge and nature. The course analyzes and critiques the social-and-behavioral-science foundations that undergird the social work knowledge base and current social work theories. There are no prerequisites for this course. This course is required to social work doctoral students.

**SOWK 5301 Social Work Theory in Research and Practice (3 Credits)**

This course builds on SOWK 5300, Philosophy of Science and Social Work Theory, to examine how theories, conceptual frameworks, perspectives, and models are used specifically within social work research, education, and practice. This course explores how theories are used in research and in social work interventions on individual, family, group, organizational, community, and policy levels. The course analyzes and critiques the social work knowledge base and the current state of social work theories. This course is required for social work doctoral students. Prerequisite: SOWK 5300.

**SOWK 5401 Quantitative Research Methods (4 Credits)**

Focuses on basic elements of quantitative social research methods: measurement, sampling, research designs, data collection and data analysis. Emphasizes logic and underlying rationale, as well as technical issues. Prior understanding of computer-based statistical analysis is helpful. Required.

**SOWK 5405 Advance Qualitative Analysis (3 Credits)**

Provides an understanding of analysis methods used to draw meaning from qualitative data, methods that must be practical, applicable and understandable to other observers. Prepares students to use a systematic, scientific process of analysis that captures the meaning of data while avoiding research self-delusion and unreliable or invalid conclusions. Topics include data collection, data reduction, data display, and conclusion drawing and verification. Methods include application of computer software. Prerequisite: SOWK 5121. Required.

**SOWK 5406 Critical Perspectives on Quantitative Research Methods (3 Credits)**

This required doctoral level course introduces students to critical perspectives on quantitative approaches to conducting social research. The course is the 2nd course in the required quantitative research methods sequence and will examine what it means to be a social scientist with a specific focus on critical perspectives in quantitative methods. The course includes material related to data processing, interpretation of results, use of results for non-academic audiences, and intersectionality, as well as an overview of experiments, surveys, and secondary data analysis. Students should gain mastery in these areas while critically examining the rationale and ethics of quantitative methods. Prerequisite: SOWK 5110.

**SOWK 5450 Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective (1-3 Credits)**

The focus of this course is to help you frame, organize, develop, and complete a proposal for your comprehensive exam, with a particular emphasis on building your skills in integration, synthesis, and critical thinking related to the social justice implications of your work. Students will receive support and feedback about how to integrate theory, policy and empirical research when stating the aims and implications of their proposal. Additionally, students will learn to apply a critical social work perspective to analyze the limitations of existing understandings of their substantive areas of interest. Students will learn to acknowledge complexity and bias of vantage and values in social work scholarship, identify the influence of context and question assumptions about dominant policy, research, and theoretical frameworks, and demonstrate a general understanding of the ways societal privilege and prejudice set the frame for analysis and intervention with the problem. Advisors and mentors participate in class presentations and critiques as a part of preparing the student for the comprehensive exam proposal meeting.

**SOWK 5500 Pedagogy in Social Work Education (3 Credits)**

This foundation course examines philosophies, theories, and pedagogical models that are utilized in social work education. It explores how various perspectives shape the approaches and techniques used and how these in turn impact classroom effectiveness and issues of classroom management. The course incorporates concepts and develops skills based on evidence-based teaching. This course is a required course for social work students and has no prerequisite. This course is for SOWK PhD students only.

**SOWK 5600 Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies (3 Credits)**

This course introduces students to anti-racist, feminist, queer, anti-oppressive and other critical perspectives on facilitation and pedagogy. The course is organized in four sections: theoretical frameworks; the role of identities in facilitation, training, and teaching; facilitation and course design and strategies; and supporting social action. Prerequisite: SOWK 5500.

**SOWK 5700 Teaching Practicum (3 Credits)**

This 3-hour required course provides classroom instruction and teaching opportunities designed to prepare doctoral students for faculty positions in undergraduate and graduate level social work education. Students work with a faculty mentor to pursue practicum placements that match their substantive interests. Students are expected to devote approximately 8 hours to the practicum per week. Restricted to Ph.D. students only.

**SOWK 5903 Photovoice as Intervention and Research Methodology (3 Credits)**

This doctoral level course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research. Finally, students will make an actionable plan for integrating photovoice into their doctoral-level research.

**SOWK 5990 Special Topics (1-5 Credits)**

This special topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard PhD curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year which have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to advanced social work theory, pedagogy, or research. Topics vary from term to term and may be initiated by program administrators, faculty, or by student interest.

**SOWK 5991 Independent Study (1-10 Credits)**

This is an opportunity for MSW students to undertake special study in a defined area of interest with faculty consultation.

**SOWK 5995 Independent Research (1-10 Credits)****SOWK 6991 Independent Study (1-10 Credits)**

PhD students undertake special study in a defined area of interest with faculty consultation. By arrangement.

**SOWK 6995 Independent Research (1-18 Credits)**

The formal mechanism for undertaking the dissertation, providing for faculty support through the appointment of a dissertation committee. By arrangement.

## Josef Korbel School of International Studies

The Josef Korbel School of International Studies is one of the world's leading schools for the study of international relations. Our interdisciplinary programs prepare tomorrow's global leaders for careers in commerce, government, diplomacy, security, sustainable development, global health and

humanitarian relief. Coming together from over 20 different countries, our students provide diverse perspectives that supplement the experience and research of our renowned faculty.

## Public Policy

Office: Sie International Relations Complex

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Web Site: <https://kobel.du.edu/academics-advising/programs-gr/mpp-public-policy> (<https://kobel.du.edu/academics-advising/programs-gr/mpp-public-policy/>)

The Master of Public Policy (MPP) prepares students with analytical skills and competencies for professional careers in government, private industry, and non-profits. Skills-based learning is joined by deep engagement in select policy areas of the student's choice—such as sustainability, social policy, urban policy, economic policy, business and government, and foreign policy and international security, among others. MPP faculty provide intensive classroom instruction and include professors from across the Korbel School of International Studies as well as public policy practitioners. Multiple experiential learning opportunities and the capstone individual policy memo prepare students for entering the real-world public policy environment.

MPP students graduate with a job-ready skill set, equally applicable to decision-making and leadership positions in the public, private, and non-profit sectors. MPP graduates are able to define policy problems across disciplinary boundaries and apply a range of methodologies as well as ethical awareness to evaluate and implement alternative courses of action in multiple settings.

The MPP degree is hosted by the Scrivner Institute of Public Policy at the Josef Korbel School of International Studies. The Scrivner Institute is dedicated to a broad, innovative, and robust engagement with the foremost policy issues of the day. It equips students with the life-long capacity to understand, analyze, and address pressing public policy issues, both as practitioners in myriad professions and as engaged citizens.

### Master of Public Policy in Public Policy

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-55.

#### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Program

### Master of Public Policy

The Public Policy program at the Josef Korbel School of International Studies is committed to the development of tomorrow's policy leaders through an innovative core curriculum that emphasizes analytical, evidenced, and expertise-based solutions to contemporary policy issues. The Master of Public Policy (MPP) degree, offered by the graduate program in public policy, gives students the opportunity to identify, analyze, and solve challenging policy issues at local, state, national, and global levels of governance.

**Curriculum Overview:**

Candidates must complete 60 credit hours.

**Degree Requirements:**

Code	Title	Credits
<b>Degree Core (three courses):</b>		<b>12</b>
It is highly recommended that students take these required degree courses in their first year in the MPP program to help prepare them for other courses, to keep them on track for completion, and to integrate them in their cohort. PPOL 4200 and PPOL 4400 are typically offered in the Fall; while PPOL 4500 is typically offered in the Winter and/or Spring.		
PPOL 4200	Microeconomics for Public Pol.	
PPOL 4400	Introduction to Policy Analysis	
PPOL 4500	Cost-Benefit Analysis/Pub Pol	
<b>Policy Track (choose one of two tracks):</b>		<b>12</b>
<b>Local/National Track</b>		
INTS 4750	The Policy Making Process	
PPOL 4350	The Policy Lab: Local/National	
Experiential coursework. Choose one:		
PPOL 4225	Economic Policymaking: From Concepts to Practice	
PPOL 4655	Negotiating Environmental Conflict and Policy	
INTS 4226	Social Entrepreneurship & Sustainable Development	
Or a Substitution as Approved by the Degree Director		
<b>Comparative/Global Track</b>		
INTS 4349 or INTS 4355	Comparative Public Policy and Finance Finance and Development	
PPOL 4351	The Policy Lab: Comparative/International/Global	
Experiential coursework. Choose one:		
INTS 4630	Civilian Protection in Armed Conflicts	
INTS 4672	Environmental Peacebuilding	
PPOL 4503	Elections and Conflict Dynamics	
Or a Substitution as Approved by the Degree Director		
<b>Skills (three courses):</b>		<b>12</b>
PPOL 4702	Special Topics in Public Policy Skills (Data, Evidence, and Public Policy)	
PPOL 4702	Special Topics in Public Policy Skills (Policy Writing )	
INTS 4057	Statistics	
A total of 4 credits (in the form of one 4-credit or two 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. This list is updated annually and can be found on the Korbel Student Affairs Digication site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.		
<b>Specialization (three courses):</b>		<b>12</b>
Specializations are sets of three full credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digication site.		
<b>Capstone</b>		<b>4</b>
PPOL 4950	Policy Memorandum	4
(Student-driven analytical project on a topic of your choosing, ideally related to Specialization. Typically completed in the second year.)		
<b>Internship: Required</b>		
INTS 4981	Internship *	0 or 4
Please see the Student Affairs Digication site <a href="https://du.digication.com/korbelgradstudents/internships">https://du.digication.com/korbelgradstudents/internships</a> ( <a href="https://du.digication.com/korbelgradstudents/internships/">https://du.digication.com/korbelgradstudents/internships/</a> ) for more details.		
<b>Supporting Courses:</b>		<b>4-8</b>

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to public policy (international studies) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

**Total Credits** **60**

- \* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
  2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
  3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.
  4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

## Certificate Program

### Specialized Certificate in Public Policy

The Public Policy graduate specialized certificate centers on fundamental policy analysis skills along with core knowledge of the policy making process. The certificate will equip students with the core expertise and skills to identify, analyze, and solve challenging policy issues at urban, state, national, and global levels of governance, preparing them for policy-related professional careers that are related to their primary degrees in the public, private, and non-profit sectors.

#### Requirements

Complete 16 credits of coursework:

Code	Title	Credits
<b>Required Policy Analysis Skills (8 credits):</b>		<b>8</b>
PPOL 4400	Introduction to Policy Analysis	
PPOL 4701	Special Tpcs in Public Policy (Data, Evidence, and Public Policy)	
PPOL 4702	Special Topics in Public Policy Skills (Policy Writing)	
<b>Select one course on the policy-making process (4 credits):</b>		<b>4</b>
INTS 4349	Comparative Public Policy and Finance	
INTS 4750	The Policy Making Process	
<b>Select one additional policy analysis skills course (4 credits):</b>		<b>4</b>
PPOL 4200	Microeconomics for Public Pol.	
PPOL 4500	Cost-Benefit Analysis/Pub Pol	
<b>OR with advisor permission students may propose a public policy specialization course (4 credits) –examples include:</b>		
INTS 4671	Climate, Science, and Society	
INTS 4674	Water Policy	
PPOL 4410	Health Policy	
PPOL 4550	International Development Policy	
PPOL 4600	Regulation and Institutional Analysis	
<b>Total Credits</b>		<b>16</b>

**PPOL 4100 American Public Policy System (4 Credits)**

The American Policy Agenda, which is required for MPP students, will provide an intensive overview of the development of American public policy in the 20th century, with special emphasis on the interconnection between the values of the public and private sectors. Through the lens of a useful descriptive model, graduate students will learn concepts of the role of government have evolved from: the (1) constitutional period, wherein political society was thought to be a rational device for the protection of property and liberty and prosperity was equivalent to the free management of affairs; to the (2) administrative period, wherein powerful regulatory agencies were created to control concentrations of corporate power and the idea developed that the market does not always reflect the social good; to the (3) bureaucratic period, wherein the stock market collapse of 1929 and the Great Depression reversed key ideas of limited government inherent in the constitution and, beginning with the New Deal, social engineering in the "public interest" defined virtually every problem as "national;" to the (4) social welfare period, wherein government became the source of vast entitlements and benefits and interest groups came to dominate the policy debate; to the (5) current period of stalemate, gridlock, and reconsideration, wherein big government is a given, along with a utilitarian social contract defined as that which provides the most efficiency, the most productivity, and the most consumption for the most people.

**PPOL 4200 Microeconomics for Public Pol. (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the MPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus," will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality".

**PPOL 4225 Economic Policymaking: From Concepts to Practice (4 Credits)**

This course focuses on understanding the policymaking process and the social, political, and economic forces that influence it. We focus on the study of selected examples of policy design, discussing the views, constraints, and motivations of key actors and groups that influence the policy formation process and explore how these results differ from the policy prescriptions in neoclassical economic theory. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics, international economics, and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, and the reliability of economic data.

**PPOL 4250 Hacking for Good (4 Credits)**

The basic structure of the course involves teams of students competing to find the most innovative approach to a common problem. The course is led by faculty member, who will connect students to local experts and policy makers. Students will work together to research, analyze, propose, and present a proposal that addresses some aspect of a pressing societal project. The final product is judged by a panel of local policy makers and other experts. Topic vary from year to year. Examples include such issues as combatting homelessness in Denver, designing more efficient transportation systems, reducing water use in urban areas, reducing Denver's carbon footprint, and the like.

**PPOL 4300 Quantitative Analysis-Pub Pol (4 Credits)**

This course will provide the MMP student with the tools of mathematical analysis needed for the advanced study of public policy issues and evaluation of alternatives. Topics will include descriptive statistics, probability, sampling, estimation, inference and hypothesis testing, variable analysis and correlation, regression theory, reliability and validity, and prediction and simulation. Students needing review of college-level algebra will be referred to appropriate tutorials. The overall learning objective of this course is to help students recognize and apply basic statistical concepts to Public Policy and, more in general, Social Science analysis. Students will learn how to use statistical software to: build datasets, describe data in a visual and analytical fashion, perform statistical tests, and construct basic statistical inference models. Students will also learn how to report their analytical findings for Public Policy analysis.

**PPOL 4350 The Policy Lab: Local/National (4 Credits)**

The Policy Lab is an experiential course designed to introduce students to the policy-making and political environment surrounding a specific area of public policy at the state and national level. In different years, the Policy Lab might cover as a specific area, for example, fiscal policy, education policy, or health policy, and so on. The basic structure of the course is designed to: (1) introduce students to general thematic scholarship and expertise on the policy area being examined, (2) immerse students in the state and/or national policy-making environment through guest lectures and discussions with lawmakers, academics, policy experts, and political practitioners, and (3) connect students to lawmakers, nonprofit organizations, or other advocacy groups working on the specific policy area in order to work on proposing legislation, ballot initiatives, or other frameworks for reform design and implementation. The final product is a professional policy consultant report or the equivalent. The course will be led by faculty members with deep professional expertise in the policy issue being explored.

**PPOL 4351 The Policy Lab: Comparative/International/Global (4 Credits)**

The Masters in Public Policy Curriculum has two tracks depending on student professional experience and expectations. The first, and long standing, track centers on working professional policy problems centered in a U.S. context. The second track is centered on comparative/international/global policy questions for those students seeking to work in international and/or non-U.S. contexts. Both tracks have a Policy Lab requirement but given the potential diversity of the logical policy questions to be addressed, each has its own Policy Lab designation to help match faculty expertise and student interest to the learning objectives sought of the course. The basic structure of the lab course involves student teams, each working on a different issue for an external client. The course is led by a faculty member who coaches the student teams and stands in as or gathers a panel from the PPOL community to serve as the clients, identifies other experts and policy makers who can be resources for the team, helps students learn how to learn about the issue, provides feedback at critical junctures during the quarter, and assesses the quality of the students' work. The final product is a professional consultants' report.

**PPOL 4400 Introduction to Policy Analysis (4 Credits)**

This course will provide the student with the analytical tools necessary to evaluate competing points of view, using empirical techniques, logic, and statistical inference. Case studies will be drawn from the current legislative and regulatory environment and will provide the MPP student with opportunities to construct a course of action, based on the use of logically consistent arguments and on the persuasive use of facts and empirical data. Students in this course will also learn the history and development of the scientific method, how to distinguish speculation, theory, fact, and opinion, how to identify the validity, ideological content or irrationality of data, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to argument not based on evidence. Students in this course how to identify the validity, ideological content or irrationality of information, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to arguments not based on evidence.

**PPOL 4410 Health Policy (4 Credits)**

This course will examine major health care policy decisions and how each shaped fundamental elements of the U.S. health care system. Course material will explore the questions of why America spends more on health care than other industrial nations, why 8.6 percent of Americans do not have health coverage, and why the location of one's birth or current neighborhood may affect their health. These topics will be explored through the lens of recent and current policy debates, including the Affordable Care Act and other federal health care programs, the response to the COVID-19 pandemic, and the cost and affordability of prescription drugs. In addition to mastering the content in these areas, the course will weave in policy scenarios and exercises meant to mimic decisions federal and state policymakers must make when addressing policy challenges created by the U.S. health care system.

**PPOL 4500 Cost-Benefit Analysis/Pub Pol (4 Credits)**

How do we determine if programs have met their objectives? Increasingly, this is a matter for empirical evaluation. This course will focus on quantitative approaches to program evaluation and on the primary tool available to the policy analyst in the modern organizational framework, cost-benefit analysis. Various issues will be considered, including the "costs" associated with taxes (and tax expenditures), governmental mandates, health and safety regulation, environmental regulation, government "investments," such as those in education, defense, law enforcement, and the regulation of financial industries.

**PPOL 4501 Great Issues Forum (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4502 Issues Forum II (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4550 International Development Policy (4 Credits)**

This course surveys international development policy. It has two main goals: (1) to build a multi-faceted understanding of what constitutes “development” and (2) to compare and assess different approaches to aiding the success of low- and middle-income countries. We will begin by asking what development is and examining the expansive ways in which it can be defined and measured, looking at these questions from economic, institutional, social, and political angles. We will study macro approaches to industrialization, economic growth, and development over the past half-century, with an emphasis on comparing and contrasting different development strategies. We will then focus on the development and aid business, looking at what the World Bank and other aid agencies do, the successes and failures of traditional approaches to foreign aid, and new thinking and actors in international development policy. We will end by examining how development policy could better address key contemporary challenges, such as the natural resource curse, corruption, and the challenges of building effective and legitimate governance in developing countries.

**PPOL 4600 Regulation and Institutional Analysis (4 Credits)**

This course will provide the MPP student with a solid understanding of the legal basis for policy action, through a case-based examination of executive and legislative authority, judicial policy-making, the expansion of the due process and equal protection clauses of the 14th Amendment, and the expansion of administrative authority under the Administrative Procedure Act. Such issues as affirmative action, government contracting, school finance, antitrust, and substantive due process will be presented utilizing a combination of traditional legal analysis and the cost-benefit approach of the policy specialist.

**PPOL 4655 Negotiating Environmental Conflict and Policy (4 Credits)**

Environmental issues engage multiple stakeholders with differing knowledge sets, beliefs, values, and even worldviews. Science alone is ill-equipped to resolve such complex disputes. Environmental conflicts involve negotiating differences, as do the development and implementation of environmental policies. This course explores both these ‘downstream’ and ‘upstream’ arenas. Within the domain of environmental and public policy conflict and policy, it focuses on the range of processes used to address these conflicts and issues, what different processes may have to offer, and the tradeoffs in both process and substance that must be considered. Themes of public involvement, information management & integration, and designing for adaptation will undergo consideration and critique of approaches. Multiple case studies will be explored and compared.

**PPOL 4700 Public Management & Budgeting (4 Credits)**

This course introduces students to the topic of public management, which includes concepts such as organizational structure, performance management, and strategy development. In addition, the instructor will teach the techniques and concepts of government and non-profit budgeting/financial management. The budgeting process includes program development/implementation, cost and revenue estimation and projection, and budget evaluation. The relationship between public management and budgeting will be explored.

**PPOL 4701 Special Topics in Public Policy (1-4 Credits)**

Various topics in public policy are covered. Topic subjects to change each term as deemed appropriate with local, regional and federal policy issues and regulation changes. Two examples are: “Denver Dynamics” explores the policy options and responses to the challenges of big city governance. Exclusive interactions with major stakeholders in the City and County of Denver are featured, with a view to giving the student an insider’s view of power, economic development, political influence and decision-making. “Getting Results Inside the Beltway: Power and policy in Washington, D.C.” is a travel course consisting of specially-arranged one-on-one sessions with Washington-based lawmakers, decision-leaders, and policy experts, through which graduate students will gain an understanding of the dysfunctionalities of the current budget process, political polarization, the interest groups that shape the current policy dynamic, the increasing importance of media in shaping policy, the solutions that will be required for the United States to regain fiscal sanity and solvency—and the challenges that will need to be met to preserve American hegemony and redefine national security.

**PPOL 4702 Special Topics in Public Policy Skills (1-4 Credits)**

Various professional skills and competencies are covered in these 1-credit classes. Each student will be required to complete four of these for the MPP degree. The topics are subject to change given student needs. Examples of topics may include: Diversity and Inclusion in Public Policy, Drafting a Policy Memo, Presenting a Policy Position to a Professional Audience, Working in Teams Addressing Complex Issues, Ethics Challenges in Public Policy Choices, and The Practice of Public Policy.

**PPOL 4715 Negotiation Workshop (2 Credits)**

Negotiation is an important skill for most jobs and professions. Whether you are crafting policies or legislation, negotiating agreements, advocating for rights, making arrangements to meet human needs, or implementing programs, the ability to strategically advance your own or your group’s interests while working through differences allows efficient and mutually acceptable solutions to be created. Though some may feel negotiation is an art, it is also a skill that can be taught and practiced. In this course you will learn, and have opportunities to practice and improve, analytic skills, communication skills, and forms of preparation and execution. You will leave with new tools to advance your goals and to work with others to create solutions that are “win-win.”

**PPOL 4821 Executive Introduction to Public Policy (4 Credits)**

This course offers an introduction to the contemporary study of public policy for the Executive MPP student. It has three main goals: (1) to build a multi-faceted understanding of what constitutes public policy, with a particular emphasis on how public policy is co-created by government, private sector, and civil society actors; (2) to understand the range of political, social, economic, and institutional forces that shape public policies and their outcomes; and (3) to introduce different forms and techniques of public policy analysis tied to audience, context, and objectives. We will begin by asking what public policy is and examining why we need it, explicitly addressing how political and societal context and decisions shape public policymaking. We will examine the traditional foundations of how public policy is typically framed and analyzed, rooted in neoclassical economics. We will round out the course by considering new ways of thinking about and analyzing public policy.



**PPOL 4822 Executive Microeconomics for Public Policy (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the EMPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare, and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus" will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality."

**PPOL 4823 Executive Data Analysis and Visualization (4 Credits)**

This course is aimed at helping policy professionals to review basic principles of statistics and apply this knowledge to visualizing data for policy analysis and communication. Students will use software to produce visualizations for effective and accessible data description and analysis.

**PPOL 4841 Executive Cost Benefit Analysis (4 Credits)**

This course will focus on economic analysis and will provide an intensive overview of analytical tools used in public policy decision-making. After discussing economic theory and its role in policymaking, we will cover analytical techniques such as Cost Benefit Analysis, Cost Effectiveness Analysis, Cost Utility Analysis, and other analytical approaches. Economic analysis is both a science and an art. The aim of this course is to give students an understanding both of the practical aspects of economic analysis as well as its economic and philosophical foundations and ethical implications. Students should gain an appreciation of the role of economic analysis in policy decision-making and become comfortable with various analytical approaches commonly used by government officials and policymakers.

**PPOL 4842 Executive Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details across countries, over time, and even from issue to issue within the same country. In this course we will study several parts of those processes and some of the inputs into them. The overall goals for this course are: (1) to introduce students to the multiple features of the policy making process and the literature on those features; (2) to enable students to use effectively databases and other research tools to examine those features of the policy making process; and (3) to give students the experience of tracing a specific policy issue through the policy process to analyze how some features of that process affect the outcomes of the policy.

**PPOL 4843 Executive Policy Writing and Briefing (2 Credits)**

In this two-credit course, students will develop policy-specific applied writing skills for the most important contexts and purposes in government and policy settings. Students will learn the key elements, formats, and styles for four categories of policy writing: 1) issue analysis briefs, 2) decision briefs, 3) legislative testimony, and 4) comments to proposed regulations. Students will take part in peer-review exercises as well as simulated policy briefings summarizing their written materials.

**PPOL 4852 Executive International Economic Policy (4 Credits)**

This course focuses on understanding how governments design and implement economic policy and how economic, social, political, and cultural forces impact on that process. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics as well as international and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. In the discussion of these cases, we will contrast neoclassical economic theories of optimal policy design with political economy, structuralist, and institutional views of the policymaking process. Through each example, we will engage with the views, constraints, and motivations of key actors and groups that influenced the policy formation process. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, financing climate action, and the reliability of economic data.

**PPOL 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**PPOL 4950 Policy Memorandum (4 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

**PPOL 4991 Independent Study (1-4 Credits)**

Students will work in collaboration with faculty from the Institute for Public Policy Studies to complete an independent study project.

**PPOL 4995 Independent Research (1-8 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

## Courses

### **PPOL 4100 American Public Policy System (4 Credits)**

The American Policy Agenda, which is required for MPP students, will provide an intensive overview of the development of American public policy in the 20th century, with special emphasis on the interconnection between the values of the public and private sectors. Through the lens of a useful descriptive model, graduate students will learn concepts of the role of government have evolved from: the (1) constitutional period, wherein political society was thought to be a rational device for the protection of property and liberty and prosperity was equivalent to the free management of affairs; to the (2) administrative period, wherein powerful regulatory agencies were created to control concentrations of corporate power and the idea developed that the market does not always reflect the social good; to the (3) bureaucratic period, wherein the stock market collapse of 1929 and the Great Depression reversed key ideas of limited government inherent in the constitution and, beginning with the New Deal, social engineering in the "public interest" defined virtually every problem as "national;" to the (4) social welfare period, wherein government became the source of vast entitlements and benefits and interest groups came to dominate the policy debate; to the (5) current period of stalemate, gridlock, and reconsideration, wherein big government is a given, along with a utilitarian social contract defined as that which provides the most efficiency, the most productivity, and the most consumption for the most people.

### **PPOL 4200 Microeconomics for Public Pol. (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the MPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus," will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality".

### **PPOL 4225 Economic Policymaking: From Concepts to Practice (4 Credits)**

This course focuses on understanding the policymaking process and the social, political, and economic forces that influence it. We focus on the study of selected examples of policy design, discussing the views, constraints, and motivations of key actors and groups that influence the policy formation process and explore how these results differ from the policy prescriptions in neoclassical economic theory. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics, international economics, and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, and the reliability of economic data.

### **PPOL 4250 Hacking for Good (4 Credits)**

The basic structure of the course involves teams of students competing to find the most innovative approach to a common problem. The course is led by faculty member, who will connect students to local experts and policy makers. Students will work together to research, analyze, propose, and present a proposal that addresses some aspect of a pressing societal project. The final product is judged by a panel of local policy makers and other experts. Topic vary from year to year. Examples include such issues as combatting homelessness in Denver, designing more efficient transportation systems, reducing water use in urban areas, reducing Denver's carbon footprint, and the like.

### **PPOL 4300 Quantitative Analysis-Pub Pol (4 Credits)**

This course will provide the MMP student with the tools of mathematical analysis needed for the advanced study of public policy issues and evaluation of alternatives. Topics will include descriptive statistics, probability, sampling, estimation, inference and hypothesis testing, variable analysis and correlation, regression theory, reliability and validity, and prediction and simulation. Students needing review of college-level algebra will be referred to appropriate tutorials. The overall learning objective of this course is to help students recognize and apply basic statistical concepts to Public Policy and, more in general, Social Science analysis. Students will learn how to use statistical software to: build datasets, describe data in a visual and analytical fashion, perform statistical tests, and construct basic statistical inference models. Students will also learn how to report their analytical findings for Public Policy analysis.

### **PPOL 4350 The Policy Lab: Local/National (4 Credits)**

The Policy Lab is an experiential course designed to introduce students to the policy-making and political environment surrounding a specific area of public policy at the state and national level. In different years, the Policy Lab might cover as a specific area, for example, fiscal policy, education policy, or health policy, and so on. The basic structure of the course is designed to: (1) introduce students to general thematic scholarship and expertise on the policy area being examined, (2) immerse students in the state and/or national policy-making environment through guest lectures and discussions with lawmakers, academics, policy experts, and political practitioners, and (3) connect students to lawmakers, nonprofit organizations, or other advocacy groups working on the specific policy area in order to work on proposing legislation, ballot initiatives, or other frameworks for reform design and implementation. The final product is a professional policy consultant report or the equivalent. The course will be led by faculty members with deep professional expertise in the policy issue being explored.

**PPOL 4351 The Policy Lab: Comparative/International/Global (4 Credits)**

The Masters in Public Policy Curriculum has two tracks depending on student professional experience and expectations. The first, and long standing, track centers on working professional policy problems centered in a U.S. context. The second track is centered on comparative/international/global policy questions for those students seeking to work in international and/or non-U.S. contexts. Both tracks have a Policy Lab requirement but given the potential diversity of the logical policy questions to be addressed, each has its own Policy Lab designation to help match faculty expertise and student interest to the learning objectives sought of the course. The basic structure of the lab course involves student teams, each working on a different issue for an external client. The course is led by a faculty member who coaches the student teams and stands in as or gathers a panel from the PPOL community to serve as the clients, identifies other experts and policy makers who can be resources for the team, helps students learn how to learn about the issue, provides feedback at critical junctures during the quarter, and assesses the quality of the students' work. The final product is a professional consultants' report.

**PPOL 4400 Introduction to Policy Analysis (4 Credits)**

This course will provide the student with the analytical tools necessary to evaluate competing points of view, using empirical techniques, logic, and statistical inference. Case studies will be drawn from the current legislative and regulatory environment and will provide the MPP student with opportunities to construct a course of action, based on the use of logically consistent arguments and on the persuasive use of facts and empirical data. Students in this course will also learn the history and development of the scientific method, how to distinguish speculation, theory, fact, and opinion, how to identify the validity, ideological content or irrationality of data, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to argument not based on evidence. Students in this course how to identify the validity, ideological content or irrationality of information, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to arguments not based on evidence.

**PPOL 4410 Health Policy (4 Credits)**

This course will examine major health care policy decisions and how each shaped fundamental elements of the U.S. health care system. Course material will explore the questions of why America spends more on health care than other industrial nations, why 8.6 percent of Americans do not have health coverage, and why the location of one's birth or current neighborhood may affect their health. These topics will be explored through the lens of recent and current policy debates, including the Affordable Care Act and other federal health care programs, the response to the COVID-19 pandemic, and the cost and affordability of prescription drugs. In addition to mastering the content in these areas, the course will weave in policy scenarios and exercises meant to mimic decisions federal and state policymakers must make when addressing policy challenges created by the U.S. health care system.

**PPOL 4500 Cost-Benefit Analysis/Pub Pol (4 Credits)**

How do we determine if programs have met their objectives? Increasingly, this is a matter for empirical evaluation. This course will focus on quantitative approaches to program evaluation and on the primary tool available to the policy analyst in the modern organizational framework, cost-benefit analysis. Various issues will be considered, including the "costs" associated with taxes (and tax expenditures), governmental mandates, health and safety regulation, environmental regulation, government "investments," such as those in education, defense, law enforcement, and the regulation of financial industries.

**PPOL 4501 Great Issues Forum (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4502 Issues Forum II (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4550 International Development Policy (4 Credits)**

This course surveys international development policy. It has two main goals: (1) to build a multi-faceted understanding of what constitutes “development” and (2) to compare and assess different approaches to aiding the success of low- and middle-income countries. We will begin by asking what development is and examining the expansive ways in which it can be defined and measured, looking at these questions from economic, institutional, social, and political angles. We will study macro approaches to industrialization, economic growth, and development over the past half-century, with an emphasis on comparing and contrasting different development strategies. We will then focus on the development and aid business, looking at what the World Bank and other aid agencies do, the successes and failures of traditional approaches to foreign aid, and new thinking and actors in international development policy. We will end by examining how development policy could better address key contemporary challenges, such as the natural resource curse, corruption, and the challenges of building effective and legitimate governance in developing countries.

**PPOL 4600 Regulation and Institutional Analysis (4 Credits)**

This course will provide the MPP student with a solid understanding of the legal basis for policy action, through a case-based examination of executive and legislative authority, judicial policy-making, the expansion of the due process and equal protection clauses of the 14th Amendment, and the expansion of administrative authority under the Administrative Procedure Act. Such issues as affirmative action, government contracting, school finance, antitrust, and substantive due process will be presented utilizing a combination of traditional legal analysis and the cost-benefit approach of the policy specialist.

**PPOL 4655 Negotiating Environmental Conflict and Policy (4 Credits)**

Environmental issues engage multiple stakeholders with differing knowledge sets, beliefs, values, and even worldviews. Science alone is ill-equipped to resolve such complex disputes. Environmental conflicts involve negotiating differences, as do the development and implementation of environmental policies. This course explores both these ‘downstream’ and ‘upstream’ arenas. Within the domain of environmental and public policy conflict and policy, it focuses on the range of processes used to address these conflicts and issues, what different processes may have to offer, and the tradeoffs in both process and substance that must be considered. Themes of public involvement, information management & integration, and designing for adaptation will undergo consideration and critique of approaches. Multiple case studies will be explored and compared.

**PPOL 4700 Public Management & Budgeting (4 Credits)**

This course introduces students to the topic of public management, which includes concepts such as organizational structure, performance management, and strategy development. In addition, the instructor will teach the techniques and concepts of government and non-profit budgeting/financial management. The budgeting process includes program development/implementation, cost and revenue estimation and projection, and budget evaluation. The relationship between public management and budgeting will be explored.

**PPOL 4701 Special Topics in Public Policy (1-4 Credits)**

Various topics in public policy are covered. Topic subjects to change each term as deemed appropriate with local, regional and federal policy issues and regulation changes. Two examples are: “Denver Dynamics” explores the policy options and responses to the challenges of big city governance. Exclusive interactions with major stakeholders in the City and County of Denver are featured, with a view to giving the student an insider’s view of power, economic development, political influence and decision-making. “Getting Results Inside the Beltway: Power and policy in Washington, D.C.” is a travel course consisting of specially-arranged one-on-one sessions with Washington-based lawmakers, decision-leaders, and policy experts, through which graduate students will gain an understanding of the dysfunctionalities of the current budget process, political polarization, the interest groups that shape the current policy dynamic, the increasing importance of media in shaping policy, the solutions that will be required for the United States to regain fiscal sanity and solvency—and the challenges that will need to be met to preserve American hegemony and redefine national security.

**PPOL 4702 Special Topics in Public Policy Skills (1-4 Credits)**

Various professional skills and competencies are covered in these 1-credit classes. Each student will be required to complete four of these for the MPP degree. The topics are subject to change given student needs. Examples of topics may include: Diversity and Inclusion in Public Policy, Drafting a Policy Memo, Presenting a Policy Position to a Professional Audience, Working in Teams Addressing Complex Issues, Ethics Challenges in Public Policy Choices, and The Practice of Public Policy.

**PPOL 4715 Negotiation Workshop (2 Credits)**

Negotiation is an important skill for most jobs and professions. Whether you are crafting policies or legislation, negotiating agreements, advocating for rights, making arrangements to meet human needs, or implementing programs, the ability to strategically advance your own or your group’s interests while working through differences allows efficient and mutually acceptable solutions to be created. Though some may feel negotiation is an art, it is also a skill that can be taught and practiced. In this course you will learn, and have opportunities to practice and improve, analytic skills, communication skills, and forms of preparation and execution. You will leave with new tools to advance your goals and to work with others to create solutions that are “win-win.”

**PPOL 4821 Executive Introduction to Public Policy (4 Credits)**

This course offers an introduction to the contemporary study of public policy for the Executive MPP student. It has three main goals: (1) to build a multi-faceted understanding of what constitutes public policy, with a particular emphasis on how public policy is co-created by government, private sector, and civil society actors; (2) to understand the range of political, social, economic, and institutional forces that shape public policies and their outcomes; and (3) to introduce different forms and techniques of public policy analysis tied to audience, context, and objectives. We will begin by asking what public policy is and examining why we need it, explicitly addressing how political and societal context and decisions shape public policymaking. We will examine the traditional foundations of how public policy is typically framed and analyzed, rooted in neoclassical economics. We will round out the course by considering new ways of thinking about and analyzing public policy.

**PPOL 4822 Executive Microeconomics for Public Policy (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the EMPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare, and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus" will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality."

**PPOL 4823 Executive Data Analysis and Visualization (4 Credits)**

This course is aimed at helping policy professionals to review basic principles of statistics and apply this knowledge to visualizing data for policy analysis and communication. Students will use software to produce visualizations for effective and accessible data description and analysis.

**PPOL 4841 Executive Cost Benefit Analysis (4 Credits)**

This course will focus on economic analysis and will provide an intensive overview of analytical tools used in public policy decision-making. After discussing economic theory and its role in policymaking, we will cover analytical techniques such as Cost Benefit Analysis, Cost Effectiveness Analysis, Cost Utility Analysis, and other analytical approaches. Economic analysis is both a science and an art. The aim of this course is to give students an understanding both of the practical aspects of economic analysis as well as its economic and philosophical foundations and ethical implications. Students should gain an appreciation of the role of economic analysis in policy decision-making and become comfortable with various analytical approaches commonly used by government officials and policymakers.

**PPOL 4842 Executive Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details across countries, over time, and even from issue to issue within the same country. In this course we will study several parts of those processes and some of the inputs into them. The overall goals for this course are: (1) to introduce students to the multiple features of the policy making process and the literature on those features; (2) to enable students to use effectively databases and other research tools to examine those features of the policy making process; and (3) to give students the experience of tracing a specific policy issue through the policy process to analyze how some features of that process affect the outcomes of the policy.

**PPOL 4843 Executive Policy Writing and Briefing (2 Credits)**

In this two-credit course, students will develop policy-specific applied writing skills for the most important contexts and purposes in government and policy settings. Students will learn the key elements, formats, and styles for four categories of policy writing: 1) issue analysis briefs, 2) decision briefs, 3) legislative testimony, and 4) comments to proposed regulations. Students will take part in peer-review exercises as well as simulated policy briefings summarizing their written materials.

**PPOL 4852 Executive International Economic Policy (4 Credits)**

This course focuses on understanding how governments design and implement economic policy and how economic, social, political, and cultural forces impact on that process. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics as well as international and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. In the discussion of these cases, we will contrast neoclassical economic theories of optimal policy design with political economy, structuralist, and institutional views of the policymaking process. Through each example, we will engage with the views, constraints, and motivations of key actors and groups that influenced the policy formation process. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, financing climate action, and the reliability of economic data.

**PPOL 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**PPOL 4950 Policy Memorandum (4 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

**PPOL 4991 Independent Study (1-4 Credits)**

Students will work in collaboration with faculty from the Institute for Public Policy Studies to complete an independent study project.

**PPOL 4995 Independent Research (1-8 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

# International Studies

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## Degree Programs

### Doctor Of Philosophy in International Studies

The PhD degree is designed as a four to six-year program provided the student a) enters with a closely related master's degree and b) is able to devote full-time study during the entire period. The student working toward this degree must earn a grade average of 3.5 or higher for a minimum of 90 hours of graduate credit. A maximum of 45 course credits can be transferred into the program from another university, while a maximum of 60 course credits can be transferred in from a Korbel MA. The precise number of course credits that can be transferred in will be decided by the PhD program director to ensure that each student takes a sufficient number of Korbel courses to back up their studies for the Korbel PhD. Students select two of the three fields available: Comparative Politics, International Relations, and Political Theory. In addition, each student must meet the core curriculum and field training, methodology, and foreign language requirements, pass written and oral comprehensive field exams, file an approved prospectus, and successfully write and defend a dissertation.

### Master of Arts in Global Economic Affairs

The Global Economic Affairs (GEA) program provides students with a multi-disciplinary, policy-focused examination of the global economy. *Emphasis is on political economy, not on the narrow field of economics as standardly taught in economics textbooks.* The GEA program is fully accessible to students who did not study economics as undergraduates. Courses within this degree focus on the complex changes underway in the global economy, including the emerging patterns of finance, trade, and investment flows and their effect on national economies; the effect of globalization on state capacity, policy autonomy, and national economic conditions; the relationship between economic, political, and social outcomes of policy choices; corporate governance, competition, and corporate social responsibility; and the politics of economic policy choices at the national and international levels, within multilateral agreements and organizations. All students within this degree receive training in advanced statistical methods, including econometrics. Students also select from a diverse collection of qualitative and quantitative skills courses.

This degree is intended for students looking to pursue a diverse range of careers:

1. As international economic analysts for public sector agencies, such as the Department of Commerce, the International Trade Administration, Ministries of Finance, crime and security agencies such as the FBI, and state and municipal government,
2. As analysts for multilateral institutions and organizations, such as the World Bank, the U.S. Trade and Development Agency, the World Trade Organization, United Nations agencies, the African Development Bank, and the Organization for Economic Cooperation and Development,
3. As researchers and analysts within non-governmental organizations, such as Oxfam, Action Aid, Accion, and Water for People,
4. As private sector economic policy consultants, political risk or international project analysts, ethical supply chain experts, and international project managers.

### Master of Arts in Global Environmental Sustainability

A defining issue of the 21st century will be international challenges posed by a changing environment, population growth, and increased demands on our food, water, and energy resources. Given the complexity and magnitude of these challenges, we need innovative approaches to meeting needs while promoting just and equitable development and a sustainable path for future generations. The Korbel School is poised to assume a position of leadership in research, teaching, and outreach around issues related to our changing climate and global environment. The Global Environmental Sustainability (GES) MA will stimulate, facilitate, and coordinate these activities in a sustaining manner. Our location in the Front Range puts us at the center of practical discussions about water, agriculture, and energy (both conventional and renewable). Our strength comes in taking a human-focused approach to understanding the consequences of global change for human well-being.

### Master of Arts in International Development

The MA in International Development focuses on development theory, policy-oriented decision-making and analysis, politics of institutions, and in-demand practical skills. The program prepares students for careers in government, multilateral and bilateral development agencies, non-governmental organizations, and the private sector. Development graduates also enter relevant doctoral programs.

The program reflects an approach to development that emphasizes not only economic issues but also the importance and interrelatedness of sustainable economic and human development, human rights, and environmental sustainability. We emphasize the diversity of needs, desires, opportunities, and constraints experienced by individuals of differing socioeconomic classes, ethnicities, and genders, as well as differences among nations and regions.

Students gain analytical skills that address not only policy issues, but also the logics and workings of diverse institutions that create, negotiate, and implement development policy. Students also engage the many power differentials that profoundly influence processes central to sustainable development. These power differentials exist not only among nations, but also among public- and private-sector partners within development programs; between development practitioners and their intended beneficiaries; and among those intended beneficiaries. Thus, we also engage with

actors and processes across levels from the most macro-level international institutions and initiatives to the most micro-level agendas and actions taken by communities, firms, movements, and individuals.

The program provides training in key practical skills identified by development employers, including communications, quantitative analysis, program/project-focused management and assessment, qualitative and participatory field research, and cross-sectoral framework development. Through internships, students gain experience in meeting the challenges of development practice while applying these skills and their knowledge of ideas, institutions, and processes that have influenced the course of international development.

### **Master of Arts in International Human Rights**

The MA in International Human Rights provides students with the opportunity to engage with some of today's most pressing and compelling human rights issues and consider emerging issues and approaches in an academically rigorous and critical way. Students will examine diverse perspectives on the contributions, effectiveness, and relevance of international human rights frameworks, instruments, movements, and institutions. Graduates of the program go on to work on human rights research and documentation, advocacy, and programming including with nonprofits, the UN, government, and the for-profit sector.

### **Master of Arts in International Security**

The International Security curriculum provides education and practical training on issues related to the causes and consequences of foreign policies pursued by states plus the goals of non-state actors to advance their position and status in world political dynamics through violent confrontation and war or through cooperative moves towards peace. The Security Program combines traditional issues (state level threats, sovereignty, armament policies) and foundational theoretic perspectives (realism, liberalism, international law) with emerging twenty-first century problems (e.g. human security, climate change, health pandemics, humanitarian assistance, global governance) with exposure and appreciation for updated research and policy perspectives on contemporary topics to enable students to understand continuities and major shifts in the evolving global system, to foresee new threats, and imagine threat responses.

We focus on developing skill sets: written and oral communications; technical tools (graphic displays, statistical analysis) and clear, logical arguments that are essential for our graduates to be marketable practitioners in the security field—whether working in government, private industry, or the non-profit sector. We expect everyone to keep current in scholarship and policies presented in mainline journals. By completing the Security program, students will have a sufficient sense of basic concepts, theories, and approaches associated with the field with the confidence to apply this knowledge to real-world problems.

### **Master of Arts in International Studies**

The Master of Arts in International Studies combines a broad understanding of the field of international studies with an issue-oriented specialization, skills courses, and opportunities for internships or advanced research. It is the traditional professional international studies curriculum long favored by students pursuing career options in the government, private, and non-profit sectors, as well as those considering a PhD. It is also our most flexible degree, with ample opportunity to tailor a program to fit your specific needs and interests.

## **Certificates**

### **Certificate of Specialization in Global Environmental Change and Adaptation**

Environmental change, driven in large part by human activity, is increasingly identified as posing significant challenges to development and security. While climate change has received the most attention (see, e.g., US DOD, *2014 Quadrennial Defense Review*), other changes, e.g. biodiversity loss, ozone depletion, and freshwater use have also been raised as significant issues affecting development and security. These issues have also been tied to questions related to social justice. The Josef Korbel School of International Studies (Korbel) is building a critical mass of scholars, student interest, and activities related to environmental change, development, security, and justice. This certificate seeks to provide opportunities for students to develop substantive expertise around one of the defining challenges of the 21<sup>st</sup> century: global environmental change and attempts to adapt thereto in sustainable ways that minimize harm to affected communities.

Note: The GECA certificate is not available to students pursuing the MA in Global Environmental Sustainability.

### **Certificate of Specialization in Global Health Affairs**

The Certificate in Global Health Affairs (CGHA) is the first global health program to be based in a school of International Studies. Unlike certificates offered by schools of medicine or public health, which emphasize biomedical approaches to health, CGHA focuses on the social, political, and economic determinants of health as the primary avenues for addressing health inequity. Combined with a degree, the five-course CGHA sequence prepares students for systematic, evidence-based approaches to a broad range of global health problems relating to development, diplomacy, security, trade, social justice and human rights.

CGHA's core emphasis lies in building sound decision-making skills in an arena often suffused with inefficiency and blindness to political, social, and cultural context. Our courses address the social determinants of individual and population health, emphasizing short- and long-term effects; the increasing globalization of health; and interactions between health and other key factors such as politics, development, trade, and conflict. Practical courses build skills in epidemiology, research methodology, and program design and evaluation.

### **Certificate of Specialization in Global Justice**

Social justice issues, such as the injustices and inequalities faced by women, LGBTQIA+ communities, racial minorities, indigenous people, and the poor, are more salient than ever. And across the world, people are standing up, asserting their rights, and devising movements to demand change – indeed, 2019 saw more protests across the globe than any other year on record. The Global Justice Certificate places these struggles in both local

and global context, aiming to prepare students to support, participate in, and amplify movements from the #StopTheSweeps movement in Denver challenging mistreatment of the unhoused, to campaigns against femicide in Latin America, to global youth-led movements for climate action.

Upon earning a GJC from the Korbel School, graduates will have a knowledge of theories of social change along with an understanding of clear historical examples; they will understand concrete strategies around using media, advocacy, storytelling, fundraising, and strategic visioning for global changemakers; and they will have a toolkit and network to help them launch a career in global social justice organizing and human rights advocacy.

### **Certificate of Specialization in Homeland Security**

This certificate program is offered to currently enrolled Josef Korbel School of International Studies' Master's students. The Homeland Security Certificate Program is a professional certification program focused on preparing participants to step directly into career opportunities in the local, state, and national homeland security profession. Current alumni are employed at NORTHCOM, FEMA, Colorado Office of Emergency Management, The Colorado Information Analysis Center (CIAC), many city/county offices of emergency management as well as a wide range of private sector positions. There are also increasing numbers of former students working in international roles and/or roles in home countries beyond the United States. Professional roles include threat assessment, emergency preparedness, response and recovery, and crisis scenario development, testing, and exercise execution and well as the associated policy outcomes.

### **Certificate of Specialization in Humanitarian Assistance**

The humanitarian system comprises international, national, and local entities who work together to alleviate suffering and save lives of people affected by conflict, displacement, and natural disasters. Our certificate in humanitarian assistance provides students with the theoretical and practical underpinnings for humanitarian work that is technically sound, partners with affected communities, responds to diverse needs, and sets the stage for sustainable and inclusive development efforts. Through this certificate, you'll be able to explore your specific interests in the humanitarian field and develop relevant skills, experiences, and professional networks. The certificate offers personalized advising, exclusive networking, and unique experiential learning opportunities including a simulation and the Humanitarian Assistance Applied Research Group. Graduates pursue humanitarian careers abroad and in the U.S. working with international organizations, government, non-governmental organizations, and the private sector.

### **Certificate of Specialization in Strategic Intelligence**

This certificate program is open to all University of Denver Graduate Students. The Strategic Intelligence Certificate is designed to prepare students for careers in the intelligence community and related threat and situational analysis roles in government, consultancies, and the private sector. The emphasis of the certificate is familiarity with the realities, skill sets, and challenges associated with strategic intelligence analysis.

## **Interdisciplinary Certificates**

Interdisciplinary Certificates allow students to gain competence in relevant issue areas by taking approved coursework in another academic unit, as well as course at JKIS. While these certificates are open to matriculated students pursuing a graduate degree at the Josef Korbel School of International Studies and are offered jointly, they are administratively based in other units.

### **Certificate in Global Business and Corporate Social Responsibility**

As a joint offering between the Daniels College of Business and the Josef Korbel School of International Studies, the graduate Certificate in Global Business and Corporate Social Responsibility (CSR) at the University of Denver focuses specifically on the challenges and opportunities businesses confront in a globalized and developing world.

Businesses today are aware of increased pressure to behave ethically. Many are unsure how to integrate these goals into their business strategy and engage meaningfully with stakeholders. Likewise, governments, civil society organizations, and other stakeholders recognize the importance of having businesses at the table, but do not always have a clear understanding of how to best engage with the private sector. Both private enterprises and those wishing to affect their behavior are looking for young talent with the capability to navigate this new space.

The certificate curriculum draws from unique course offerings at the Daniels College of Business and the Josef Korbel School of International Studies to provide students with the skills to embrace and navigate the complexity of business and governance issues. The required and elective courses explore the theory and practice related to: economic development, business ethics, CSR strategy, social entrepreneurship, business and human rights, sustainability, impact investing, international business law, financial accounting, managerial accounting, as well as considerations with regards to hard and soft law mechanisms that govern transnational space. Students complete the program with a clear understanding of the complexity of the global business environment, a variety of corporate strategies, best practices and the impact of CSR efforts in particular cases.

The Certificate of Specialization in International Studies with a concentration in Global Business & Corporate Social Responsibility is administered by the Daniels College of Business.

### **Certificate in Public Diplomacy**

The Graduate Certificate in Public Diplomacy is an interdisciplinary, 24-credit certificate which examines the history, theory, methods, and uses of strategic communication for the purposes of informing, influencing, and establishing dialogue with international publics and stakeholders. Recognizing the central role of mediated communication in international relations today, the certificate is designed to help students acquire a sophisticated understanding of global media and communication processes and the ways in which they are employed by individuals, groups, organizations, and governments to advance their strategic interests. The certificate combines expertise from the Department of Media, Film, and Journalism Studies and the Josef Korbel School of International Studies, providing students with a truly interdisciplinary experience and preparing them to address contemporary international challenges in ways that make an impact. Those earning this Certificate of Specialization will be equipped



with conceptual and practical skills that prepare them for careers in the fields of cultural diplomacy, nation branding, public affairs and information, foreign aid, global health and development communication, international strategic communication, and international education.

The Certificate of Specialization in International Studies with a concentration in Public Diplomacy is administered by the Department of Media, Film & Journalism Studies (MFJS) – Division of Arts, Humanities, and Social Sciences.

### **Certificate in Religion and International Affairs**

The Certificate in Religion and International Affairs provides graduate students pursuing MA degrees in the Department of Religious Studies (AHSS) or the Josef Korbel School of International Studies with the opportunity to enhance their home program of study with specific expertise in the scholarly and professional field of religion and international affairs. This certificate program emphasizes scholarly and practitioner approaches to understanding the intersections between religion and international affairs in the modern world, providing students with an interdisciplinary approach to contemporary case studies as well as theoretical issues. The program will enable certificate students to develop demonstrable competencies that will help them position themselves for academic policy or non-profit careers.

Interested students from the Religious Studies or the Josef Korbel School of International Studies MA programs will submit an online application consisting of a 500-word personal statement, a CV, undergraduate and graduate transcripts, which will be reviewed by an interdepartmental faculty committee. Applicants must be enrolled graduate students in good standing in the Department of Religious Studies MA program or the Korbel School of International Studies MA program.

The Certificate of Specialization in International Studies with a concentration in Religion & International Affairs is administered by the Department of Religious Studies (RLGS) – Division of Arts, Humanities, and Social Sciences.

## **Doctor of Philosophy in International Studies**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Standardized Test Scores**

- The Graduate Record Examination (GRE) is required. Scores must be received directly from the appropriate testing agency by the deadline. The institution code for the University of Denver is 4842.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## **Master of Arts in International Studies**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Standardized Test Scores**

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-18.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Global Economic Affairs

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-09.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Global Environmental Sustainability

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-36.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in International Human Rights

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-23.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in International Development

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-23.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in International Security

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE or GMAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842. The code to submit GMAT scores for this program is MZR-Z3-80.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 95
- Minimum IELTS Score: 7
- Minimum C1 Advanced Score: 185
- Minimum Duolingo English Test Score: 125

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Philosophy in International Studies

### Doctor of Philosophy in International Studies

#### Degree Requirements

#### Coursework Requirements

Minimum number of credits required for degree: 90 credit hours

Code	Title	Credits
<b>International Studies Core coursework requirements (five courses):</b> <sup>1</sup>		<b>20</b>
INTS 4324	International Political Economy	
INTS 4501	Comparative Politics in the 21st Century	
INTS 4900	International Politics	
INTS 4301	Introduction to Political Theory	
INTS 4822	Contemporary Political Theory	
<b>Field Requirement: (Please note that the courses listed below can be substituted with others with the approval of the PhD program director and the field director.)</b>		<b>24</b>
Comparative Politics (CP)		

INTS 4501	Comparative Politics in the 21st Century	
INTS 4349	Comparative Public Policy and Finance	
Plus three additional courses or directed studies in Comparative Politics		
International Relations (IR/IPE)		
INTS 4900	International Politics	
INTS 4648	Theories of Security in World Politics	
INTS 4320	Int'l Monetary Relations	
or INTS 4310	International Trade	
INTS 4903	Relational Theories of International Relations	
Political Theory (PT)		
INTS 4301	Introduction to Political Theory	
INTS 4526	Modern Islamic Political Thought	
INTS 4802	Foundational Ideas in Social Science: Marx and Weber	
INTS 4820	Democracy and War	
INTS 4822	Contemporary Political Theory	
<b>Professionalization and Methodology (three courses):</b> <sup>2</sup>		<b>12</b>
INTS 4500	Social Science Methods	
INTS 4522	Philosophy of Social Science <sup>3</sup>	
or INTS 4010	Epistemology	
INTS 4999	Research Design: Ph.D. Prospectus, Substantial Research Paper, and MA Thesis	
<b>Independent Study (optional):</b>		
INTS 5991	Independent Study <sup>4</sup>	
<b>Elective requirements (if applicable):</b>		<b>34</b>
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> Some of these courses overlap with the field course requirements below.

<sup>2</sup> Methodology training beyond these required courses is a matter of individual needs and interests, and students should consult their advisor or potential dissertation committee chair and members about available options. Students can choose to take statistics courses at Korbel to develop their skills in quantitative analysis. A limited fund is available to fund students to study at methods courses outside of DU, at, for example, methods summer schools. Awards for this purpose will be made on a competitive basis and only when students and their advisors can prove that such training is vital for completion of the Ph.D. dissertation.

<sup>3</sup> INTS 4522 Philosophy of Social Science is offered every other year.

<sup>4</sup> Independent and directed studies provides opportunities for the student to do special work under individual supervision in areas not covered by regular class offerings. Independent studies will likely be related to the research area of the student's proposed PhD dissertation. Any Ph.D. student that wishes to complete a graduate independent study (INTS 5991) must consult with and obtain approval from an appointed JKSSIS faculty member. Ph.D. students are limited to a maximum of 16 credits of independent or directed studies. For more information, contact the Ph.D. Program Director or the Director of Graduate Student Affairs.

## Non-coursework Requirements

- **Foreign Language Proficiency:** Required.
- **Field Exam:** Students will study one field intensively—Comparative Politics (CP), International Relations (IR/IPE), or Political Theory (PT)—in which their comprehensive exam will be taken. Each field will comprise 5 courses and directed studies.
- **Comprehensive Written Exams:** PhD candidates must pass one comprehensive exam (in their chosen fields) in order to advance to candidacy. Within three weeks after the written exam, an approximately 1.5 hour oral exam is given. Comprehensive exam committees are comprised of three tenure-line faculty.
- Students cannot progress towards prospectus stage until they successfully pass the exams. A prospectus must have the approval/signatures of all JKSSIS committee members.
- **Final Dissertation:** Prior to submitting the final dissertation for graduation, students must successfully pass an oral defense of the dissertation.

## Master of Arts Degrees

### Master of Arts in Global Economic Affairs

The Global Economic Affairs (GEA) program provides students with a multi-disciplinary, policy-focused examination of the global economy. *Emphasis is on political economy, not on the narrow field of economics as standardly taught in economics textbooks.* Courses within this degree focus on the complex changes underway in the global economy, including the emerging patterns of finance, trade, and investment flows and their effect on national economies; the effect of globalization on state capacity, policy autonomy, and national economic conditions; the relationship between economic,

political, and social outcomes of policy choices; corporate governance, competition, and corporate social responsibility; and the politics of economic policy choices at the national and international levels, within multilateral agreements and organizations. All students within this degree receive training in advanced statistical methods, including econometrics. Students also select from a diverse collection of qualitative and quantitative skills courses.

Students pursuing the GEA degree are required to pursue a customized specialization that is tied to their intellectual and career aspirations. Students should meet with the degree director to discuss possible specializations that will meet their needs.

This degree is intended for students looking to pursue a diverse range of careers:

1. As international economic analysts for public sector agencies, such as the Department of Commerce, the International Trade Administration, Ministries of Finance, crime and security agencies such as the FBI, and state and municipal government;
2. As analyst for multilateral institutions and organizations, such as the World Bank, the U.S. Trade and Development Agency, the World Trade Organization, United Nations agencies, the African Development Bank, and the Organization for Economic Cooperation and Development;
3. As researchers and analysts within non-governmental organizations, such as Oxfam, Action Aid, Accion, and Water for People;
4. As private sector economic policy consultants, political risk or international project analysts, ethical supply chain experts, and international project managers.

Students who seek a more specialized and technical training in portfolio allocation might consider creating their own “customized, flexible dual degree” with the Daniels College of Business (DCB) that allows them to earn an MS in Finance along with the GEA degree (for more information, see the “Flexible Dual Degree Programs (<http://bulletin.du.edu/graduate/dual-degrees/flexible-dual-degree-programs/>)” section of the Graduate Bulletin).

#### Degree Requirements

Candidates must complete sixty (60) credit hours

Code	Title	Credits
<b>Degree Requirements:</b>		
Korbel Core (one course):		4
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; take as early in the program as possible)	
Degree Core (three courses):		12
INTS 4310	International Trade <sup>1</sup>	
INTS 4320	Int'l Monetary Relations <sup>1</sup>	
One of the following:		
INTS 4324	International Political Economy	
INTS 4370	The Global Economy: Conflict, Crisis and Cooperation <sup>2</sup>	
INTS 4372	Great Books in Political Economy	
<b>Specialization (three courses):</b>		12
Specializations are sets of three full credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digation site.		
<b>Skills Requirement (12 credits):</b>		12
INTS 4057	Statistics	
INTS 4303	Econometrics for Decision Making I	
A total of 4 more credits (in the form of one 4-credit or two 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. GEA students must take a degree-relevant option and should get pre-approval from their degree director. This list is updated annually and can be found on the Korbel Student Affairs Digation site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval from their degree director.		
You can find more information on skills courses offered at <a href="https://du.digation.com/korbelgradstudents/registration">https://du.digation.com/korbelgradstudents/registration</a> ( <a href="https://du.digation.com/korbelgradstudents/registration/">https://du.digation.com/korbelgradstudents/registration/</a> ).		
<b>Internship: Required</b>		
INTS 4981	Internship (Required, for 0 or 4 credits.) *	

Please see the Student Affairs Digication site <https://du.digication.com/korbelgradstudents/internships> (<https://du.digication.com/korbelgradstudents/internships/>) for more details.

**Supporting Courses:****20**

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel (INTS or PPOL) and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

**Total Credits****60**

<sup>1</sup> INTS 4310 and INTS 4320 assume some pre-existing economics background. Students considering the GEA program or these specific courses should speak with the GEA degree directors to determine whether additional microeconomics or macroeconomics study (which can be obtained via DU/Korbel in many cases) would be beneficial prior to taking INTS 4310 and 4320.

<sup>2</sup> INTS 4310 and INTS 4320 are recommended prerequisites for INTS 4370.

**Thesis (4 or 8 credits) or Substantial Research Paper (4 credits): Optional** Please see the Student Affairs Digication site <https://du.digication.com/korbelgradstudents/home-1> (<https://du.digication.com/korbelgradstudents/home-1/>) for more details

**Note:** MA in GEA candidates may enroll in a **maximum** of 12 credits at the Daniels College of Business. If a student wishes to take more than 12 credits, they must apply, and be accepted, to a graduate degree program at the DCB through the DU flexible dual degree program. No more than 12 credits completed prior to acceptance into such a program may be applied toward a DCB degree. Students currently enrolled in a dual or joint degree program are not impacted by this policy.

To request permission to register for DCB classes, please contact a Graduate Business Advisor at [gradbus.advising@du.edu](mailto:gradbus.advising@du.edu). Students who register without this permission risk disenrollment from the course. All non-DCB students will be registered on a space-available basis.

- \* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
  2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
  3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.
  4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

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## Master of Arts in Global Environmental Sustainability

A defining issue of the 21st century will be international challenges posed by a changing environment, population growth, and increased demands on our food, water, and energy resources. Given the complexity and magnitude of these challenges, we need innovative approaches to meeting needs while promoting just and equitable development and a sustainable path for future generations. The Korbel School is poised to assume a position of leadership in research, teaching, and outreach around issues related to our changing climate and global environment. The Global Environmental Sustainability (GES) MA will stimulate, facilitate, and coordinate these activities in a sustaining manner. Our location in the Front Range puts us at the center of practical discussions about water, agriculture, and energy (both conventional and renewable). Our strength comes in taking a human-focused approach to understanding the consequences of global change for human well-being.

**Degree Requirements**

Candidates must complete sixty (60) credit hours

Code	Title	Credits
<b>Korbel Core (one course):</b>		<b>4</b>
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; to be taken as early in the program as possible)	
<b>Degree Core (three courses):</b>		<b>12</b>
INTS 4397	The Environment, The Economy, and Human Well-Being	

INTS 4972	Global Environmental Governance	
Choose one:		
INTS 4706	Topics in Int'l Studies (Sustainability of Socio-Ecological Systems)	
INTS 4642	Environmental Security	
<b>Skills Courses (12 credits):</b>		<b>12</b>
A total of 12 credits (in the form of 4-credit or 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. GES students must take degree-relevant options and should get pre-approval from their degree director for all courses. The skills list is updated annually and can be found on the Korbel Student Affairs Digication site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.		
<b>Specialization Area Requirement (12 credits):</b>		<b>12</b>
Specializations are sets of three courses full credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate (such as Homeland Security or Corporate Social Responsibility) will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digication site.		
<b>Internship: Required</b>		
INTS 4981	Internship (Required, for 0 or 4 credits.) *	
Please see the Student Affairs Digication site <a href="https://du.digication.com/korbelgradstudents/internships">https://du.digication.com/korbelgradstudents/internships</a> ( <a href="https://du.digication.com/korbelgradstudents/internships/">https://du.digication.com/korbelgradstudents/internships/</a> ) for more details		
<b>Thesis (4 or 8 credits) or Substantial Research Paper (4 credits): Optional</b>		
<b>Supporting Courses:</b>		<b>20</b>
Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.		
<b>Total Credits</b>		<b>60</b>

- \* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
- Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
  - Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
  - Students sponsored by foreign governments whose terms of study discourage do not allow internships.
  - Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement
- Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

## Master of Arts in International Development

The MA in International Development focuses on development theory, policy-oriented decision-making and analysis, politics of institutions, and in-demand practical skills. The program prepares students for careers in government, multilateral and bilateral development agencies, non-governmental organizations, and the private sector. Development graduates also enter relevant doctoral programs.

The program reflects an approach to development that emphasizes not only economic issues but also the importance and interrelatedness of sustainable economic and human development, human rights, and environmental sustainability. We emphasize the diversity of needs, desires,



opportunities, and constraints experienced by individuals of differing socioeconomic classes, ethnicities, and genders, as well as differences among nations and regions.

Students gain analytical skills that address not only policy issues, but also the logics and workings of diverse institutions that create, negotiate, and implement development policy. Students also engage the many power differentials that profoundly influence processes central to sustainable development. These power differentials exist not only among nations, but also among public- and private-sector partners within development programs; between development practitioners and their intended beneficiaries; and among those intended beneficiaries. Thus, we also engage with actors and processes across levels from the most macro-level international institutions and initiatives to the most micro-level agendas and actions taken by communities, firms, movements, and individuals.

The program provides training in key practical skills identified by development employers, including communications, quantitative analysis, program/project-focused management and assessment, qualitative and participatory field research, and cross-sectoral framework development. Through internships, students gain experience in meeting the challenges of development practice while applying these skills and their knowledge of ideas, institutions, and processes that have influenced the course of international development.

### Curriculum Overview:

Candidates must complete 60 credit hours.

Substitutions *must be* approved, in advance, by the degree director. Students should prioritize completion of the Degree Core and the Statistics requirement during their first year.

A list of recommended electives is available from the degree director. The director will be available to help students shape specializations and to identify relevant electives.

Code	Title	Credits
<b>Degree Requirements:</b>		
Korbel Core (one course):		4
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; take as early in the program as possible)	
Degree Core (three courses):		12
INTS 4350	Economic Development	
INTS 4468	Politics of Development	
One of the following:		
INTS 4215	Gender, Aid, and Development	
INTS 4353	Environment and Development	
INTS 4435	Health and Development	
INTS 4521	Postcolonial Thought and Decolonizing Development	
Note: Not all of these courses will be offered every year. To experience the degree as a cohort, you are encouraged to take the core course offered in Fall, Winter, and Spring quarters of your first year.		
<b>Specialization (three courses):</b>		12
Specializations are sets of three, full credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree-relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirements, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours required for their degree. For more information on Specializations, see the Korbel Student Affairs Digication site.		
<b>Skills Requirements (12 credits):</b>		12
INTS 4057	Statistics	
A total of 8 more credits (in the form of 4-credit or 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. This list is updated annually and can be found on the Korbel Student Affairs Digication site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.		
<b>Internship: Required</b>		
INTS 4981	Internship (Required, for 0 or 4 credits.) *	
Please see the Student Affairs Digication site <a href="https://du.digication.com/korbelgradstudents/internships">https://du.digication.com/korbelgradstudents/internships/</a> for more details.		
<b>Supporting Courses:</b>		20

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel (INTS or PPOL) and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

#### Total Credits

60

#### Non-coursework Requirements

- Thesis (4 or 8 credits) or Substantial Research Paper (4 credits): Optional. Please see the Korbel Student Affairs Digication site <https://du.digication.com/korbelgradstudents/> for more details.

- \* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
  2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
  3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.
  4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

## Master of Arts in International Human Rights

The MA in International Human Rights provides students with the opportunity to engage with some of today's most pressing and compelling human rights issues and consider emerging issues and approaches in an academically rigorous and critical way. Students will examine diverse perspectives on the contributions, effectiveness, and relevance of international human rights frameworks, instruments, movements, and institutions. Graduates of the program go on to work on human rights research and documentation, advocacy, and programming including with nonprofits, the UN, government, and the for profit sector.

### Degree Requirements

Complete 60 total credit hours

Code	Title	Credits
<b>Korbel Core (one course):</b>		<b>4</b>
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; take as early in the program as possible)	
<b>Degree Core (three courses):</b>		<b>12</b>
INTS 4940	Introduction to Human Rights	
One of the following:		
INTS 4929	Foundations of Human Rights	
INTS 4935	International Humanitarian Law of Armed Conflict	
INTS 4936	International Law and Human Rights	
INTS 4958	Human Rights Global Governance, Nationalism and Internationalism	
One of the following:		
INTS 4011	Comparative Genocide	
INTS 4569	Migration	
INTS 4649	Human Rights and the Middle East	
INTS 4670	Gender, Security and Human Rights	
INTS 4909	Climate Migration and Human Rights	
INTS 4928	Torture	
INTS 4947	Human Rights and Security	
INTS 4987	Forced Labor and Human Trafficking	
<b>Specialization (three courses):</b>		<b>12</b>

Specializations are sets of three courses full credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digication site.

**Skills Courses (12 credits):****12**

INTS 4057	Statistics
INTS 4644	Human Rights Research Methods
or INTS 4632	Qualitative Research Methods

A total of 4 more credits (in the form of one 4 credit or 2 credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. This list is updated annually and can be found on the Student Affairs Digication site: <https://du.digication.com/korbelgradstudents> (<https://du.digication.com/korbelgradstudents/>). Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.

**Internship: Required**

INTS 4981	Internship (Required, for 0 or 4 credits.) *
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See the Student Affairs Digication site <https://du.digication.com/korbelgradstudents/internships> (<https://du.digication.com/korbelgradstudents/internships/>) for more details

**Supporting Courses:****20**

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

**Total Credits****60****Non-coursework Requirements**

- Thesis (4 or 8 credits) or Substantial Research Paper (4 credits): Optional.

\* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.

1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.
4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office.

**Master of Arts in International Security**

The International Security curriculum provides education and practical training on issues related to the causes and consequences of foreign policies pursued by states plus the goals of non-state actors to advance their position and status in world political dynamics through violent confrontation and war or through cooperative moves towards peace. The Security Program combines traditional issues (state level threats, sovereignty, armament policies) and foundational theoretic perspectives (realism, liberalism, international law) with emerging twenty-first century problems (e.g. human security, climate change, health pandemics, humanitarian assistance, global governance) with exposure and appreciation for updated research and policy perspectives on contemporary topics to enable students to understand continuities and major shifts in the evolving global system, to foresee new threats, and imagine threat responses.

We focus on developing skill sets: written and oral communications; technical tools (graphic displays, statistical analysis) and clear, logical arguments that are essential for our graduates to be marketable practitioners in the security field—whether working in government, private industry, or the non-

profit sector. We expect everyone to keep current in scholarship and policies presented in mainline journals. By completing the Security program, students will have a sufficient sense of basic concepts, theories, and approaches associated with the field with the confidence to apply this knowledge to real-world problems.

### Curriculum Overview

Candidates must complete sixty credit hours.

All Korbel MA students enroll in INTS 4091, Great Issues in International Affairs, during their first year of enrollment (i.e. during their first three terms of taking courses in the graduate program), which is offered only in the Fall term. All International Security students must also register for INTS 4735 Defense and Security Methods and INTS 4057 Statistics during their first year.

### Degree Requirements

Code	Title	Credits
<b>Korbel Core (one course):</b>		<b>4</b>
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; take as early in the program as possible)	
<b>Degree Core (three courses; take all three during your first year):</b>		<b>12</b>
INTS 4700	United States Foreign Policy	
INTS 4702	Emerging Issues in International Security	
INTS 4703	Foundations of Security	
<b>Skills Courses (12 credits; take first two during your first year):</b>		<b>12</b>
INTS 4057	Statistics	
INTS 4735	Defense and Security Methods	

A total of 4 more credits (in the form of one 4-credit or two 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. This list is updated annually and can be found on the Korbel Student Affairs Digication site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.

### Specialization (three courses): 12

Specializations are sets of three full-credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digication site.

### Internship: Required

INTS 4981	Internship (Required, for 0 or 4 credits.) *
Please see the Student Affairs Digication site <a href="https://du.digication.com/korbelgradstudents/internships">https://du.digication.com/korbelgradstudents/internships</a> ( <a href="https://du.digication.com/korbelgradstudents/internships/">https://du.digication.com/korbelgradstudents/internships/</a> ) for more details.	

### Supporting Courses 20

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel (INTS or PPOL) and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

### Total Credits 60

### Non-coursework Requirements:

- Thesis (4 or 8 credits) or Substantial Research Paper (SPR) (4 credits): Optional. Please see the Student Affairs Digication site for more details.

\* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.

1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.

4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

## Master of Arts in International Studies

The Master of Arts in International Studies combines a broad understanding of the field of international studies with an issue-oriented specialization, skills courses, and the opportunities for internships or advanced research. It is the traditional professional international studies curriculum, long favored by students pursuing career options in the government, private, and non-profit sectors, as well as those considering a PhD. It is also our most flexible degree, with ample opportunity to tailor a program to fit your specific needs and interests.

### Curriculum Overview:

Candidates must complete 60 credit hours.

### Degree Requirements:

Code	Title	Credits
<b>Korbel Core (one course):</b>		<b>4</b>
INTS 4091	Great Issues in International Affairs (offered each Fall quarter; take as early in the program as possible)	
<b>Degree Core (three courses):</b>		<b>12</b>
-Any regionally-focused course, to be approved by the International Studies Degree Director.		
-Choose two of the following:		
INTS 4301	Introduction to Political Theory	
INTS 4324	International Political Economy	
INTS 4370	The Global Economy: Conflict, Crisis and Cooperation	
INTS 4372	Great Books in Political Economy	
INTS 4501	Comparative Politics in the 21st Century	
INTS 4715	Debates About Democracy	
INTS 4822	Contemporary Political Theory	
INTS 4900	International Politics	
INTS 4936	International Law and Human Rights	
<b>Specialization (three courses):</b>		<b>12</b>
Specializations are sets of three full-credit courses (12 credit hours) that a student takes within their degree that are centered on a common topic, region, or degree relevant methods and must be approved by the degree director. Korbel specializations are open specializations, which is to say that they are totally customizable and can be drawn from any and all eligible University of Denver graduate courses. The key is that they must be approved on submission for graduation by a student's degree director and students are encouraged to engage their degree director early in the process on what are approvable sets of courses. Specializations do not go on transcripts, so it is possible to organize courses into more than one set of three, but for completion of degree requirement purposes, only one specialization is submitted as such on your program statement. Students who participate in a Korbel Certificate will put three of their certificate courses in their specialization and the other three in electives to fit the certificate within the 60 credit hours associated with their degree requirements. For more information on Specializations, see the Korbel Student Affairs Digication site.		
<b>Skills (three courses):</b>		<b>12</b>
A total of 12 credits (in the form of 4-credit or 2-credit skills courses) of INTS or PPOL skills coursework drawn from the Korbel School Skills List. This list is updated annually and can be found on the Korbel Student Affairs Digication site. Students may also utilize graduate level skills courses in other DU departments/schools with pre-approval of their degree director.		
<b>Internship: Required</b>		
INTS 4981	Internship (Required, for 0 or 4 credits.) *	
Please see the Student Affairs Digication site <a href="https://du.digication.com/korbelgradstudents/internships">https://du.digication.com/korbelgradstudents/internships</a> ( <a href="https://du.digication.com/korbelgradstudents/internships/">https://du.digication.com/korbelgradstudents/internships/</a> ) for more details.		
<b>Supporting Courses:</b>		<b>20</b>

Students will fill out their academic program as needed to reach the minimum requirement of 60 credits with graduate level courses in fields and areas of study related broadly but directly to international studies (public policy) or research/policy areas and/or skills already established in their required coursework. These courses can be from Korbel (INTS or PPOL) and/or other relevant graduate departments/programs associated with the University of Denver or beyond. Courses from beyond Korbel should be pre-approved by the student's academic advisor. The total number of credits allowed for the degree beyond Korbel cannot be more than 12.

#### Total Credits

60

#### Non-coursework Requirements

- Thesis (4 or 8 credits) or Substantial Research Paper (SPR) (4 credits): Optional. Please see the Student Affairs Digication site (<https://du.digication.com/korbelgradstudents/>) for more details.

- \* Internships are required for all of the MA degrees at the Josef Korbel School of International Studies and are managed through the Office of Career and Professional Development at the Korbel School. For a few categories of students, the Korbel School may grant an exemption from the internship requirement. While students in the following categories are highly encouraged to pursue internships to enhance their professional development, they may petition to be exempted from the internship requirement.
  1. Students entering Korbel with substantial degree/field relevant professional work experience, typically at least 5 years.
  2. Students with a confirmed job or job offer in a degree/field relevant sector in which they had been working prior to beginning the Josef Korbel degree.
  3. Students sponsored by foreign governments whose terms of study discourage do not allow internships.
  4. Students with truly unique circumstances in which they have met all of the learning objectives of the internship program in a degree/field relevant way, but the experience does not or did not fall within the bounds of the internship program/requirement

Students who would like to petition for their professional experience to satisfy the internship requirement will need to submit a formal request through the Student Affairs Office (see the Portfolio site for details).

## Certificate Programs

### Certificate of Specialization in Global Environmental Change and Adaptation

Environmental change, driven in large part by human activity, is increasingly identified as posing significant challenges to development and security. While climate change has received the most attention (see, e.g., US DOD, *2014 Quadrennial Defense Review*), other changes, e.g. biodiversity loss, ozone depletion, and freshwater use have also been raised as significant issues affecting development and security. These issues have also been tied to questions related to social justice. The Josef Korbel School of International Studies (Korbel) is building a critical mass of scholars, student interest, and activities related to environmental change, development, security, and justice. This certificate seeks to provide opportunities for students to develop substantive expertise around one of the defining challenges of the 21<sup>st</sup> century: global environmental change and attempts to adapt thereto in sustainable ways that minimize harm to affected communities.

Note: The GECA certificate is not available to students pursuing the MA in Global Environmental Sustainability.

#### Requirements

Complete five courses (20 credit hours), as outlined below:

Code	Title	Credits
Certificate Core Courses (three courses):		12
INTS 4397	The Environment, The Economy, and Human Well-Being	
INTS 4972	Global Environmental Governance	
Choose one:		
INTS 4706	Topics in Int'l Studies (Sustainability of Socio-Ecological Systems)	
INTS 4642	Environmental Security	
Two Additional Courses from the list below:		8
INTS 4110	Food/Nutrition Security and Sustainable Development	
INTS 4215	Gender, Aid, and Development	
INTS 4220	Political Economy of Energy & Sustainable Development	
INTS 4226	Social Entrepreneurship & Sustainable Development	
INTS 4227	Social Impact & Sustainability Lab	
INTS 4290	Gender, Environment, and Development	
INTS 4339	Microfinance Lessons: Inclusive Markets and Development	
INTS 4367	Global Health Affairs	
INTS 4484	Agriculture and Sustainable Development	

INTS 4642	Environmental Security
INTS 4654	Sustainable Energy
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability
INTS 4657	Environment & Crises
INTS 4671	Climate, Science, and Society
INTS 4672	Environmental Peacebuilding
INTS 4673	Climate Finance and Other Clean Energy Solutions
INTS 4674	Water Policy
INTS 4681	Modeling for Development, Environment, and Security
INTS 4909	Climate Migration and Human Rights
PPOL 4655	Negotiating Environmental Conflict and Policy
GEOG 3100	Geospatial Data *
GEOG 3110	GIS Modeling *
GEOG 3200	Remote Sensing *
GEOG 3425	Urban Sustainability *
GEOG 3890	Ecological Economics *
MBA 4446	Advanced Sustainability *
SOWK 4360	Social-Ecological Resilience: Connecting Human and Environmental Wellbeing *

**Total Credits****20**

\* Only one course that is not INTS or PPOL will count towards the Certificate.

## Certificate of Specialization in Global Health Affairs

The Certificate in Global Health Affairs (CGHA) is the first global health program to be based in a school of International Studies. Unlike certificates offered by schools of medicine or public health, which emphasize biomedical approaches to health, CGHA focuses on the social, political, and economic determinants of health as the primary avenues for addressing health inequity. Combined with a degree, the five-course CGHA sequence prepares students for systematic, evidence-based approaches to a broad range of global health problems relating to development, diplomacy, security, trade, social justice, and human rights.

CGHA's core emphasis lies in building sound decision-making skills in an arena often suffused with inefficiency and blindness to political, social, and cultural context. Our courses address the social determinants of individual and population health, emphasizing short- and long-term effects; the increasing globalization of health; and interactions between health and other key factors such as politics, development, trade, and conflict. Practical courses build skills in epidemiology, research methodology, and program design and evaluation.

### Program Requirements

Complete five courses (20 total credits), plus an internship/field requirement, as outlined below.

Code	Title	Credits
<b>Global Health Affairs Core (three courses):</b>		<b>12</b>
INTS 4367	Global Health Affairs (offered every Fall quarter)	
INTS 4423	Introduction to Epidemiology (offered every Spring quarter)	
INTS 4516	Major Diseases in Global Health (From Pathophysiology to Action) (offered every Winter quarter)	
<b>Additional Courses (choose two of the following courses):</b>		<b>8</b>
Note that not all courses are offered annually. You may be able to apply other courses as supporting courses—from the Masters in Public Policy or programs beyond Korbelt. Please speak to the Certificate Director for pre-approval of options beyond the list below.		
INTS 4011	Comparative Genocide	
INTS 4047	Global Sustainable Development and Human Rights	
INTS 4110	Food/Nutrition Security and Sustainable Development	
INTS 4215	Gender, Aid, and Development	
INTS 4227	Social Impact & Sustainability Lab	
INTS 4290	Gender, Environment, and Development	
INTS 4362	Gender and Health	
INTS 4404	Cities, Security, and Health	
INTS 4435	Health and Development	

INTS 4569	Migration
INTS 4655	Negotiating Environmental Conflict and Policy
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability
INTS 4670	Gender, Security and Human Rights
INTS 4672	Environmental Peacebuilding
INTS 4674	Water Policy
INTS 4731	Homeland Defense: Prevention & Mitigation
INTS 4786	Planning and Assessment in Complex Environments
MFJS 4165	Global Health and Development Communication

**Skills**

INTS 4056	Information Management in Humanitarian Crises
INTS 4057	Statistics
INTS 4058	Applied Time-Series Analysis
INTS 4060	Data Visualization
INTS 4063	Advanced Statistics
INTS 4333	International Project Design and Monitoring
INTS 4342	Project Management
INTS 4391	Financial Management and Fundraising of Non-Profits
INTS 4496	Field Operations for Humanitarian Assistance
INTS 4632	Qualitative Research Methods

**Total Credits****20****Internship/Field Requirement**

- All GHA candidates must conduct a single, 150-hour health-related practical experience or a suitable alternative. This experience must take place during the student's course of study and the work must be carried out off-campus. As an alternative to a traditional internship, this requirement could be fulfilled through current employment, an RPCV local internship, or independent research (as long as it has an off-campus field component and is approved by Certificate Director), or work on a GHA service-based research project.
- To qualify as health-related, a substantive component of the internship/practicum should focus on health issues. If this condition is not met within the context of the internship/practicum, the student may instead submit an additional, separate report on the health implications of their internship/practicum to the Certificate Director in order to fulfill the requirement. See the Certificate Director for guidelines. It is possible for students to fulfill both a degree and certificate requirement with one internship/practicum.
- Students are encouraged but not required to base their internship on their required proposal for INTS 4367 Global Health Affairs.

**Certificate of Specialization in Global Justice**

Social justice issues, such as the injustices and inequalities faced by women, LGBTQIA+ communities, racial minorities, indigenous people, and the poor, are more salient than ever. And across the world, people are standing up, asserting their rights, and devising movements to demand change – indeed, 2019 saw more protests across the globe than any other year on record. The Global Justice Certificate places these struggles in both local and global context, aiming to prepare students to support, participate in, and amplify movements from the #StopTheSweeps movement in Denver challenging mistreatment of the unhoused, to campaigns against femicide in Latin America, to global youth-led movements for climate action. Upon earning a GJC from the Korbel School, graduates will have a knowledge of theories of social change along with an understanding of clear historical examples; they will understand concrete strategies around using media, advocacy, storytelling, fundraising, and strategic visioning for global changemakers; and they will have a toolkit and network to help them launch a career in global social justice organizing and human rights advocacy.

**Requirements**[Complete 20 total credits](#)

Code	Title	Credits
<b>Required Core - three courses</b>		<b>12</b>
INTS 4808	Foundations of Global Justice: Theories of Power and Transformation	
INTS 4810	Social Movements, Global Justice	
Note: You must take Foundations of Global Justice and Social Movements before taking the Capstone course.		
INTS 4812	Capstone: Applied Strategies for Catalyzing Social Change	
<b>Additional Courses – Take 8 credits in any arrangement of 4 and 2 credit classes from the list below</b>		<b>8</b>



INTS 4011	Comparative Genocide
INTS 4047	Global Sustainable Development and Human Rights
INTS 4215	Gender, Aid, and Development
INTS 4226	Social Entrepreneurship & Sustainable Development
INTS 4227	Social Impact & Sustainability Lab
INTS 4362	Gender and Health
INTS 4391	Financial Management and Fundraising of Non-Profits
INTS 4497	International Campaign Management
INTS 4569	Migration
INTS 4632	Qualitative Research Methods
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability
INTS 4670	Gender, Security and Human Rights
INTS 4706	Topics in Int'l Studies (Gender and Conflict )
INTS 4708	Topics in International Studies (Social Movements and Change )
INTS 4816	Power and Oppression
INTS 4817	Restorative Justice
INTS 4818	Conflict Sensitive Interventions
INTS 4909	Climate Migration and Human Rights
SOWK 4132	Power, Privilege and Oppression from a Critical Multicultural Perspective
MFJS 4001	Producing Video for Social Media and Advocacy
MFJS 4050	Foundations of Strategic Communication
MFJS 4060	Strategic Messaging
MFJS 4080	Global/Multicultural Campaigns
MFJS 4165	Global Health and Development Communication
MFJS 4175	Justice Equity Diversity and Inclusion in Health Communication
MFJS 4227	Producing the Environmental Documentary
MFJS 4506	Audio Documentaries
MFJS 4650	Global Media and Communication
MFJS 4653	Language, Power, and Globalization
MFJS 4654	Intercultural Communication
MFJS 4660	Global Edutainment & Narrative Persuasion
<b>Total Credits</b>	<b>20</b>

## Certificate of Specialization in Homeland Security

This certificate program is offered to currently enrolled Josef Korbel School of International Studies' Master's students. The Homeland Security Certificate Program is a professional certification program focused on preparing participants to step directly into career opportunities in the local, state, and national homeland security profession. Current alumni are employed at NORTHCOM, FEMA, Colorado Office of Emergency Management, The Colorado Information Analysis Center (CIAC), many city/county offices of emergency management as well as a wide range of private sector positions. There are also increasing numbers of former students working in international roles and/or roles in home countries beyond the United States. Professional roles include threat assessment, emergency preparedness, response and recovery, and crisis scenario development, testing, and exercise execution and well as the associated policy outcomes.

### Requirements

Complete five courses (20 total credits)

Code	Title	Credits
Required Core (four courses):		16
INTS 4730	Foundations in Homeland Security: Response and Recovery	
INTS 4731	Homeland Defense: Prevention & Mitigation	
INTS 4736	Strategic Intelligence Data Collection and Analysis	
INTS 4907	Terrorism	
Additional Course (one course from the list below):		4

INTS 4753	Intelligence and National Security	
INTS 4786	Planning and Assessment in Complex Environments	
INTS 4989	North American Defense and Security	
<b>Total Credits</b>		<b>20</b>

## Certificate of Specialization in Humanitarian Assistance

The humanitarian system comprises international, national, and local entities who work together to alleviate suffering and save lives of people affected by conflict, displacement, and natural disasters. Our certificate in humanitarian assistance provides students with the theoretical and practical underpinnings for humanitarian work that is technically sound, partners with affected communities, responds to diverse needs, and sets the stage for sustainable and inclusive development efforts. Through this certificate, you'll be able to explore your specific interests in the humanitarian field and develop relevant skills, experiences, and professional networks. The certificate offers personalized advising, exclusive networking, and unique experiential learning opportunities including a simulation and the Humanitarian Assistance Applied Research Group. Graduates pursue humanitarian careers abroad and in the U.S. working with international organizations, government, non-governmental organizations, and the private sector.

### Requirements

Complete five courses (20 total credits), plus an internship, as outlined below.

Code	Title	Credits
<b>Certificate Core (two courses):</b>		<b>8</b>
INTS 4496	Field Operations for Humanitarian Assistance	
INTS 4581	Introduction to Humanitarian Systems	

It is highly recommended that students take these core courses in their first year at Korbelt to help prepare them for other courses and the internship, to keep them on track for completion, and to integrate them in their cohort. INTS 4581 is generally offered in Fall and INTS 4496 in Winter.

### Supporting Courses – choose 3 courses from the list below: 12

Please note that not all courses listed are offered annually.

INTS 4056	Information Management in Humanitarian Crises	
INTS 4215	Gender, Aid, and Development	
INTS 4435	Health and Development	
INTS 4492	Health and Humanitarian Aid	
INTS 4583	International Protection in the Humanitarian Context	
INTS 4647	Critical Issues in International Humanitarian Assistance (pre-req: INTS 4581)	
INTS 4657	Environment & Crises	
INTS 4667	Humanitarian Simulation Preparation	
INTS 4709	Topics in International Studies (Health, Development and Crises)	
INTS 4786	Planning and Assessment in Complex Environments	
INTS 4787	Civil-Military Practices in Humanitarian Responses	
INTS 4935	International Humanitarian Law of Armed Conflict	

### Internship:

INTS 4981	Internship	
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An internship (150 hours) is required for the Humanitarian Assistance Certificate. The Internship must be with an organization whose core work includes international humanitarian assistance or humanitarian research/policy/advocacy, and the internship itself must be focused on the organization's international humanitarian related work. Internships may be based in the U.S. or abroad. Students usually complete internships in the summer between the first and second years of the MA program. Students arrange their own internship placements but should consult with the HA Certificate Director for ideas, contacts, and to ensure that internships they are interested in meet the organizational and focus requirements. They must obtain approval from the HA Certificate Director prior to starting the internship. The Korbelt School Office of Career and Professional Development must also approve internships before they begin.

<b>Total Credits</b>		<b>20</b>
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### Chester Lee Brinser III Scholarship for Humanitarian Assistance

- The Chester Lee Brinser III Scholarship for Humanitarian Assistance is awarded annually (funds permitting) to a Korbelt student enrolled in the Certificate in International Studies with a Concentration in Humanitarian Assistance.

## Certificate of Specialization in Strategic Intelligence

This certificate program is open to all University of Denver Graduate Students. The Strategic Intelligence Certificate is designed to prepare students for careers in the intelligence community and related threat and situational analysis roles in government, consultancies, and the private sector. The emphasis of the certificate is familiarity with the realities, skill sets, and challenges associated with strategic intelligence analysis.

### Requirements

Complete five courses (20 total credits)

Code	Title	Credits
<b>Required Core (three courses):</b>		<b>12</b>
INTS 4736	Strategic Intelligence Data Collection and Analysis	
INTS 4738	Current Issues in Strategic Intelligence	
INTS 4753	Intelligence and National Security	
<b>Required Capstone (4 credits)</b>		<b>4</b>
Students who have completed INTS 4736 and INTS 4753 are then eligible to register for:		
INTS 4889	Capstone: Intelligence/Threat Assessment	
<b>Specialized Topic Course</b>		<b>4</b>
One course (4 credits) from the list below or another relevant topics-based course approved by the certificate director (not all courses below are taught annually):		
INTS 4337	Current Challenges in the Middle East	
INTS 4447	Making of Chinese Foreign Policy	
INTS 4450	Democracy and Militarism in Latin America	
INTS 4501	Comparative Politics in the 21st Century	
INTS 4620	Introduction to Middle East Politics	
INTS 4630	Civilian Protection in Armed Conflicts	
INTS 4642	Environmental Security	
INTS 4676	Insurgency/Counter-Insurgency	
INTS 4679	Economic Statecraft and Diplomacy	
INTS 4681	Modeling for Development, Environment, and Security	
INTS 4701	US National Security Policy	
INTS 4702	Emerging Issues in International Security	
INTS 4708	Topics in International Studies (21st Century Peace Operations )	
INTS 4907	Terrorism	
<b>Total Credits</b>		<b>20</b>

## Interdisciplinary Certificates

### Certificate of Specialization in Global Business and Corporate Social Responsibility

#### Program Requirements

Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		<b>12</b>
BUS 4445	International Business: Strategy and Practice	4
or INTS 4029	International Business: Strategy and Practice	
BUS 4444	Global Bus, Governance & CSR	4
or INTS 4459	Global Business, Governance & Corporate Social Responsibility	
INTS 4324	International Political Economy	4
<b>Elective Courses</b>		<b>12</b>
Choose a minimum of 12 credits from the following list. Students must complete one elective outside of their primary college:		
ACTG 4610	Financial Accounting and Reporting <sup>1</sup>	4
CMGT 4155	Sustainable Development	4
FIN 4110	Ethics in Finance	4
FIN 4180	Global Finance	2
FIN 4630	Managerial Finance <sup>1</sup>	4

LGST 4701	Topics in Ethics & Legal Study	1-5
MBA 4610	Business Law and Public Policy	4
MBA 4446	Advanced Sustainability	4
INTS 4210	Global Value Chains, Multinational Corporations, and Investment Sustainability	4
INTS 4220	Political Economy of Energy & Sustainable Development	4
INTS 4394	The Organizational Psychology of Non-Profits	4
INTS 4370	The Global Economy: Conflict, Crisis and Cooperation	4
INTS 4226	Social Entrepreneurship & Sustainable Development	4
INTS 4330	International Business Transactions	4
INTS 4339	Microfinance Lessons: Inclusive Markets and Development	4
INTS 4549	Managing Microfinance: Balancing Business with Development	4
INTS 4656	Power, Institutions, and Justice in Environmental Sustainability	4
INTS 4622	Global Governance	4
INTS 4972	Global Environmental Governance	4
MFJS 4050	Foundations of Strategic Communication	4
MFJS 4080	Global/Multicultural Campaigns	4
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4180	Sustainability and Supply Chain Management	4
<b>Total credits required:</b>		<b>24</b>

Minimum number of credits required: 24

## Certificate of Specialization in Media and Public Communication with Concentration in Public Diplomacy

### Program Requirements

Minimum Credits Required for Certificate: 24

### Coursework Requirements

Students will take classes in three categories as follows:

Code	Title	Credits
<b>Foundational Courses</b>		<b>8</b>
MFJS 4065	Public Diplomacy and Nation Branding	
MFJS 4160	Media Theories	
or MFJS 4650	Global Media and Communication	
or MFJS 4080	Global/Multicultural Campaigns	
<b>Applied Course</b>		<b>4</b>
MFJS 4050	Foundations of Strategic Communication	
MFJS 4060	Strategic Messaging	
MFJS 4165	Global Health and Development Communication	
MFJS 4504	Social Media Strategies	
<b>Context Specialization Courses</b>		<b>12</b>
Students should select courses that directly focus on the society, politics, economics, or culture of particular countries or regions or challenges related to a specific theme or issue. Context Specialization courses must be arranged into a logical three-course set (by region and/or theme) that matches student interests and is approved by the Certificate Director(s). Only full-credit, graduate level courses in JKIS and MFJS, which are approved by the Certificate Director(s) in advance and are not used to meet another Certificate requirement are eligible for this category. At least two of the specialization courses must be from the Josef Korbel School of International Studies (JKIS). The third course may be from either JKIS or MFJS.		
<b>Total Credits</b>		<b>24</b>

\* Course may be counted as either Foundation, Applied, or Context Specialization, but cannot be counted in more than one of those categories

**Non-Coursework Requirements**

Applicants must be enrolled master's students in good standing in either MFJS or JKIS. Applicants from either unit must apply for the Certificate no later than February 1 in the first year of their master's program in order to be able to complete all of the necessary coursework for the Certificate by the end of their second year.

**Certificate of Specialization in Religion and International Affairs**

This certificate program provides students pursuing an MA degree in the Department of Religious Studies (CAHSS) or the Joseph Korbel School of International Studies the opportunity to enhance their "home program" with coursework that emphasizes scholarly and practitioner approaches to understanding the intersections between religion and international affairs in the modern world.

This certificate requires a minimum of 24 credit hours.

Code	Title	Credits
<b>Core courses</b>		<b>8</b>
INTS 4525	Religion-State Relations in Comparative Perspectives	
RLGS 3760	Globalization and Religion: Theory and Methods	
<b>Elective courses</b> <sup>1</sup>		<b>16</b>
Choose from the following:		
INTS 4517	Politics of Deeply Divided Societies	4
INTS 4526	Modern Islamic Political Thought	4
INTS 4534	Topics in Middle East Politics	4
INTS 4649	Human Rights and the Middle East	4
RLGS 3302	Islamic Fundamentalism	4
RLGS 3452	Political Theology	4
RLGS 3454	Capitalism, Religion, Democracy	4
RLGS 3503	Quran and Hadith	4
RLGS 3504	Islam and Gender	4
RLGS 3645	Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism	4
RLGS 3693	Religion and the Media	4
RLGS 3814	Modern Hinduism	4
RLGS 3890	Religion and Diaspora	4
RLGS 3893	Buddhism and Social Justice	4
<b>Total Credits</b>		<b>24</b>

<sup>1</sup> Other elective courses may be approved with permission from the director.

**INTS 3665 Comparative State Building (4 Credits)**

Since the fall of the Berlin Wall, countries in East Central Europe have experienced some twenty-five years of fascinating political, economic, and social change as they have tried to rebuild themselves, undergone democratization, and transitioned to a free market. But the legacies of the region's dramatic and often tragic encounters with war and ideology in the 20th and 19th centuries are still shaping how East Central European societies respond to the new horizons following the collapse of the Soviet bloc. This course is designed as an overview and analysis of the processes of state-building in East Central Europe from the eve of imperial independence in the late 19th century to the present day. We will learn about the condition of the states and nations of East Central Europe before WWI and how they embarked on their nation-building projects after the demise of the foreign empires, the Ottoman, the Austro-Hungarian, and the Russian, that had ruled the region for 500 years. We will then discuss the onset of yet another foreign mode of control – communism – and we will learn how communist reality and Soviet hegemony was lived by the people of Poland, Hungary, Czechoslovakia, Serbia, East Germany, Romania, and Bulgaria for over forty years. After the initial wave of optimism after independence, the political chaos and economic backwardness of the interwar period 1918-1939; after the resistance, collaboration and murder of the Second World War; after the terror and senselessness of Stalinism; after the exhilaration and disappointment of the Hungarian Revolution in 1956, of the Prague Spring in 1968, and of Solidarity in Poland in 1981; after the gray monotony of decaying communism and the lonely voices of dissidents, we will come to the triumphant revolutions of 1989 and the challenges of the post-communist transition. For many of these states, the project of building a liberal democratic state and a functioning market economy over the last twenty years can be considered an impressive success. For others, however, the transition has been undermined by political mismanagement, economic backwardness, and ethnic nationalism. We will weigh the roles of domestic actors and of international institutions in bringing about East Central Europe's successes and failures over the last century. At the end we will discuss some of the key outcomes, positive and negative, of the accession to another ("foreign") empire - the European Union, which ten of these post-communist states joined in 2004-07. Prerequisites: INTS 1500 and INTS 1700.

**INTS 4010 Epistemology (4 Credits)**

An introductory course covering philosophy and history of science, epistemology, causality, and the logic of inquiry as related to international studies. The relation between theory and practical politics is explored, and differences between empirical and normative theory are examined in the context of foundational principles of politics and social science.

**INTS 4011 Comparative Genocide (4 Credits)**

This course examines the historical origins, patterns, and legacies of contemporary genocides around the world. We begin with the UN Convention on the Prevention and Punishment of the Crime of Genocide in 1948, which legally codified the definition of genocide and compelled ratifying parties to prevent its reoccurrence. Yet as we'll see, genocide has instead reoccurred with alarming frequency. We will discuss the definitional and analytical challenges facing this subject, as well as academic and policy debates regarding how to define and prevent genocide. We will also explore different approaches to seeking justice and reconciliation in the aftermath. To do so, this class will ground theoretical debates in empirical case studies.

**INTS 4029 International Business: Strategy and Practice (4 Credits)**

This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture, and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

**INTS 4031 Conflict and Security in Cyberspace (4 Credits)**

This course is for Korbel in DC program participants only. Cyber conflict is a new and complicated strategic problem that will engage the international community at many different levels. The cyber environment challenges traditional strategic thinking, and work on an adequate policy framework to assess and manage cyber conflict is at an early stage. Many traditional security concepts will need to be adjusted for the cyber environment through review and discussion. This class will look at both the national and international dimensions of cyber conflict in the larger international security context.

**INTS 4040 Technology and War (4 Credits)**

This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course will begin by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics range from the invention of gunpowder and the use of machine guns, to the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

**INTS 4046 Global Economic Inequality and Human Rights (4 Credits)**

The main purpose of this course is to understand the conceptual and empirical issues underlying the political economy of global inequality and its relation to Human Rights. What is inequality? What are the global dimensions of inequality and what are the connections between global inequalities and human rights? What are the proximate and deeper causes of global inequality? How does the analysis of deeper causes of global inequality and poverty relate to the underlying political economy of global capitalism? In order to do this, we will look at the relationship between the world economic system, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy. A special feature of the course will be an analysis and assessment of the millennium development goals and the prospects for progressive policies in the post-MDG period, e.g., the SDGs. We will also examine the problems of the advanced countries in a rigorous holistic framework that will go beyond the important work of Picketty and his collaborators on inequality.

**INTS 4047 Global Sustainable Development and Human Rights (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between sustainable development and human rights globally. For this purpose we will need to understand both the current global political economy(GPE) and Geopolitics. The key questions are:What is sustainable development ? What are the global dimensions of sustainable development ? What are the linkages between sustainable development and human rights globally and within particular nation states? How does the discourse of the linkages between sustainable development and human rights relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between sustainable development and human rights relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among sustainable development, human rights,energy, technology, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others within the context of domestic and global political economy . In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and within the nation states. For this purpose we will try to find the approximate but deep causal structure of GPE and the place of sustainability and human rights within this GPE. A special feature of the course will be an analysis and assessment of the climate change issues and renewable energy and critiques of technological fix .

**INTS 4048 International Politics of Nuclear Weapons (4 Credits)**

This MA-level course analyzes subjects central to the understanding of the role of nuclear weapons in international politics. The course addresses the origins of the atomic bomb project, early efforts to control nuclear materials, deterrence theory, nuclear strategy and force posture, and considers contemporary challenges to the global nuclear order including nuclear latency and nuclear terrorism. The goal of the course is to introduce students to the evolution of scholarship on the role of nuclear weapons in international politics, and to evaluate contemporary nuclear security issues in light of this broader context. Each class will focus on a different substantive topic, interweaving theory with history to better understand each issue area. The course will start with the initial development and use of nuclear weapons, followed by an in-depth look at the early thinking on nuclear strategy and escalation during the Cold War. These classes will cover the Manhattan Project, the bombings of Hiroshima and Nagasaki, the basics of deterrence theory, the arms race between the United States and Soviet Union, and historical cases of nuclear crises and brinkmanship (the Cuban Missile Crisis being the most well-known example). During weeks 5-7 students will explore the politics of nuclear acquisition, evaluating different explanations for why states build nuclear weapons. This section of the course will also explore the variety of ways that the international community has sought to prevent the spread of nuclear weapons, including the important role of international institutions, norms, and the nuclear disarmament movement. The final three classes are devoted to contemporary topics in nuclear politics, including the threat of nuclear terrorism, nuclear energy and dual-use issues, regional instability in Northeast and South Asia, the Iran nuclear deal, and the implication of new technologies (e.g. autonomous systems, 3D printing, precision weapons) for nuclear issues. The final class will provide the students with the opportunity to take stock of what we have learnt over the course of the quarter and to reevaluate early thinking on nuclear weapons in light of what we know now.

**INTS 4049 Addressing Complex Interagency Problems (4 Credits)**

This class will ask students develop the skills and addresses the challenges associated with the process by which policy recommendations are developed within the United States Government, particularly as they relate to complex multi-dimensional security problems. Students will learn about the roles played by various departments and agencies that are engaged in the policy making process, as well as how external actors impact the development of national security policy. This class will also give students the opportunity to learn about the policy making process in the United States inter-agency environment through a series of presentations from practitioners as well as hands-on experience via role-playing and the development of briefing memos, presentations and other materials. Students will learn about the history, structure and function of the interagency process, including past and current reform processes such as the Clinton Administration's Presidential Decision Directive on Managing Complex Contingency Operations (PDD-56) as well as the more recent Project on National Security Reform. Students will also hear several real-life examples of interagency policy-making from former government officials and various subject-matter experts. Students will be expected to role-play members of a mock National Security Council (NSC) team or as representatives of various US Government Departments and Agencies involved in the interagency decision-making process. Students will identify an actual national security problem and be responsible for debating and agreeing to a set of policy recommendations within the format and structure of the mock NSC. Select students may have the opportunity to present their recommendation to a current member of the National Security Council via video-teleconference. At the end of course, students should have a fundamental understanding of the strengths and weaknesses of the current system; what constitutes good NSC products and how to produce them; and how concession and compromise, trade-offs, external public pressure, intelligence issues and budget realities all can play a role in how national security decisions are made.

**INTS 4050 Statistical Methods I (4 Credits)**

An introductory course featuring statistical reasoning, probability, sampling, statistical inference, nominal and ordinal measures of association, and correlation. Open only to students with no prior background in statistics.

**INTS 4051 Statistical Methods II (4 Credits)**

This course is a continuation of Statistical Methods I, covering the fundamentals and primary methods of statistical inference. Topics include two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, correlation, simple regression and multiple regression. Emphasis will be on problem solving, computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only. Prerequisites: INTS 4050.

**INTS 4052 Statistical Methods III (4 Credits)**

This course will serve as continuation of Statistical Methods II. This will be an applied, non-calculus based course on statistical techniques used in nonparametric and multivariate analysis. Emphasis will be on applications and data analysis using the statistical software package SAS. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4056 Information Management in Humanitarian Crises (4 Credits)**

Accurate, reliable and timely data collection, processing, analysis and dissemination (four steps in information management) are critical for the effective implementation of both development and humanitarian programs. In humanitarian responses, there are numerous challenges to managing information in what may be a rapidly evolving situation. This course introduces students to the theory of information management and its application in the humanitarian context.

**INTS 4057 Statistics (4 Credits)**

This is a fast-paced course which serves as an introduction to basic and intermediate concepts in statistics and probability, as well as the primary methods of statistical inference. Topics include data collection, presenting data in tables and charts, summarizing and describing numerical data, basic probability, discrete probability distributions, normal distribution, sampling distributions, confidence interval estimation, single-sample and two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, simple regression and multiple regression. Emphasis will be on statistical reasoning, problem solving, computer applications (using Stata), and interpretation of results. Prerequisite: Strong quantitative background and a minimum quantitative GRE score of 148 or permission of the instructor.

**INTS 4058 Applied Time-Series Analysis (4 Credits)**

This course serves as an introduction to time-series analysis and panel data analysis techniques. Topics include moving averages, exponential smoothing, time-series decomposition, model identification and estimation, Box-Jenkins method, ARMA and ARIMA models, and VAR analysis. Panel data analysis includes fixed effects and random effects models. Emphasis will be on computer applications (using Stata) and interpretation of results.

**INTS 4059 Data Science With Python (4 Credits)**

Python is a widely used programming language for data exploration. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions, and so forth. They will then learn how to write Python programs to conduct data exploration, statistical analysis, visualization, and predictive analysis techniques like decision trees and text mining. Students will also learn how to use various libraries available in Python (like Numpy, Pandas etc.) in their programs. Finally, they will learn how to read and debug (i.e. fix) Python programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4060 Data Visualization (2 Credits)**

"The simple graph has brought more information to the data analyst's mind than any other device," stated John Tukey, a mathematician distinguished for his contributions to the field of statistics. The course, "Data Visualization" will introduce students to the Grammar of Graphics philosophy which has fundamentally changed thinking about data visualization in the last 20 years. We will use two popular data visualization tools designed using this philosophy: Tableau and the ggplot2 package in R. Students will create a portfolio in which their data visualizations implement best practices – and avoid common pitfalls – to effectively deliver insights.

**INTS 4061 Introduction to Survey Methods (4 Credits)****INTS 4062 Data Science with R (4 Credits)**

R is a widely used programming language for data analysis. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions etc. They will then learn how to write R programs to conduct data exploration, visualization, basic statistical analyses, as well as produce reproducible reports. Students will also learn how to use various packages available in R in their programs. Finally, they will learn how to read and debug (i.e. fix) R programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4063 Advanced Statistics (4 Credits)**

This course is a continuation of INTS 4057 Statistics. Topics include multivariate analyses such as principal component analysis, discriminant analysis, logistic regression and data examination. Emphasis will be on conducting data analyses as well as on interpreting Stata output. In addition, students will develop and write an empirical research paper using a rigorous analysis of the elements of formal research writing. Prerequisite: INTS 4057.

**INTS 4078 Modeling for Policy: Development, Sustainability, and Conflict (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of "traditional" development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward. This course introduces students to professional analysis using one class of quantitative tools called integrated assessment models (IAMs), which quantitatively represent complex systems in interaction. IAMs are tools that formally model the interaction across key development systems, like demographics, economics, energy, and the environment. They can be used to 1) think critically about how key trends are unfolding, 2) identify leverage points; and 3) explore the impact of changing policies and environmental uncertainties on desired outcomes.

**INTS 4090 Values-Based Leadership in International and Public Affairs (4 Credits)**

The professionals who leave Korbelt to enter international and public affairs will come to hold positions of influence, privilege, and leadership as they seek to promote the public good. Their behaviors will have significant consequences for those with whom they work, those they serve, and for third parties. Ethical leaders must be attentive to the challenges and contradictions associated with their positions, influence, and interventions. What values do we hope professionals in international and public affairs will embody, and how might they enact those values? This team-taught course engages the entire Korbelt graduate student body in centrally important, common, and difficult ethical issues that professionals in international affairs and public policy confront in their work. The course examines values-based leadership, which comprises ethical dilemmas but also issues and questions that commonly arise in practice but do not generally "fit" within the field of professional ethics. Traditional ethics courses tend to teach the two or three principal approaches to ethical frameworks and then present cases to apply those frameworks. This course on values-based leadership (VBL) also examines cases—but it takes the view that professional ethics as it is typically taught does not suffice to prepare students for the complexities of the world they will confront. As a corrective, the course is interdisciplinary, and among other fields incorporates troublesome findings from the new field of behavioral ethics. For example, why do virtuous people often violate their own ethical norms and then fail to recognize that they have done so? The course also reaches beyond ethics to engage other values that are central to responsible leadership—such as inclusivity, allyship, and access to decision-making by those targeted for professional research and policy interventions—while also exploring the contradictions and risks associated with professional privilege. Faculty and students will explore the power dynamics of decision-making where the populations that are the most affected by interventions often lack decision-making authority and may even be further disempowered by professionals' good intentions. The course looks to bring together, in one Korbelt-wide, cross-degree conversation, matters pertaining to values in leadership so that students can engage with others with a broad range of backgrounds, orientations, and career aspirations. No one discipline or professional field has a monopoly on good thinking on VBL. And so the course draws widely on the diverse experiences and expertise of students and faculty at Korbelt as we confront together some of the most difficult challenges professionals face over the course of their careers.



**INTS 4091 Great Issues in International Affairs (4 Credits)**

The course embraces a grand challenges approach that focuses on major issues of the day, while introducing key concepts central to the student of international affairs, notably international political economy, international relations, and governance in all its forms. Issues may vary from year to year, but will be those central to the Korbel School's mission. These will likely include: • Economic Inequality • Environmental Sustainability • Democracy and Human Rights • Security A lead professor will teach the first and last weeks of the quarter and coordinate the remaining weeks. Four other faculty members will each teach a two-week unit on one of the core issues. Each unit will seek to develop students understanding of: 1. The nature of the problem, its manifestations, its causes and its consequences 2. The array of possible interventions—by governments, international organizations, private firms, NGOs, and other—that might address causes or ameliorate consequences. 3. How one would decide which course of action to take. The course will utilize a mix of lectures and discussion sections led by PhD students. Generally, the first week of these units will frame the larger issue and the second will focus on a more particular instantiation of that issue. For example, in a unit on Inclusive Economic Growth, a first lecture might be explore the broad contours of economic inequality and its likely causes and second might focus on a narrower topic such as access to education, social mobility, or gendered dimensions of inequality, depending on the expertise of the faculty member leading that unit of the course.

**INTS 4105 Campaigns and Foreign Policy (4 Credits)**

This course will examine the principles of political campaign management and their application to international political campaigns, foreign policy initiatives and international affairs. Students will be introduced to the tools of political campaign management: message development, survey research, audience targeting, and paid and earned communications. Case studies will focus on elements of both US and other nations' foreign policy. Examples of foreign policy playing a significant role in campaigns in the UK, and Denmark will be highlighted. In addition, there will be a focus on human rights and issue campaign. Classes will be comprised of lectures, discussion and some simulation exercises. Outside specialists will be invited to share their experience and expertise in person or via teleconference. Readings include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management. Movies and the Internet will be an integral aspect of the class.

**INTS 4110 Food/Nutrition Security and Sustainable Development (4 Credits)**

This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food and nutrition security. Ultimately, food security is realized when all people within a population consume sufficient nutrients to live active and healthy lives. This normative focus on human health and well-being, as the metric by which food security outcomes will be measured, is critical to the framing of this course. Political, economic, and social institutions—positioned at scales encompassing global, national, “local” (micro-regional, community), and household—are simultaneously charged with producing food in particular physical environments and/or making food available and accessible to their populations, and with protecting environmental resources and public health in ways that contribute to nutritional components of human development. The term “political ecology” has been used to describe an analytical framework that explicitly focuses on the interactions among the structures of political economy and those of physical/biological ecologies (including human), together with the socio-cultural contexts that influence structural impacts and help to explain outcomes. This framework incorporates both an explicit navigation among scales (of power and of analysis) and a long-term perspective. Cumulatively, the readings and exercises of this course will build a political ecology of policy domains central to improving food security and nutrition outcomes in both global north and south. We will examine policy issues and constituencies, institutional approaches, theoretical perspectives, and empirical analyses. You will have opportunities to engage with institutional approaches through structured exercises, including a mid-term graded exercise. You will also have an opportunity to produce an independent project that will include your own policy recommendations.

**INTS 4127 The Rise and Fall of Great Powers (4 Credits)**

This new graduate course provides an in-depth look at often ignored areas of history. Learning about the rise and fall of the Roman Empire, British Empire, Russian Empire, Soviet Empire and Chinese Empire provides an excellent backdrop to understanding important historical lessons that are often downplayed in the early 21st century. The course provides a series of good works that can help students better understand the present and future developments of our century.

**INTS 4134 Forever Emerging? The Developmental Trajectory of Modern Brazil (4 Credits)**

Brazil has the largest population, economy, and industrial basis in Latin America. It is the seventh largest economy in the world, fifth largest country in land area, outranking the continental United States. Like the US, Brazilians are a mix of indigenous, European, and African peoples, along with subsequent inflows of Asian and Middle Eastern immigration, though race, ethnicity, and class have been interpreted with distinct cleavages and hierarchies. We approach our understanding of Brazil through the country's former capital, Rio de Janeiro, a city of numerous complexities, wonders, contradictions, challenges, and potential. By looking at the historical evolution of this fascinating city, the course will offer students an opportunity to study the evolution of Brazil, from the colonial period to the present day, when the country has increasingly been seen as a regional economic and diplomatic powerhouse, as well as a globally emergent player. By focusing on the historical trajectory of Rio de Janeiro, in an in-depth reflection structured along textual, visual, and in-sight materials and experiences, students are invited to reflect about matters of change and continuity as well as how national socio-political trends are reflected in local contexts, thus also learning to reflect about the interpretive relationship between the micro-macro levels of analysis. Historical political and economic narratives, contemporary analysis of the country's place in the world, films, music, architecture, guided visits to neighborhoods and local cultural institutions will be our explanatory prisms into the Carioca (Rio-based) spirit and cultural memories as expressions of national trends and trajectories. Through lectures, seminar discussions, and field studies, we explore Rio's renowned and sometimes notorious informality, from informal housing (favelas) to language, social organization and economic activities. We also explore themes such as tourism, the history of housing policies, and the transformation of local culture into 'national' and 'export' cultures. Moreover, by looking at the urban transformations over the last 200 years, we explore Brazil's drive to become an industrial power, as well as the new social conflicts produced by these efforts. Finally, we investigate Brazil's contemporary culture, politics, sports, achievements, promises and continued challenges as it proceeds as a so-called emergent nation into the 21st century, while still struggling with its colonial past.

**INTS 4136 U.S.-Cuba Relations (4 Credits)**

This class will review relations between the U.S. and Cuba from the Spanish-American War in 1898 to present day. On one hand, we find a stand-off that includes an invasion and trade embargo by the U.S., mutual attempts at political disruption, and the exodus of populations from each country to the other. On the other hand, we find surprising levels of cooperation including a longstanding pattern of "back channel" communication between the two governments as well as a degree of cooperation at the societal level. In addition, each country has had a profound influence on the development of social ideals in the other.

**INTS 4137 China in the World: Global Drivers, Local Conflicts (4 Credits)**

It is impossible to understand the 21st century without discerning China, which now possesses the largest army in the world, the biggest economy in terms of purchasing power parity, and the greatest number of people. Chinese firms provide foreign direct investment (FDI) worth \$3.8 trillion in stocks by 2018 and Chinese policy banks fund official development finance totaling around \$658 billion between 2000 and 2019. Chinese information and communications technology firms have launched some of the most widely used applications such as TikTok and Zoom. The Ministry of Finance, the People's Bank of China, and the State-owned Assets Supervision and Administration Commission of the State Council have been able to rewrite some of the global development architecture, launching the Belt and Road Initiative and Asian Infrastructure Investment Bank and the. Global commodity chains pass through Chinese territories or maritime economic zones, reaching 12.4% of global trade in 2019. In security issues, the Chinese Ministries and the People's Liberation Army have defined norms such as the responsibility to protect in the international community. In global struggle to reduce decarbonization, Chinese electric vehicle companies have been at the forefront of these new technologies and renewable energy companies have made major strides at limiting carbon emissions within its borders. The Chinese Communist Party has redefined human rights, putting the economic definition of the right to livelihood and work above everything else. China's new rich comprise the fastest growing number of billionaires in the world who are responsible for investments in online gambling or wildlife hunting.

**INTS 4141 Domestic/Int'l Conseq:Drug War (4 Credits)**

Domestic and international policy and the impact of the drug war on both.

**INTS 4142 After the Fall: Russia & China (4 Credits)**

Provides analysis of the historical rise of Russia and China, and their complex inter-relationship and interaction with the United States and the world.

**INTS 4147 American Govt & Pol. Making (4 Credits)**

Examines governmental fragmentation affects and policies and examines how policy issues engage different segments of the government.

**INTS 4201 Quantitative Analysis of Global Environmental Change (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate This course examines the role that quantitative analyses play in characterizing risks to society or ecosystems posed by global environmental change, and how various policy options could reduce those risks. We will focus in particular on analyses with "integrated assessment models" (IAMs), which have been influential in shaping the climate change policy debate. IAMs are typically global-scale systems analyses that integrate societal and environmental aspects of the climate issue. The course will survey alternative types of IAMs and explore how they work using one of the original, and still most influential, IAMs in the climate field, the Dynamic Integrated Climate-Economy (DICE) model developed by recent Nobel laureate William Nordhaus. We will use a recent version of DICE to explore how assumptions affect outcomes, and understand the strengths and weaknesses of such models.

**INTS 4205 Hacking for Defense (4 Credits)**

Hacking for Defense (H4D) is designed to provide students the opportunity to learn how to work with the Department of Defense (DoD) and Intelligence Community (IC) to better address the nation's emerging threats and security challenges. (See the background here.) Unlike current practices in the DoD/IC that can stall and in some cases thwart rapid innovation, this course provides a platform to develop prototypes that address DOD/IC users' needs in weeks. Agencies or Commands in the Department of Defense and Intelligence Community may provide follow-on funding to student teams for further refinement and development of prototypes. In this Hacking for Defense (H4D) course, student teams may either select from an existing set of problems provided by the DoD/IC community or introduce their own ideas for DoD/IC problems that need to be solved. Although teams pick a problem to solve, Hacking for Defense is not a product incubator for a specific technology solution. Instead, it provides teams with a deeper understanding of selected problems and the host of potential technological solutions that might be arrayed against them.

**INTS 4207 The Global Political Economy of China (4 Credits)**

China's rise in the 21st century has given rise to complex reactions in both the global North and the global South. This course will explore the rise of China and its possible consequences for the Global Political Economy from a complex systems perspective. The recently developed evolutionary theory of Global Political Economy will be the basic framework. We will build up an applicable ecologically sound evolutionary theory from the bottom up to understand 21st century Chinese paradoxes and ambiguities. These paradoxes and ambiguities are not accidental but relate to tensions in the moral economy of PRC embedded in the world of the early 21st century. Furthermore, the uneven development of both the Chinese and Global Political Economies across space and over time has led to immense inequalities among groups and possible polarizations. We will examine these inequalities and related emerging issues both theoretically and empirically and begin a conversation between the theorists and practitioners. In this way, this course is intended to begin the much needed dialogue among students of global society regarding the contemporary relevance of a complex multilayered innovative economy like that of the PRC. The ecological and geopolitical aspects of China's rise will be analyzed within our Evolutionary Ecological Global Political Economy framework. The well-being of the Chinese people and others in the Global Political Economy will be analyzed by using an extension of Sen's capabilities theory called the Socially Embedded Intersectional Capabilities Theory.

**INTS 4210 Global Value Chains, Multinational Corporations, and Investment Sustainability (4 Credits)**

The emergence of sweeping new legal rights for Multinational Corporations (MNCs) in relation to their foreign direct investment and cross-border trading activities under the avalanche of bilateral investment treaties negotiated in the last few decades and under multilateral conventions such as NAFTA represent what many have termed "revolutionary" changes in the nature of state sovereignty as it relates to state-investor relations. That expansion of investor/MNC rights in relation to state sovereignty has thus seemingly reached a point calling for re-examination of the nature and appropriate scope of MNC rights, as well as the nature of MNE accountability and responsibilities which are the flip side of such rights.

**INTS 4215 Gender and Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has grappled with the concept of gender and how to operationalize it in the context of humanitarian preparedness and response. Through readings, class discussions, guest speakers and assignments, students will have the opportunity to gain a better understanding of how the humanitarian system's approach is evolving in theory and practice.

**INTS 4220 Political Economy of Energy & Sustainable Development (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between energy and sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions.

**INTS 4223 Global Dynamics and Local Threats in Agricultural Development (4 Credits)**

Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

**INTS 4226 Social Entrepreneurship & Sustainable Development (4 Credits)**

This course provides an overview of the role of social entrepreneurs, innovative small firms, and entrepreneurial NGOs in sustainable development and poverty alleviation. Market-driven strategies are increasingly important for all organizations, in government, public, or private sectors, to encourage local solutions that are sustainable and do not require ongoing subsidy. Entrepreneurial NGOs and small firms are a great source of local innovation and adaptation, identifying potential strategies that can be scaled up through partnerships with governments, social purpose organizations, or private capital. These market-driven strategies are based on a good understanding of customers, the value provided, and how to best deliver products and services to vulnerable populations in a responsible way. Further, a strong customer and market focus ensures that all social purpose organizations (both for-profit businesses and NGOs) meet customer needs effectively and develop new products and services efficiently.

**INTS 4227 Social Impact & Sustainability Lab (4 Credits)**

This course combines classroom work with a project-based learning opportunity that matches students to a specific project for a social enterprise organization or research on a social enterprise topic. The class combines structured introduction to social enterprise business models and strategies to enhance social impact and financial sustainability with real organizations and practical challenges of launching and managing social enterprises. This approach allows teams of students to work together on real issues for social enterprises, learn strategies and tools for designing better solutions to development challenges, and learn some basic consulting and research skills with group discussion and shared learning. While INTS 4226 Social Entrepreneurship & Sustainable Development is not a pre-requisite, it provides a helpful overview.

**INTS 4228 Development Practicum in Social Enterprise (4 Credits)**

As global development challenges continue to evolve, many are complex, inter-connected social challenges that we call “wicked problems.” These challenges require development organizations and social entrepreneurs to combine human-centered design and systems thinking methods to design better solutions, and to include business planning for implementation and social impact management for continual learning. While not all organizations are “social enterprises” with earned revenue streams to drive their social impact, all social-purpose organizations can benefit from an entrepreneurial approach to problem-solving. They need human-centered and systems-minded impact strategies, market-driven business models, and well-designed performance metrics to guide continual innovation and improvement. Further, organizations that consistently strive to improve customer outcomes and make existing systems work better will be leaders in social innovation that create sustainable change. This Development Practicum is an experiential learning opportunity that matches students with projects for existing development organizations to help strengthen their customer-centered program design, business model, social outcomes, or financial sustainability. This allows teams of students to work together on a real problems, gain experience in how to design better solutions to development challenges, and learn and apply strategies and tools in Human Centered Design, business planning, and social impact management. The Practicum matches teams of 2-3 students to a client consulting projects and provides structured classroom learning about social enterprise principles and strategies for better solution design and successful implementation. This approach gives students structure for their consulting or research projects, and facilitates group learning and insights.

**INTS 4234 International Security, Diplomacy and Force (4 Credits)**

The course examines the ways and means of war and peace with a focus on both multilateral and bilateral forms of diplomacy. We begin with the use of force and the modalities of peacemaking in the Greco-Roman, Indian and Chinese ancient worlds. Ending wars in the “modern” period has often resulted in new constructs to maintain peace. Thus, the Peace of Augsburg (1555) and the Peace of Westphalia (1648) that ended warfare among German states established a foundation for sovereignty as cornerstone of a new state system. When post-1789 France became a “revolutionary” power, she dramatically upset the status quo. After the defeat of Napoleon in 1815, conservative powers gathered in the Congress of Vienna to restore a balance of power. The arrangements they established (dubbed the “Concert of Europe”) successfully avoided general war for 99 years. World War I (1914-18) was followed by multilateral diplomacy at Versailles and formation of the League of Nations and agreement to maintain international security through application of international law. Failure of this design in the interwar period led to another attempt after World War II (1939-45) at Yalta, Potsdam, Dumbarton Oaks, and San Francisco to establish and maintain peace not just by international law (collective security), but also through alliances (collective defense)—both under United Nations auspices. In the seven decades since, both bilateral and multilateral diplomacy have been used to restore or maintain international peace and security, also engaging in peacekeeping and arms control efforts in relation to weapons of mass destruction, confidence- and security-building measures (CSBMs), space and other security-related matters on present-day national and international security agendas.

**INTS 4235 Realism and Great Powers (4 Credits)**

We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schweller, Grieco, VanEvera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

**INTS 4236 Human Security and Sexuality (4 Credits)**

The root of homophobic views are often religious and cultural (mis)understandings deeply embedded in many societies around the world. Expressed in secular terms, the sexual orientation and identity of the majority trump those of sexuality minorities. Lesbian, gay, bisexual, transgender, other “queer” or questioning, intersex, and asexual (LGBTQIA) individuals have a personal stake in both security and the rights they have as human beings wherever they reside around the world. Violence, threats, discrimination, marginalization and other forms of harm directed to persons due to their sexual orientation or identities are worldwide human-security issues the course addresses.

**INTS 4237 Human Rights and Security (4 Credits)**

Throughout their 200,000 year history, humans have gathered into groups ruled by strongmen, to seek protection or prey on others. Just three centuries ago, Enlightenment thinkers challenged that conception of society and governance, which soon led to a remarkable event: the 1776 creation of a state whose rationale for existing was to secure the inalienable rights of all individuals to “life, liberty, and the pursuit of happiness.” That changed world politics. It meant that while the fate of states would continue to be shaped by their relative power, a new moral standard would be applied to governments: the extent to which they recognized universal human rights. As John Quincy Adams put it in 1817, the mixture of America’s emerging power and its avowed commitment to human freedom made America a “dangerous nation” in the eyes of the world’s authoritarian regimes. It also meant that competing conceptions of human rights would permeate American domestic struggles: over rights for white men vs. equal rights for all, over rights to property vs. labor rights, over national security vs. free speech and privacy rights, and over whether to defend rights only at home vs. the need (or obligation) to advance them internationally. Along the way, those U.S. debates led to a Civil War, a war to defeat fascism, and a cold war (including U.S. support for many “third world” dictators) to defend the market democracies of the West against authoritarian Communism. From the early post-cold war promise of an advance toward globally inclusive universal rights—during which such subjects as a “responsibility to protect” and support for democratic transitions entered mainstream policy debates—a “democratic recession” has now reached the point of serious threat to preserving even the United States as a rights-based Republic. For the first time since the 1930’s, a U.S. President offers a conception of national security that rejects promotion of human rights abroad. Domestically, a struggle over whether the object of “national security” is a Republic based on equal rights for all, or a racially and religiously defined “nation,” evokes memories of the clash that once led to civil war. Finally, Vladimir Putin’s effort to subvert all Western democracies presents us with a “cyber” version of the 20th century’s international, state-led assaults on the West by fascist and communist major powers. Those struggles are the subject of this course.

**INTS 4238 Modern Political Violence and Human Rights (4 Credits)**

The landscape of contemporary political violence is marked by a dizzying array of actors, including rebel groups, militias, gangs, and state governments. In this class, students will develop a better understanding of belligerents in modern conflicts and how they relate to one another. Students will also develop an in-depth understanding of a non-state armed group or conflict of their choice.

**INTS 4271 Sex and Violence (4 Credits)**

Some have described war as “long periods of boredom punctuated by moments of sheer terror.” In these periods of ennui, combatants have often found themselves filling the time with affairs of the heart (and other, less PG organs). This course considers how armed groups—ranging from state militaries to non-state armed groups—manage romance, sex, and family within their ranks. Examining these subjects is not an exercise in voyeurism, but rather a means by which we can better understand the quotidian operations of armed groups and, thus, the conduct of war.

**INTS 4290 Gender, Environment, and Development (4 Credits)**

This course is concerned with how and why gender matters in producing environmental, economic, and social outcomes of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of environmental and related economic planning. Beyond these practical implications of gendered environments, the course will engage theoretical and ideological underpinnings for the gendered structures of environmental control and management encountered in a wide range of physical environments.

**INTS 4301 Introduction to Political Theory (4 Credits)**

Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shape—and continue to shape—our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard.

**INTS 4303 Econometrics for Decision Making I (4 Credits)**

The first course in a two course sequence in Applied Econometrics. Introduces basic probabilistic techniques for the quantitative analysis of economic and social data and their application to international public policy decision making. Prepares students to: compile and analyze data sets; build and test regression models; interpret and critically evaluate applied econometric studies; and conduct their own applied econometric research using computerized statistical packages. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4310 International Trade (4 Credits)**

An intermediate course analyzing causes and consequences of international trade. Classical, neo-classical, and product-cycle models included. Topics include international specification, terms of trade of developed and less-developed countries, distribution of gains from trade, instruments and uses of commercial policy, nominal and effective protection, and theory of customs unions and economic integration. Prerequisite: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 should first complete INTS 4536.

**INTS 4320 Int'l Monetary Relations (4 Credits)**

An intermediate course examining history of the monetary system, foreign exchange rates, balance of payments analysis, and adjustment processes under different exchange systems, current status problems, and prospects for reform. Prerequisite: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for 4320 should first complete INTS 4536.

**INTS 4324 International Political Economy (4 Credits)**

The course examines 3 contrasting visions of international political economy: economic security, trade and finance.

**INTS 4327 Advanced Issues in International Studies (4 Credits)**

The purpose of this course is to train students in advanced research in the fields of International Relations and Comparative Politics. The course achieves these ends through an investigation into a particular empirical theme (of the professor's choosing in any given year). While due emphasis is placed on the major findings of the specified literature, as much or more attention is given to the research design, methods and evidence of the selected literature. Students will learn what constitutes a falsifiable hypothesis and what the alternatives to falsifiability are, examine various scholars' methods of operationalization and measurement, consider the merits of treating rival explanations to one's own, and judge the veracity of findings by these and other criteria. In addition, students will apply such knowledge gained by writing their own original research paper during the quarter. The course aims to assist primarily PhD candidates in their abilities to carry out research, to assess the quality of other scholars' research, to teach in the fields of International Relations and Comparative Politics, and to excel in their comprehensive exams. Please note that this course is offered only once every other year. Thus PhD candidates must enroll in the first year it is available in their course program.

**INTS 4330 International Business Transactions (4 Credits)****INTS 4332 Data Analysis and Development (4 Credits)****INTS 4333 International Project Design and Monitoring (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Design and Monitoring course (formerly International Project Analysis) is to provide students with an appreciation for the myriad of considerations in designing and monitoring an international development intervention and exposure to conventional and unconventional methods and means for doing so. The international project cycle begins with identifying an intervention to address a development impediment or opportunity faced by a target group. A development intervention typically falls into a sector or thematic area, such as education and health care, and it is generally directed towards physical, human, institutional/legal capacity building, or a combination of them. Projects can be singular in scope, such as building a new primary school, or broadly scoped to mitigate causes of poverty, such as the Millennium Development Villages project, but they all should be a unique endeavor with a beginning and an end. Much of the physical development today is supported by the private sector or state sponsored organizations, with less support through traditional foreign aid unless it is a major reconstruction effort like in Afghanistan. In this course, students will learn that a project proposal should be designed in concert with the beneficiaries to be relevant, feasible, and supported by their needs, but also recognizing their absorption capacities. Such a project proposal should ideally have gone through a systematic analysis of factors that will affect its design and management of risk, including economic, financial, environmental, technical, and social factors, as well as special safeguard areas. Students will also learn about the continued need for project proposals to define the underlying theory of change, assumptions, and logical framework for linking inputs, activities, outputs, outcomes and ultimately desired impacts. Establishing a performance management plan for the project that defines, among other things, the metrics and milestones for monitoring the process is an essential component of most project proposals. However, students will learn that adherence to plans is challenging under complex development conditions.

**INTS 4337 Current Challenges in the Middle East (4 Credits)**

In this course, we will examine some of the issues, events and decisions that may be contributing to this perception and more generally on the evolving role of the U.S. in the Middle East. Is the perception correct? What might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Can the U.S. play an effective role in any of those challenges? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4339 Microfinance Lessons: Inclusive Markets and Development (4 Credits)**

This course provides an overview of why microfinance and financial inclusion are key strategies and platforms to build sustainable development and inclusive markets and how the financial inclusion ecosystem supports development outcomes through direct impact of microfinance institutions (MFIs) and systems change. Microfinance and financial inclusion are important ways to improve economic choices and household resilience among the poor, providing access to credit, safe savings options, payment systems, and even micro-insurance to help the poor manage risk and financial uncertainty. They are also important tools to create local, inclusive markets and economic opportunity by facilitating micro and small business development and access to development assets like clean energy, clean water, agricultural inputs, education, and healthcare. We will focus on lessons and insights from microfinance's evolution into financial inclusion, how digital finance and other technology innovations are creating new opportunities and risks in development, and the shared characteristics of highly effective microfinance institutions and NGOs that integrate microfinance into their development strategies.

**INTS 4341 Illicit Markets in the Americas (4 Credits)**

This course applies the understandings of International Political Economy (IPE) to the study of illicit market activity in the western hemisphere. While sociologists, criminologists, legal scholars and law enforcement agencies have all contributed substantially to this area of study, IPE has only recently been applied. So what can this approach contribute? Through IPE, we can place illicit market activity within the larger structure of trade and monetary relations, the rise of the informal sector and the existence of economic and other inequalities in particular regions. We can consider the nature and impact of North-South relations and the process of structural adjustments as advised by international financial institutions. Further, we can evaluate the overall function and effectiveness of law enforcement, governing institutions and international organizations in controlling illicit market activity. Finally, through IPE, we can consider the ideational context of participation in illicit market activity.

**INTS 4342 Project Management (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the Project Management course is to expose students to right- and left-brain approaches to managing the knowledge areas of project management, such as time and cost management, as well as approaches used by project managers and their teams. This course concentrates on the implementation and completion/transition phases of the international project cycle. The implementation phase commences after stakeholders approve a project proposal—translated into a project charter—from which a detailed project management plan is developed to execute the project. Project managers rely, to a large extent, on internationally recognized management approaches to move workflow smoothly among project phases, allocate project tasks effectively, efficiency track project milestones, and make adjustment for inevitable and often uncontrollable project delays and cost overruns. The completion/transition phase ends the project and transfers control from the project team to the operational team, preferably through a defined exit strategy. The course covers the knowledge and skills needed to meet the educational requirements for certification by the Project Management Institute (PMI). PMI serves practitioners and organizations by providing standards that describe leading practices, globally recognized credentials that certify project management expertise, and resources for professional development, networking and community. PMI credentials certify your knowledge and experience in project management so you can be more confident at work and more competitive in the job market. Several other organizations will be mentioned that also provide certification, but all share in common required education hours, years of experience, and passing a professional examination. Students in the course will exhibit their new knowledge and skills by joining small teams to prepare a professional project management plan for the selected development project charter and through individual examination.

**INTS 4349 Comparative Public Policy and Finance (4 Credits)**

Course aims to provide in-depth treatment of the question "why do size, form, financing, and distributive outcomes of government differ so greatly across nations?."

**INTS 4350 Economic Development (4 Credits)**

This course combines an introduction to the theories and key issues in economic development with a rigorous analysis of empirical evidence from low- and middle-income countries in Asia, Africa, and Latin America. The course enables participants to develop an in-depth understanding of diverse local, national, and regional patterns of economic development, and to critically assess the design and potential social and economic consequences of global policy frameworks and national economic development strategies. The course starts with providing an outline of global trends in poverty, inequality and growth, including a discussion of key concepts and ways of measuring economic development. Part I focuses on classical, neoclassical, and institutional theories of economic development. Linkages between the intellectual basis of different theories and major political currents and ideologies, and the associated policy design, are assessed. In part II, core themes in economic development are explored, including agriculture, trade, industrialization, labor, and the environment. The analysis of diverse country studies illuminates how historically specific social, political, and institutional conditions shape development outcomes. In part III, we examine the design and implementation of economic development policy through an analysis of international aid agendas and institutional modalities of ODA, with a particular focus on emerging donors. We investigate the strength and weaknesses of national economic development policies through an in-depth study of selected country case studies. Please note that a mastering of quantitative economics is not a requirement for this course.

**INTS 4355 Finance and Development (4 Credits)**

An advanced course which examines the relationship between financial system organization and economic performance. The political economy of financial innovation, liberalization and globalization, state-finance-industry relations, micro-lending, stock markets and regional financing are discussed with reference to Latin America, Asia and African countries. Completion of INTS 4320 and INTS 4350 prior to taking this course are recommended but not required; students with questions should contact the professor.

**INTS 4362 Gender and Health (4 Credits)**

This course will introduce students to theories/concepts of gender and health and examine the interlinkages between global health policies and programs. It will cover the design, delivery, reception, and effectiveness of international programs aimed at improving health outcomes for women and men. The course will review women and men's access to health, and the influence of patriarchy/masculinity on health at micro, meso and macro levels. The readings from the course focus on major theoretical and analytical debates in the field of international/global health, such as HIV/AIDS, gender-based violence (especially in relation to emergencies/humanitarian crises), key populations (MSM (Men who have sex with men), Commercial sex workers, IDUs (Injecting drug users)), LGBT health, and sexual and reproductive health. Research projects provide students an opportunity to explore further the linkage between health and gender, health care or health policy and gender, gender and health-related issues in emergencies, and the relevant health and gender interventions in a country of their choice.

**INTS 4364 Global Poverty and Human Rights (4 Credits)**

This course explores the many dimensions of global poverty and human rights and well-being of people around the world. Three particular areas are emphasized and explored in detail. The first is the exact dimensions and extent of globalization. The second is the exact nature of another complex thought called poverty. The third area explores the connections between globalization, poverty, and human rights. After rigorous discussion of the conceptual foundations, we focus on the U.N. millennium development goals for poverty reduction in particular. At the end we will be able to explore the analytical foundation of alternative policies, strategies and evaluate these for formulating alternative strategies addressing human rights issues and global poverty reduction.

**INTS 4367 Global Health Affairs (4 Credits)**

Introductory survey class for all students interested in intersection of international affairs and global health and security, development and economics.

**INTS 4368 HIV & AIDS in International Affairs (4 Credits)**

Upon completion of the course, students will understand (a) the concept of global health security; (b) HIV/AIDS as an epidemiological phenomenon; (c) the political, economic and social contexts of HIV/AIDS in specific regions of the world; (d) HIV/AIDS as a threat to security and gender; (e) security considerations of HIV/AIDS impacts in development and as a human right.

**INTS 4369 Political Economy of Global Poverty & Inequality (4 Credits)**

The main purpose of this course is to understand the underlying causes of inequality and poverty in the world. In order to do this, we look at the relationship between economic growth, poverty, and inequalities in several different dimensions. First, the process of sustainable growth itself is analyzed. Second, the implications of different types of growth for income distribution and poverty are studied. Finally, the implications of such inequalities for human welfare in developing economies in particular are studied. After an initial exploration of the income-based measures of poverty and inequalities we focus on the more recently developed social capabilities approach developed by Amartya Sen and others.

**INTS 4370 The Global Economy: Conflict, Crisis and Cooperation (4 Credits)**

An introductory course on the nature of global economic integration in the postwar period, including contending theoretic perspectives, and several applied issues and policy dilemmas such as the evolving nature of firms (e.g. globalization of production), the "new international of labor," and the status of national sovereignty/policy autonomy in an integrated world economy, politics and markets, and current themes in political economy.

**INTS 4372 Great Books in Political Economy (4 Credits)**

This course investigates several contemporary approaches to Political Economy, ranging from institutionalist to Marxist, anti-essentialist, and (postmodernist) feminist thought. Rather than attempt to survey quickly a lot of literature, we carefully read a limited number of influential (and provocative) texts that present a range of perspectives with which most students are largely unfamiliar. These are very challenging texts, and students must be prepared to spend a good bit of time on the assigned readings weekly.

**INTS 4379 Gender and Development (4 Credits)**

This course is concerned with how and why gender matters in outcomes and impacts of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of development planning. Beyond these practical implications, the course engages theoretical and ideological underpinnings for the gendered structures of economic, political, and social power encountered in a wide range of economic and social development contexts. Throughout the quarter, the class examines interactions among structural and cultural (including ideational) factors that together comprise and construct gendered environments. Structural and cultural factors are, at the least, mutually reinforcing, and may be mutually constitutive. The class interrogates the ways in which each set of economic and social transformations broadly encompassed within a human-rights or human-development approach to international development. The class also engages interacting dimensions of change, including economic, social, political, physical environmental, and human biological dimensions. The class explicitly examines all interactions across scales from global to local. If we were looking for a label for this approach, it could be called "gendered political ecology." We could also use a term coined by Dianne Rocheleau and others, "feminist political ecology," which suggests the need to examine the responsibilities, freedoms, and control of resources, together with the varying forms of agency, strategy, and tactic deployed by women (often in partnership with men) to redress these inequalities. The class considers numerous cases from the Global South, and some from the Global North. These case studies immerse us in the diversity and complexity of gender and development interactions and in the "grounded agency" (Radcliffe 2006) through which women and men attempt to secure livelihoods – that is, "making a living and making living meaningful" (Bebbington 2000) – to enjoy long and healthy lives, and to participate in full citizenship. These cases also illustrate myriad patterns of gender construction across ethnicity, class, age, marital status, and other differences among women and men. This is a policy-oriented course. The class explores the ways in which the gendered division of labor and resources, and the socio-cultural construction of masculinities and femininities, influence perceptions, formulation, and implementation of development policies and practices. The class traces the differential impacts of development policies and initiatives on women, men, and gender relations in the developing world as well as efforts to target women through more gender-sensitive development initiatives. Ultimately, this course considers how ideologies and institutions of global development might yet enable women's empowerment and facilitate equity in a deeply unequal and interconnected world.



**INTS 4384 Middle East and U.S. Security (4 Credits)**

The course will examine current US strategies toward the Middle East, terrorism, and how Homeland Security in US will respond.

**INTS 4391 Financial Management and Fundraising of Non-Profits (4 Credits)**

This course will introduce students to the legal, governance and financial structures that enable non-profit organizations to function effectively. It will also provide a practical orientation to financial management issues, such as budgeting, financial reporting, and independent audits. Finally, a comprehensive presentation will be given of the fundraising methods needed to sustain the viability of non-profit organizations. These methods include: annual campaigns, direct mail, special events, major gifts, corporate fundraising, foundation grants, and planned giving. The course combines exploration of the general conceptual issues with an emphasis on practical "how-to's" and skill building.

**INTS 4394 The Organizational Psychology of Non-Profits (4 Credits)**

Nonprofit management issues and techniques looks at current NGOs and issues in working with corporations.

**INTS 4397 The Environment, The Economy, and Human Well-Being (4 Credits)**

In this course we will explore the role of the environment plays in society and the determination of human well-being, and how this can be addressed from an economic perspective. A core premise of the course is that the human economy is embedded within the broader context of human society, which in turn is embedded within a natural environment. The natural environment provides a variety of goods and services, which, through interactions between the environment, individuals, and society, contribute to human well-being. Some of these services are directly used by people. Others contribute indirectly by allowing for the continued provision of other services. As such, any discussion of human well-being and development that ignores the natural environment is inherently problematic. We will specifically adopt an economic perspective, but one that goes well beyond that of conventional neoclassical economics.

**INTS 4399 Issues in Global Economics and Financial Security (4 Credits)**

This course is for Korbel in DC participants only. The course discusses global economic and financial security issues through the prism of the current crisis and its aftermath. We begin by developing the analytical framework and then applying it to key countries/regions. We consider the causes, the policy responses and prospects. We look at ways of ensuring global monetary and financial stability, including appropriate policies to ward off financial crises and asset prices bubbles. Other key topics, including food and energy security and the role of finance in promoting development, are also discussed as time permits. The focus is on applied economics and finance, and their importance as analytical tools in policy discussions on economic security and development. This course is less narrowly technical, more policy and political economy oriented, but nonetheless appropriate for students concentrating in global markets, development, finance and trade. These are a few guest speakers on special topics, in addition to answering questions about career choices and professional development.

**INTS 4404 Cities, Security, and Health (4 Credits)**

This course will present a framework to analyze the impact of urbanization on human development and security in a comparative context of major urban centers in the developed and developing world. It will provide a practicum for utilizing cross-disciplinary methods and perspectives to address specific challenges to urban and human development. We will examine urbanization through a framework of human development, environmental health and security, and explore how public policy and planning can create short- and long-term impacts on multiple outcomes.

**INTS 4423 Introduction to Epidemiology (4 Credits)**

Decisions and policy related to global health are based on data from various disciplines such as demography, medicine, and epidemiology. Therefore, it is crucial to correctly understand and interpret what health data and the data in general tell us. This course provides the knowledge and skills required to critically assess data, and understand both strengths and limitations of data and research. This course covers the basic principles and concepts of descriptive and analytic methods in epidemiology and their application to research and practice in public and global health.

**INTS 4427 The Political Economy of Sustainable Development in Africa (4 Credits)**

This course introduces the political economy of sustainable Development in sub-Saharan Africa (SSA). It uses a multidisciplinary approach that draws on literature from development economics, international relations, comparative politics, sociology, and history, as well as a broad range of country case studies. We engage with the main theoretical and empirical debates on sustainable economic and human development in SSA and examine a diverse range of country case studies. The topics covered include past and current political and economic conditions for economic growth and the improvement of human welfare levels, sustainable agricultural development and governance of natural resources, increased resilience - socially and economically - to rapid environmental change, and the role of foreign aid in African development. We explore the region's integration into the global political economy and examine the role of the state in Africa's development today. The course helps students to understand the major development challenges facing African societies today by illuminating patterns as well as diversity in development trajectories across the region.

**INTS 4435 Health and Development (4 Credits)**

Looks at how health status of populations affects culture and environment, and also how successful development affects health.

**INTS 4437 American Public Opinion & Foreign Policy (4 Credits)**

This course examines American public opinion and its impact of foreign policy. The course begins with an investigation of what is public opinion in general and how it is collected, analyzed and used. The primary sources of American public opinion data and analyses are identified. The course proceeds to outline the controversies of American public opinion related to foreign policy decision-making using historical perspectives and the most recent challenges from the first Iraq War to the Arab Spring. Although foreign policy is often a secondary issue for the public compared to domestic issues, in recent times it has been mostly responsible for the transition from a Republican-dominated era to the Democrats' ascendance. A series of principles that have informed practitioners and foreign policy experts concerning American opinion related to foreign policy is examined and affirmed or debunked. Also, media and its persuasive power in opinion formation are considered. At the conclusion of the course, students should be familiar with a selection of foreign policy challenges that America has confronted in the modern era, the role of public opinion in the national decision-making and the existence of guiding principles of public opinion and their exceptions.

**INTS 4438 International Public Opinion and Foreign Policy (4 Credits)**

This course examines international public opinion and introduces the major international opinion trends that impact foreign affairs. The course first reviews international public opinion worldwide, then by major regions and finally a selection of leading countries. The theoretical question is how public opinion influences foreign policy in countries around the world, and if and when it does, under what conditions. Also, how international opinion affects American foreign policy, including the views of foreign publics toward America and its policies, is also examined. The course begins with an investigation of the history of collection and diffusion of international survey research, the quality of the data and the techniques used to collect it. The relationship of public opinion research and democratic government and media freedom is examined. The second part of the course outlines some of the public opinion benchmarks, their variations and similarities among countries and regions, and their change over time. A variety of the best sources of opinion data are used. Benchmarks include: level of satisfaction with the direction of own nation; satisfaction with and preferences for form of government; satisfaction with and preferences for economic system, the role of government intervention and entrepreneurial values; nationalism and approach to neighbors; attitudes toward Americans, American leadership and foreign policy; and impact of cell phones and Internet on opinion formation and collection. The course's orientation is both from an American foreign policy perspective and from the perspective of key international organizations, such as the UN, OAS, EU, etc. At the conclusion of the course, students should be familiar with the history and sources of international public opinion research, the major similarities and differences in international and regional public opinion, and the impact that it has on both American and international, multinational organization foreign policy decision-making. When available, there are guest speakers concerning the impact of public opinion on foreign policy decision makers.

**INTS 4447 Making of Chinese Foreign Policy (4 Credits)**

This seminar course examines and analyzes the making of foreign policy in China, a rising power in the 21st-Century. We look at and identify major driving forces behind China's foreign policy-making, including ideational sources (historical legacy, strategic culture, communism, and nationalism), domestic and institutional sources (foreign policy making institutions, elite politics and key players), and international sources (international system and regimes). We also examine China's strategic relations with major powers and its Asian-Pacific neighbors. This course is aimed to equip students with sophisticated understanding of the ongoing debate about the role that a rising China has played and will play in world affairs.

**INTS 4450 Democracy and Militarism in Latin America (4 Credits)**

Many note that even as democratization has taken place throughout Latin America, there has been a persistent and evolving role for the military, police and private security forces in many cases. The purpose of the class is to explore this apparent contradiction by examining the various internal and external pressures that have come to bear on these societies. Through approaches derived from comparative politics and international political economy we study domestic factors such as interest groups, political parties, social movements and governing institutions on one hand, and the role of international relations and organizations on the other. From this standpoint, the state becomes a mediator of internal and external pressures and is shaped by these pressures in turn. In the first half of the class, we specifically apply institutions, political realist, class analytic and market globalization perspectives to the study of the military. In the second half, we look at the interplay between democratic development and security issues in a changing global environment. This includes a study of the nature of democratization in Latin America, so heavily applauded by scholars, politicians and others, the impact of the truth and reconciliation process that emerged after the bureaucratic-authoritarian era, and the role of civil society and international organizations. In the final part of the class, we turn to the issue of citizen security amid high levels of crime, gang activity, and drug trafficking with a focus on Central America.

**INTS 4453 Political Economy of Latin America (4 Credits)**

In any part of the world, the earth and its resources constitute the fundamental framework of economic development. The study of development in Latin America offers an opportunity to study the interplay between the forces of economic development and efforts to restore and maintain ecological balance. In the first part of the class, we consider the legacies of colonial rule and foreign intervention including uneven patterns of land ownership, political and social divisions, tension between democratic and authoritarian forms of governance, and a central role for social movements in the struggle for economic justice. We also discuss the current era of export-led development, which has prompted a surge in mining, lumbering, and other forms of extraction, along with environmentally disruptive commercial projects. While increasing economic growth and facilitating some of the largest fortunes in the world, this development model is currently devastating the environment, human health, and the prospects for community survival in many places. On the other hand, communities, indigenous groups, and civil society organizations are challenging this model by advancing an alternative that stresses ecological balance.

**INTS 4459 Global Business, Governance & Corporate Social Responsibility (4 Credits)**

In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. This course will dive into contemporary global governance mechanisms to better understand the opportunities and challenges that states, business, and civil society face when in engaging with issues such as global financial crises, labor standards, respect for human rights and the environment.

**INTS 4460 Politics of China's Modernization (4 Credits)**

After more than a century of decline and stagnation, China is reemerging as a great power in the twenty-first century. China's rise to the glorious has never been easy and still faces many changes in the year ahead. This course is designed to provide students with a comprehensive understanding of China's rise in the context of its political development. We examine how revolution, nationalism, communism and liberalism have all affected the development of modern China with a focus on the political dynamics of the People's Republic of China (PRC) and the politics of post-Mao economic and political reform. We start by analyzing the rise of the Chinese Communist Party and its state and nation building efforts in the early years of the PRC and move on to examine the Mao's failed socialist transformation and political campaigns (the Hundred Flow Campaign, Great Leap Forward, and the Cultural Revolution). The remainder of the course explores political dynamics of post-Mao economic and political reforms and the prospect for a democratic China. This course aims at equipping students with an analytical perspective for understanding contemporary Chinese politics.

**INTS 4468 Politics of Development (4 Credits)**

Course explores political factors and parties which affect developing nations and hinder new development.

**INTS 4478 Donald Trump, Democratic Decline and Authoritarian Populism (4 Credits)**

To affirm that on a global level, liberal democracy is declining and authoritarian populism is ascendant, is to state the obvious. This confirms a trend that Larry Diamond predicted ten years ago about a "democratic recession" that shows no sign of abating. What is most intriguing and in need of explanation is the decline of democracy and the rise of authoritarianism in liberal societies of the West, where democracy has long been established and consolidated. According to the 2018 Democracy Index (published by the Economist Intelligence Unit), the United States in the era of Donald Trump, is better described as a "flawed democracy" rather than a "full democracy." Similar trends are discernible in Europe, Latin America and Asia. How can we explain this development? What social conditions have produced this outcome and what are the implications for world order and the study of international affairs? Can the slide toward authoritarian populism be reversed? We will examine these questions theoretically, historically and comparatively.

**INTS 4483 Global Health in Practice (4 Credits)**

The purpose of the course is to prepare Global Health Practitioners for realistic situations utilizing practical tools and exercises forged from decades of hands-on experience. Heavy emphasis is placed on program design based on context, authentic dilemmas in implementation, critical components of leadership, and best practices of field operations management. No prior field experience is necessary to attend or to complete this course. The student will acquire practical knowledge about the following areas of health program design and management in the field: research and preparation, creation and implementation, along with team management and operational leadership. Students will develop detailed field perspectives, analyze the implications of their programs, and ultimately assemble their own personal toolkits to build for success. The intent is to develop a solid understanding of and to practice the usage of tools and skills for Global Health Practitioners to thrive in international and domestic programs.

**INTS 4484 Agriculture and Sustainable Development (4 Credits)**

This course provides an overview of world agriculture and an introduction to agricultural populations, politics, policy paradigms, and institutions. It contains modules in: the history of agricultural production for economic growth and food security; global distributions of (1) agricultural production regimes, (2) land (including historical and contemporary "land grabs") and other productive factors, and (3) uses of agricultural products for food, fuel, feed, fiber, and agro-based construction materials; effects of agricultural trade on economic growth, livelihoods, and food security; relationship between humanitarian food aid and agricultural production and food security; social organization of agriculture and related productivity and human development issues, with special attention to gender; environmental constraints to agricultural sustainability and agricultural constants to environmental sustainability (climate change, water demands and conservation, agricultural energy production and consumption, causes of soil loss and degradation); technological change and innovation in agriculture; and culture and agriculture.

**INTS 4485 International Trade and Economic Negotiations (4 Credits)**

This course is for Korbel in DC participants only. The purpose of the course is to explore the challenges confronting international trade and economic policy, as well as current negotiations designed to address these circumstances.

**INTS 4492 Health and Humanitarian Aid (4 Credits)**

According to the World Health Organization, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." In order to address health in humanitarian settings we must therefore respond to a range of needs and consider the diversity within affected populations. In this course, students will have the opportunity to explore some key sectors of humanitarian aid and how they relate to health. By following a specific ongoing crisis throughout the quarter, each student will have the opportunity to gain a better understanding of the particular challenges inherent in humanitarian assistance and to analyze how the "theory" is actually implemented in practice. Whether the student's future is in the field or at headquarters, internationally or at home, he or she will likely need to quickly and critically review and summarize available information in order to inform decision-making, and students will have ample opportunity to develop this skill during the quarter.

**INTS 4493 Humanitarian Aid in Complex Emergencies (5 Credits)**

This course will focus on the evolution of humanitarian actions, in the context of the international system, since World War II. Complex humanitarian emergencies will be the focus. Themes will include: disasters, conflicts and humanitarian action; the political economy of conflicts and humanitarian aid; civil-military cooperation; and the impacts of humanitarian intervention on the delivery of aid. Vulnerability analysis, capacity analysis, and risk analysis will be key tools. The structure and function of EWS (early warning systems), especially in the context of famine, also will be key.

**INTS 4496 Field Operations for Humanitarian Assistance (4 Credits)**

Within a disaster response, various interrelating factors determine the ability of the humanitarian community to adequately respond. From coordination among governments, donors, non-governmental organizations (NGOs) to internal working components within an agency that drive programmatic support, the realm of humanitarian operations is a complex system that should be understood by anyone with an interest in supporting relief efforts. The main focus of this course is concentrating on the practical, specific systems that drive field operations - namely security, logistics, finance, monitoring and evaluation, human resources, administration, and advocacy that support program planning and implementation. Through understanding these components, the challenges that are encountered, and how each interrelates within an organization and the wider response community students gain a balanced understanding of humanitarian operations. While each emergency response comes with varying contextual challenges, the humanitarian imperative mandates the relief community to respond in a neutral manner based on need. Doing so, places strains on the operational systems that need to be overcome to provide quality interventions. Through this course we take an in depth look at both theoretical and practical ideals for humanitarian assistance.

**INTS 4497 International Campaign Management (4 Credits)**

This course will examine the principles of political campaign management and their application in a number of international political, public affairs and human rights campaigns. It will be an introduction to the tools of political campaign management: message development, survey research, audience targeting, paid and earned communications, fundraising and organizational structure. Case studies of campaigns in countries such as Sweden, the UK, and Australia will be used as examples of these techniques. Class will be comprised of lectures, discussion and some simulation exercises. Efforts will be made to bring outside specialists and experts to the class or by teleconference. Readings may include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management.

**INTS 4499 Evolving Global Security Landscape (4 Credits)**

This course is for Korbel in DC participants only. Change brings with it challenges—at the individual, organizational, and systemic levels. It involves behaviors and cultures with often deep-seated traditions. This course will explore the scope and magnitude of the transformational forces at work in the U.S. and to a lesser extent the global security and defense establishments. By its nature the course will be about peace and war—how the nation goes about the business of preparing, equipping, and training itself to deter and if necessary to fight traditional wars and the new kinds of challenges that might lead to armed conflict as well as shaping the post war environment for an enduring peace—but do NOT think about this as a linear process. It will also be about sociology, bureaucratic politics, the role of the media, economics, health care, power.... Most of all this semester it will be about the transformational nature and effects of ROBOTICS, AUTONOMOUS SYSTEMS, and ARTIFICIAL INTELLIGENCE (RAS/AI) on security and the budget pressures on the national security/ defense budgets—and where to consider taking acceptable risks—geographically and functionally and force posture wise (for example, do we need a \$1 Trillion nuclear modernization program; or 2400+ F-35s; or 12 carrier battle groups?). THIS AGENDA NOW IS BEING SHAPED GOVERNMENT and the PRIVATE SECTOR—COMMONLY KNOWN AS THE 3rd OFFSET. (The roots of this can be found in Secretary Hagel's 214 Innovation Initiative. <http://www.defense.gov/News/Article/Article/603658>).

**INTS 4500 Social Science Methods (4 Credits)**

Prerequisites: The course presumes a basic competence in statistics, social science, international relations, and comparative politics. This is an advanced, fast-paced course that seeks to provide students with a sensitivity to research design choices, both for designing their own projects and as critical consumers of the works of other scholars. The course is primarily intended for Ph.D. students at the pre-dissertation prospectus stage as well as for advanced MA candidates pursuing thesis projects. The course content covers diverse methodological approaches from the discipline of Political Science as well as methods from other fields. The course will cover topics including: research questions and 'puzzles' in political and social science; causality and causal inference; theory construction; measurement; the comparative method; case selection; and quantitative and qualitative methods. Students should enter the course with several research interests in mind since the final project for the course entails producing a research design that could serve as the basis for a future prospectus. The class sessions will include a formal introduction to different methods, a discussion of readings, and work-shopping of student work. We will also informally discuss tips and tradeoffs in the academic profession and for publishing. The class meetings will rely heavily on student participation and peer critique. At the end of the course, students should be able to identify the strengths and weaknesses of different research designs.

**INTS 4501 Comparative Politics in the 21st Century (4 Credits)**

INTS 4501, Comparative Politics: States and Societies in the 21st Century, is a core course in the graduate program curriculum of the Josef Korbel School of International Studies. The course explores theoretical perspectives and policy-relevant knowledge in comparative politics, a sub-field of contemporary political science that considers the ways in which states and societies govern themselves or "allocate value" in countries around the world. Governance is arguably the pivotal variable in the realization of contemporary global development and human security objectives. The principal question the course addresses is: What is "governance," and how does it serve to work for, or against, peace and development in countries around the world?

**INTS 4502 Comparative Revolutions (4 Credits)**

An intermediate course focused around the major revolutions that occurred in England, France, 19th century Europe, and in Russia and China during the 20th century. Emphasis is placed on historical facts, key theoretical debates generated during the various social upheavals, and diverse interpretations seeking to understand the nature and causes of revolutions and their impact on societies. Prerequisites: INTS 4702.

**INTS 4516 Major Diseases in Global Health (From Pathophysiology to Action) (4 Credits)**

As future global health practitioners and policy makers, it is imperative that we each have a complete and solid understanding of the mechanisms, physiology, epidemiology, transmission patterns, and clinical impact of the major diseases affecting global health. How and when does a person transition from simple HIV infection to full-blown AIDS? Why is dracunculiasis so readily amenable to eradication whereas filariasis is not? For what populations is co-infection with HIV and TB or HIV and malaria so critical and why? On the individual patient level, how and why do certain diseases manifest so differently in resource-poor versus resource-rich or urban versus rural settings? Who are the vulnerable populations and how does disease impact them physiologically? When and where would specific program interventions work over other programs and for whom? In this course, the students develop an understanding of the etiology, agents, vectors, burden, methods of detection, basic treatment complexities, and life cycles of major diseases impacting the world. Specifically, this course details HIV/AIDS, TB, malaria, maternal/reproductive health, some protozoa, helminthes, and major parasites, chronic disease such as cancers and diabetes, and violence/trauma. As there is no shortage of amazing and interesting diseases globally, students learn a sound method of inquiry with which to address and disease process. Students also apply this method directly toward program analysis, and in the development of teaching sessions for community health workers.

**INTS 4517 Politics of Deeply Divided Societies (4 Credits)**

This course focuses on the politics, conflicts, and conflict transformation approaches to deeply-divided societies. While ethnic, religious, and other types of communal conflict have been around for millennia, since the decline of colonization, and especially since the end of the Cold War, such struggles seemed to have exploded onto the world scene. This course focuses on these "contemporary" ethnic, religious, racial, and other communal conflicts to better understand why and how such conflicts develop. We then examine both theory and practice on what can be done to ameliorate or remedy them. Units focus on the nature of identity and identity politics; the use of political violence to pursue identity or nationalistic goals, and nonviolent approaches to identity conflicts. We then look at alternative political and conflict-transformational approaches to such conflicts including frameworks for living together (such as consociationalism, federalism, and power-sharing, and scenarios for separation (partition or succession). We also look at the negotiation, mediation, and other peace processes that have been utilized to try to accomplish such ends, and examine which have worked better than others and (to the extent possible) why. Readings will include both case study and theoretical material. Students are required to make several short class presentations, participate actively in discussions and exercises, and prepare and present a term paper analyzing one currently destructive deeply-divided society, analyzing the cause of the current unrest, and possible remedies to that situation.

**INTS 4521 Cultures of Development (4 Credits)**

Explores cultural dimensions of economic and social change from perspectives of actors who create, promote, negotiate, and resist different agendas from global to local.

**INTS 4522 Philosophy of Social Science (4 Credits)**

What is the nature of social science and the knowledge that it produces? This course, which is intended to complement INTS 4500 Social Science Methodology and INTS 4010 Epistemology, it introduces students to the leading mainstream perspectives on the philosophy of social science. Special attention is given to Positivism and Post-Positivism, Post-Structuralism, Pragmatism, and Scientific Realism.

**INTS 4525 Religion-State Relations in Comparative Perspectives (4 Credits)**

This seminar course provides an introduction to the key readings, concepts and debates on religion-state relations. While the focus is on the Western political tradition we explore the case of India and the Islamic world at the end of the course. Themes such as freedom of belief, the role of religion in the public sphere and debates over the political construction, location and meaning of secularism are examined.

**INTS 4526 Modern Islamic Political Thought (4 Credits)**

This seminar course explores the key writings of Muslim thinkers who have shaped Islamic political thought during the 20th Century. We begin with the writings of Jamal Eddin Al Afghani and his Egyptian disciple Muhammad Abduh. We then proceed to read from the selected writings and speeches of Hassan al-Banna (founder of the Muslim Brotherhood), Sayyid Qutb (radical Egyptian Islamist theoretician), Adul Ala Maududi (Pakistani Islamic thinker and founder of Jamaat-i Islami) and Ayatollah Ruhollah Khomeini (leader of Iran's 1979 Islamic Revolution). We also investigate some of the writings of Islamic reformist thinkers such as Abdolkarim Soroush, Nasser Hamed Abu Zayd and Khaled Abou El Fadl. The emphasis in this course is on understanding the historical and political context which has shaped Islamic political thought during the 20th Century.

**INTS 4534 Topics in Middle East Politics (4 Credits)**

This is an advanced topics course centered on major issues in Middle East politics. Students should expect to read one book, as well as relevant scholarly reviews, each week, and should expect regular analytic writing assignments. This class is designed for students who seek a deeper grasp of the Middle East and a more refined understanding of the politics and history of this region. This is not an introductory course on the Middle East, Islam, or the Arab world and previous course work is assumed. Those uncertain about their status should consult with the instructor before enrolling.

**INTS 4536 Economics: Fundamental Knowledge, Global Applications (4 Credits)**

This course provides an introduction to the methods used to analyze contemporary global economic events by examining the environment in which individual economic agents interact. We analyze what the economic problem is, how consumers and business firms make economic decisions, how markets work and how they fail, and how government public policy decisions affect individual and aggregate behavior in both domestic and international markets. A special feature of the course is the application of economic principles to real world problems.

**INTS 4539 Food Security in the United States and the World (4 Credits)**

This course discusses: food security in the United States (community food security, food insecurity); stunting and chronic nutritional deficiencies; global water crisis; land degradation; land deals; climate change; dictatorship and kleptocracy; economic approaches (westernized view, food justice, food sovereignty); World Food Summit; achieving food security (the agriculture-hunger-poverty nexus, biotechnology for smallholders in the (sub)tropics); risks to food security (fossil fuel dependence, genetic erosion in agricultural and livestock biodiversity, hybridization, genetic engineering and loss of biodiversity, price setting, treating food the same as other internationally traded commodities); access to basic food supplies; infant feeding; determining nutritional status; supplementary feeding; therapeutic feeding; malnutrition, nutrient requirements and sources.

**INTS 4549 Managing Microfinance: Balancing Business with Development (4 Credits)**

This course builds on the topics in "Introduction to Microfinance" and delves more deeply into the challenges of managing microfinance institutions (MFIs) and effective social entrepreneurship. How do MFIs make sure they stay in business (with good risk management and financial management) and make sure they have real social impact? How can they innovate financial services and other market-based solutions that create lasting economic opportunity or social change? Whether a market-oriented NGO or a socially-motivated business, an MFI needs a clear development strategy, a clear business strategy, and the operational tools to implement both strategies well. Regardless of legal structure, both NGO and for-profit MFIs need good management and financial information to meet both sustainability and social goals. Whether used for poverty alleviation and/or banking services for the poor, there are shared characteristics among successful microfinance organizations, as well as common pitfalls and challenges. As organizations figure out the "business" side of providing loans and savings, they also need to figure out which development services have greatest benefit for clients, choose strategies for social change (e.g. basic education, health care, business skills), and assess how well those strategies are working. For example, large-scale MFIs in India and Latin America have been very successful financially, but have only recently focused on their social impact. Smaller NGOs may serve the poorest and provide many development services, yet struggle to find a viable business strategy and sustainability. MFIs share challenges faced by many development organizations: (1) How do we balance our financial and impact goals; (2) How do we choose where to invest resources for greatest impact (e.g. financial services for many or in-depth assistance for fewer?); (3) What information do we need to ensure financial transparency and accountability; (4) How do we assess social and financial performance to keep improving our business strategies? This class will use weekly readings and case studies of specific microfinance organizations to: Illustrate business challenges and specific business risks in microfinance; Review basic financial statements and key financial measures to assess financial performance and risk, for both for-profit and non-profits; Review different approaches to answering the question "are we making a difference?"; Analyze management situations of "too much profit" and "too much development"; Compare pros and cons of for-profit and NGO legal structures, and implications; Discuss governance and boards of directors, compare and evaluate approaches; Highlight examples of social entrepreneurship powering market-driven change in microfinance and other areas (mobile banking, small-scale solar electricity, etc). Cases include Adelante Foundation, BRAC, Fonkoze, Kenya Women's Finance Trust, ACCION's Center for Financial Inclusion, and others. The first half of each class focuses on a real MFI case study to highlight the issues and understand the topic; the second half on the financial implications of these risks, the financial principles involved, and how well the tools work. Students gain a better understanding of financial statements, MFI operations (with case studies from around the globe), and credit risk, as well as key principles of financial management and good governance.

**INTS 4555 Professional Communications (4 Credits)**

This course is designed to help graduate students improve their ability to communicate professionally to a variety of national and international/intercultural audiences for a variety of purposes, and to manage through communications. While INTS 4557, Cross-Cultural Communications, focused heavily on immersive experiences in verbal and non-verbal communication in professional, cross-cultural scenarios, this course will use professional writing in cross-cultural contexts as its starting point. Students will learn the tools they need to adapt their writing in varied professional, cross-cultural contexts and to translate it into effective verbal presentations in these settings. In particular, students will develop an awareness of professional language, written conventions, and multimodal communication, including verbal, written, and digital/visual modes. Students will learn skills in rhetorical analysis, which will enable them to adapt to multifaceted professional writing scenarios in the future. They will apply these skills in the context of case studies and other examples that will address challenges professionals must problem-solve using written communication. All students will complete a professional writing portfolio by the end of the quarter with the goal of being more prepared for the job search.

**INTS 4557 Cross-Cultural Communications (4 Credits)**

This course is designed to prepare graduate students for careers as international professionals by focusing on the cultural factors that influence communication in international relations as well as the rules that proscribe and prescribe behavior. The course emphasizes culture and will explore how different cultures: perceive and interpret their surroundings, and create and communicate a shared, cultural construct of reality and identity; develop unique communication rules; and evolve culture-specific verbal and non-verbal communication behaviors. Students will immerse themselves in a particular culture (its history, values, world views and associated thought processes, religion, gender and social perception, language, and nonverbal communication) and research its communication conventions, practices, standards, core metaphors, terms, cultural premises, and meaning systems. Students are expected to demonstrate a critical and informed awareness of cultural content and identity, as well as the communication imperatives and procedural issues in their country through class presentations, discussions, and a long paper. The course rationale is that cross-cultural communication is inevitable, and without an understanding of the cultural communication imperatives, it is very difficult, virtually impossible to understand, work with, manage, or influence individuals from another culture. The course will involve theory and proven models, but will primarily focus on cultural immersion, skills development, practical applications, and case studies—exploring how culture both influences and reflects communication dynamics, how to communicate effectively in a multicultural environment, and how to manage and resolve cross-cultural conflicts.

**INTS 4569 Migration (4 Credits)**

Migration is a fundamental feature of our lives. Indeed, every aspect of our civilization and our self-conception is shaped by the exodus of all humans from our origin as a species in Southern Africa 200,000 years ago. In our own era, the aging of western populations, the rise of new economic powers, and dramatic improvements in human capital have given rise to an era of labor migration unparalleled in magnitude and diversity, though not entirely unique. New technologies have risen to facilitate further migration, enable the transmission of resources and knowledge across borders, and create new transnational patterns of residence and livelihood that challenge our notions of nation, identity, and even the very meaning of the term migrant. To put it simply, migration is the human face of our modern era of globalization, entailing incredible costs, risks, and returns for migrants along with important impacts for host societies, and the global system. Migration comes in many varieties in terms of destruction, permanence, and level of coercion, yet common theoretical, empirical, and policy unite these different forms of mobility. This course offers a holistic view of the migration process from multiple perspectives, at multiple levels of analysis, and on multiple aspects of our world today. As a uniquely individual behavior, migration has proven over time to be notoriously unfriendly to policy, which is often ineffectual or even counterproductive. We explore this cross-cutting concern through case studies illustrating the promise and pitfalls of migration policy.

**INTS 4575 Systems Thinking for Social Scientists (4 Credits)**

The purpose of this course is to introduce students to systems thinking as an approach for understanding and analyzing real-world issues. In addition to introducing the basic principles of systems thinking, questions that will be addressed include: Why do systems behave the way they do? Why do systems resist change and often end up getting worse when we try to change them? How do you find points of leverage within a system? This course uses examples drawn from a range of issues across the field of international studies. In doing so, it illustrates how a systems perspective can allow you to see parallels between seemingly disparate issues. This course introduces both qualitative and quantitative approaches for analyzing systems and discusses the benefits and limitations of each. Quantitative, computer-based modeling is used in this course, but no background is required.

**INTS 4579 International Futures (4 Credits)**

Futures forecasting involved decisions about priorities. Decisions require forecasting the trajectory of a society with and without interventions of various kinds. This course involved students in the forecasting and analysis process. In the lab, students learn to use the International Futures (IFs) forecasting system. That system represents multiple issue areas (demographics, economics, energy, agriculture, education, health, socio-political, and environment subsystems) and is supported by a very large database. Students study the structure of each of these modules, learn how they represent the underlying subsystems, how they are linked to other subsystems, and what they tell us about the processes of change globally and in countries and regions around the world. Students use the system for forecasts and analyses of their own.

**INTS 4581 Introduction to Humanitarian Systems (4 Credits)**

The Humanitarian field has changed significantly since the founding, in 1863, of what is now the International Committee of the Red Cross. Since the early 1990s there have been efforts to improve coordination between humanitarian actors and to improve the quality of international humanitarian response. High profile humanitarian crises such as the Rwandan genocide, the 2004 Indian Ocean Tsunami, the Haitian earthquake, and the conflict in Syria have highlighted weaknesses in the system and spurred reform efforts. Through readings, class discussions, guest speakers, group work and individual assignments, students gain a better understanding of the development of humanitarian systems and policies and how these affect current humanitarian practice. Key debates in the humanitarian system are also discussed and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. At the completion of the course, students should be able to: Discuss the history of humanitarianism; Recall key components of the humanitarian infrastructure; Describe the humanitarian principles, their interpretation and application; Identify ethical issues which may arise for humanitarians; and discuss the implications for humanitarian practice of key emerging challenges.

**INTS 4583 International Protection in the Humanitarian Context (4 Credits)**

At the conclusion of World War II after witnessing the horrific and historic loss of life, and in an effort to save future generations from the direct impact of war and conflict, the Western powers created several important legal instruments to protect civilians. These instruments are largely derived from human rights, refugee, and international humanitarian law. These initial legal instruments were later combined with additional instruments, both regional and international in scope, and are collectively and cumulatively considered the legal framework for "International Protections." After sixty years of the progressive legal and theoretical development of international protection and its practical implementation, a slow but evident shift has developed over time. Theoretically speaking, a shift from the end of the Cold War's position of absolute sovereignty to the ideals of the 1990s and the "responsibility to protect" which developed in direct response to the failed efforts of the international community to protect in Bosnia, Rwanda and other conflicts. As a result of the changing nature of conflicts, confusing mandates, ambiguous definitions, and political will, we have witnessed the failure of international protection in numerous humanitarian settings.

**INTS 4591 Advcd Fundraising Workshop (4 Credits)**

This course compliments INTS 4391, in which an overview of non-profit fundraising - along with financial management - is given. In this course, we take an in-depth look at the major methods of non-profit fundraising, namely, annual giving, special events, corporate fundraising, grant writing, major gifts, and planned giving. The teaching methodology to be employed is that each 3 hour class session is, in effect, an intense workshop on a specific fundraising topic. During each class session, a fundraising professional from the community, who is actively engaged in the particular fundraising activity being discussed, joins the professor in leading the workshop. Due to the advanced nature of this course, enrollment is limited to those who have already been introduced to the major methods of fundraising through the previous completion of INTS 4391, the concurrent enrollment of INTS 4391, or previous fundraising experience or educational pursuit in the fundraising field that is judged by the professor to be sufficient to be an active participant in this course.

**INTS 4595 Civil Wars and International Responses: Evaluating Post-War Peacebuilding (4 Credits)**

Today, civil wars constitute the principle, realized threat to international security (measured in lives lost). This seminar critically explores the problems to international peace and security posed by contemporary civil wars and the efforts of international - primarily, United Nations - "peace building" missions to implement negotiated settlements aimed at substantially ending such wars and preventing their recurrence. The concept of peace building seeks to capture the complex, multidimensional task of implementing the terms of settlements to end war preventing the recurrence of war, and addressing the deep-seated causes of social conflict and deep divisions that gave rise to protracted armed conflict in the first place. Furthermore, the notion of peace building have been augmented by the concept of state building, which implies that the principle strategic objective of external efforts is to help develop and create legitimate, capable states that are able to realize the provision of security and human development and to manage future social conflict through nonviolent bargaining processes and institutions. The scope of the course includes the analysis of theories, concepts and empirical research in the analysis of post-war international interventions in civil wars and in-depth, student led evaluation of specific cases. Prerequisite: INTS 4495.

**INTS 4599 Ethics and International Affairs (4 Credits)**

This course examines the following: social "science" and ethics, power-rivalry and capitalism versus human rights and democracy, what are the dimensions of poverty, what role does the World Bank play, "laws of people," two classes of human rights (according to Rawls), national interest, and tolerance.

**INTS 4620 Introduction to Middle East Politics (4 Credits)**

According to 2017 Global Peace Index, the Middle East and North Africa are the least peaceful parts of the world. The instability from this region has gone global and is now destabilizing large parts of the entire world. Why? Answering this question is the focus of this course. The approach taken will be historical and comparative with an emphasis on the relationship between religion and politics in the Islamic Middle East. The politics of the Middle East today cannot be understood without some examination of the West's relationship with the region and the associated view of the Muslim Orient that grew out of this relationship. In light of this reality, the state system that has emerged in the region since the demise of colonialism will form a framework in which to understand the major themes of this course.

**INTS 4622 Global Governance (4 Credits)**

This course surveys a range of arguments about how, whether, and/or the conditions under which global or transnational issues are governed. It examines different ways of thinking about governance and the governance process. It unpacks the variety of authorities that govern transnational issues. This course also considers different arguments about how the variety of actors engaged in a particular issue affects to the amount and type of governance possible. The course is intended for both masters and PhD students.

**INTS 4624 Private Actors and Conflict (4 Credits)**

General approaches to conflict focus on violence between the military forces or states. The conflicts of the last two decades, however, involved a variety of other actors: private military companies training or fighting with armies, relief workers trying to mitigate the impact of conflict on non-combatants, environmental NGOs working to lessen the impact of conflict on endangered species, multinational corporations trying to continue their business dealings, paramilitary and/or other citizen groups trying to defend their private property or other rights, criminal networks working to exploit conflict for personal gain, and terrorist networks. How do these different actors behave in conflict situations? Does their presence alter the way conflict unfolds, strategies of conflict (and conflict resolution), and/or the prospects for long-term security (peace, stability and development)? How? How do we decide whether these actors are public or private? How do today's "private" actors in conflict compare with the past? Is this a new phenomenon or simply a return to what has been typical at numerous points in history? This course explores the questions presented by the variety of actors involved in conflict today, compare today's situation with the past, and examine the way states and non-state actors are coming to terms with each other in conflict situations.

**INTS 4625 East African Development and Human Rights (4 Credits)**

For our purposes, East Africa encompasses the countries of Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. This course begins with an introduction to the cultural richness and diversity of East African societies, with an overview as to how tribes, chiefdoms, and states function. Religious influences are noted. This history of development, as externally conceptualized, begins with the Berlin Conference of 1884/85 and the so-called "scramble for Africa." It features socio-economic and socio-political processes. 20th- and 21st-Century external development programs are covered, most recently exemplified by the former Soviet Union, the United States, and China. Principles of induced development and participatory development are contrasted. Regarding the latter, indigenous innovations are stressed. The history of human rights, as externally conceptualized, begin much later, with the 1969 refugee-related innovations of the Organization of African Unity (now, the African Union). The "classic" issues of tribalism, corruption, and resource exploitation are covered, as well as the "late-breaking" issues of food security, refugee repatriation, and child soldier rehabilitation. Conceptually and theoretically, the course is grounded in disciplinary understandings derived from cultural anthropology, political science, ecology, and history. Resource use, in the context of socio-cultural systems development, are foundational. Special projects are featured, exemplified by those involving University of Denver personnel in Kibera, Kenya (water and sanitation); Mai Misham, Ethiopia (literacy); and Juba, South Sudan (indigenous leadership). At the broadest level, examples are most often drawn from the water/sanitation, agricultural, and health/mental health sectors.

**INTS 4626 Civil Resistance (4 Credits)**

Civil resistance is the application of unarmed civilian power using nonviolent tactics such as protests, strikes, boycotts, demonstrations, without using or threatening physical harm against the opponent. This method of struggle occurs worldwide in places as diverse as Russia, Moldova, Serbia, Spain, Egypt, Iran, Maldives, the Niger Delta, the West Bank, Thailand, and Burma, among many others. As a consequence of the growing use of civil resistance, the foreign policy community has become interested in understanding the causes, dynamics, outcomes, and consequences of civil resistance campaigns. This course serves as a primer on the topic of civil resistance, introducing students to the primary texts in the field, as well as the policy implications of empirical research on the topic. This five primary goals of this course are to: (1) present leading theories and concepts for understanding civil resistance; (2) explore international history to evaluate theories of civil resistance; (3) apply these theories to analyze current trends and make predictions about future development; (4) provide students with opportunities to synthesize their knowledge in a major written assignment; and (5) allow students to deepen their knowledge about several historical cases around the globe.

**INTS 4630 Civilian Protection in Armed Conflicts (4 Credits)**

Studies of armed conflict tend to focus on the production of violence to the neglect of how civilians might instead be protected. In this course, we will study how to limit violence against civilians. We will begin with an overview of theories of violence and legal and ethical frameworks governing the use of force. We will then consider how various actors throughout society, from state actors, to international actors, to illegal arms actors, to NGO's, to civilians and their communities—the would-be victims of violence—can either promote or restrain the use of violence. We will also consider the conditions under which the protection of civilians is most feasible as well as research methods for analyzing populations and their protection strategies. In their final projects, students will analyze the threats of violence faced by a particular population and design appropriate protection strategies and policies to deal with them.



**INTS 4632 Qualitative Research Methods (4 Credits)**

This course provides training in ethnographic and engaged research methods while giving students the opportunity to apply their skills to the local Denver immigrant community. This class requires a commitment to doing fieldwork outside of the classroom and to organizational partners in the community. Students should expect to spend 3-4 hours a week in the field and 1-2 hours on their field note write-ups. Students will work on the Wage Theft in the Denver Construction Industry project being led by Professor Galemba in collaboration with El Centro Humanitario, a day laborer center in Denver. Or they may choose projects with Casa de Paz and the Colorado Immigrant Rights Coalition. Students will gain experience with participant observation, qualitative interviews, data security protections, qualitative data coding, analysis, reflexivity and positionality in research, and writing. The course culminates in a public presentation to share results with the community. Spanish skills are a plus, but are not required for all students.

**INTS 4633 Int'l Project Evaluation (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Evaluation course is to provide students with a better understanding of and practical tools for designing, implementing, and reporting project evaluations. In all cases, a good evaluation design that is well implemented will allow the project manager to identify supportable findings, conclusions, and recommendations. The recommendations from both performance and impact evaluations can be directed to decision makers to support changes necessary to correct project deficiencies or to provide lessons learned for designing subsequent development interventions. Project managers can also use community or stakeholder participation in the process to build evaluation capacity and to gain support for the results. More specifically, students will learn about similar approaches used by four organizations that evaluate project, programs, and policies—the U.S. Government Accountability Office, the World Bank, United Nations Development Program, and United States Agency for International Development (USAID). Each of these organizations has developed templates for evaluation design, use similar methods and techniques to collection and analyze data, and share common elements in the framework of their evaluation reports. Two of these organizations have protocols to contract out evaluations to other groups through the preparation of an evaluation statement of work (SOW) or terms of reference (TOR). In this course, students will have the opportunity to compare evaluation approaches and to apply these approaches in preparing evaluation products. Small student teams will produce an evaluation SOW patterned after USAID guidance and defend their design in a final presentation.

**INTS 4635 Civil-Military Relations (4 Credits)**

Who guards the guardians?" has been a long-standing dilemma in international politics. How can we make sure that military leaders enjoying the control of coercive power submit to civilian political authorities? How can military organizations be powerful enough to counter external threats without becoming themselves a threat to the political community they should protect? How can hierarchical institutions created to exert physical violence be compelled to respect human rights and democratic values? These questions lie at the heart of civil-military relations theory. Analyzing the different ways in which military organizations, political authorities and the broader society interact is crucial to understand political outcomes such as state-building, democratization and the outbreak of war. This course provides students with a comprehensive understanding of the problems surrounding civil-military relations. Besides looking at the theoretical foundations of the field, it offers a comprehensive overview of civil-military relations over time and across countries. Specifically, it focuses on some topical and yet poorly understood cases and phenomena, such as the impact of the rise of private military and security companies on control over the use of force and the role played by military in Middle Eastern countries such as Turkey, Egypt, Syria, Libya, and Pakistan.

**INTS 4642 Environmental Security (4 Credits)**

This course surveys the expanding literature on the complex interrelationships between the environment, natural resources, conflict, and human security. Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental. Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a source of conflict, ranging from "water wars" between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel. This course will survey the expanding literature on environmental impacts on conflict, as well as conflict impacts on the environment, and the potential for making co-management of valuable natural resources and wildlife a source of cooperation, rather than conflict, between communities and states.

**INTS 4644 Human Rights Research Methods (4 Credits)**

This course is about how social science research can be used as a tool to understand and promote human rights. The field of human rights is bedeviled by several challenging obstacles to research, including reporting bias, hidden abuses, missing data and politicization of the facts. To deal with these obstacles, we learn about various methodological tools and how they are applied for the analysis of special human rights topics. By the end of the course, students are equipped to compile and present information to highlight patterns of rights abuses and identify patterns of cause and effects.

**INTS 4646 European Integration: States in Transition (4 Credits)**

Not only have the global financial turmoil threatened by the Eurozone crisis and the negotiations of a trade agreement between the European Union (EU) and the United States made the study of EU integration increasingly important for students of International Relations. As a unique political entity distinct from both states and traditional international organizations, the EU remains an unidentified object, whose development has challenged the traditional paradigms of both international relations and political science. Besides providing an in-depth knowledge of a crucial political and economic actor, the study of the EU integration process, its drivers and its shortcomings will therefore enhance students' understanding of some of the most crucial theoretical debates underlying today's international studies. This course intends to provide students with a comprehensive knowledge of the politics and institutions of the EU, analyzing its development from its origins until the present day and beyond. It will do so by focusing on the following core issues: Firstly, it will briefly analyze the history of the EU, seeking to identify the rivers of the integration process and explain why, after the end of World War II, European countries have set aside their centuries-old antagonism and embedded themselves within an ever close political Union. Secondly, it will examine what the EU is and how it functions, analyzing its key institutions, the architecture of its system of multilevel governance and its policy-making processes. Thirdly, it will investigate some key consequences of European integration, focusing on topical debates such as whether and to what extent the shifting of national decision-making powers at the EU level has created a democratic deficit, what is the impact of EU enlargement on both the Union and the institutions, societies and economies of new member states and what have been the economic and political consequences of the introduction of a single currency. Finally, the course intends to engage students in a debate on what is the future of the European Union in light of the latest development brought about by the entering into force of the Lisbon Treaty and the economic and financial crisis suffered by Southern European member countries. Prerequisite:.

**INTS 4647 Critical Issues in International Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has undergone significant changes related to developments in global governance, lessons learned and relationships between agencies (UN/NGO), governments (donors, affected countries), as the nature of crises themselves the contexts in which they occur and actors involved in crisis response continue to evolve, the humanitarian system and those that work within it must contend with new challenges and critiques. Through readings, class discussions, guest speakers and assignments, students have the opportunity to gain a better understanding of the major emerging policy issues and internal and external challenges facing the international humanitarian system. The class discusses important debates in the humanitarian system and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. This course is aimed at those with an interest in humanitarian policy as well those who wish to explore the challenges that may face them as they prepare to work in the humanitarian field. Prerequisite: INTS 4581.

**INTS 4648 Theories of Security in World Politics (4 Credits)**

In the 40 years following World War II, the study of security assumed a divide between international relations (the politics between states) and domestic politics (the politics within states) and gradually became separated from studies of international economics. International or national security largely centered on one empirical and two different theoretical enterprises. The empirical enterprise explored the relationship between the US and Soviet Union, focusing particularly on deterrence and the effect of nuclear weapons. The theoretical enterprises explored the likelihood of conflict between states in different systems and scenarios (when does conflict occur? When is stability more likely?) and examined the causes and consequences for actors of pursuing different strategies (What determines which strategy states will choose and what are the consequences for security – i.e., war, conquest, security gain, security loss, etc. – of different choices). After the end of the Cold War debates about the meaning of security joined change in the prevalence of intra-state conflicts and growing attention to terrorism in ways that led many scholars to question the usefulness of assumed differences between international and domestic politics, and, to a lesser extent, between security and economics. Also studies of conflict and stability have increasingly focused on a variety of transitional and global actors that do not fall into the realm of the nation, the state, or even the "international" system at all. This course focuses on this post-Cold War security agenda. The class begins with a (rather old by now) debate over the definition of security, then consider the role of states and other actors and finally turn to a list of prominent questions. In examining these questions, the class reads studies based in a variety of explanations, research strategies and methods. Students are encouraged to think about prominent explanations that stretch across the questions in different weeks. Students should also consider the costs, benefits, and alternatives to the research strategies and methods that individual authors have chosen. While the focus is on the substance of debates in security studies, the professor hopes to also spend time each session talking about how to frame productive questions and research strategies. In the way of background, if students have never read Kenneth Waltz, *Man, the State, and War*, they are recommended to do so. It would also be useful to have some familiarity with some basic texts in political theory, particularly Hobbes, Machiavelli, Kant, and Weber.

**INTS 4649 Human Rights and the Middle East (4 Credits)**

This course is shaped in three parts; each focuses on a set of critical human rights questions drawn from different phases of the Arab uprisings. Part I focuses on the Arab Uprising and Promises of Human Rights Progress and asks: 1. What can we learn from past contagion of human rights struggles, while the class analyzes the Middle Eastern social transformation? 2. What are the main causes that shook the Arab Middle East? 3. What was/is the role of major social actors? Part II covers the Rise of the 2012 Islamist tides, which gained new momentums after the electoral victory of the Muslim Brotherhood in Tunisia and Egypt and asks: 1. Are these religious trends consistent with human rights efforts? What accounts for waves of contagious revival of religious fundamentalism in the Middle East and North African region before and after 2012? 3. What is the impact of religious fundamentalism and nationalism among Israelis and Palestinians? Part III analyses the Possible Paths of Democratization and Human Rights in the Middle East and explores: 1. What accounts for different Revolutionary Arab Paths? 2. Is there a human rights answer to the Israeli/Palestinian quandary regarding one or two state solution? What are the current and possible roles of external forces for the region (international and/or regional)?

**INTS 4650 Globalization and Economic Crime (4 Credits)**

This course explores the policy issues raised by international economic crime, a phenomenon that has mushroomed with globalization and now accounts by some estimates for one-fifth by value of all international commerce. But who gets to define "crime?" Are there standards applicable globally to all situations? Nation states, corporations, nongovernmental organizations and political advocacy groups have issued multiple and often conflicting definitions of acceptable and unacceptable behavior and have been free in affixing blame on other sectors. To assess the part played by economic liberalization in the increase of crime, readings focuses attention on the political, technological and economic factors that encourage criminal activity and on the direct and indirect economic costs of activities such as identity theft and counterfeiting; mislabeling and trade in illicit goods; political corruption; money-laundering; and securities and accounting fraud. The class discusses activities posing definitional challenges to policymakers, such as currency and commodity speculation, re-export, gray marketing and state sponsorship of organized crime. This class also looks at policy options available when state-supported criminal economic activity is deemed to violate peremptory norms, create a substantial domestic effect, or constitute an act of war. This course examines self-help programs such as due-diligence and know-your-customer rules as well as statutory regimes such as the U.S. Foreign Corrupt Practices Act, and the movement toward transparency and uniform financial standards.

**INTS 4652 Contemporary Issues in Refugee Studies (4 Credits)**

This course is designed to provide a stimulating interdisciplinary environment in which students explore contemporary issues in refugee studies. Through examination of relevant international instruments, research, case studies, agency policies and reports, students will begin to develop the skills necessary for understanding refugee-serving agencies and associated programs in large scale refugee operations. Specific emphasis will be given to recent developments in - refugee terminology, refugee status determination, urban refugee populations, refugee camps, durable solutions, and extremely vulnerable refugees. Throughout, the course will focus on humanitarian assistance and protection frameworks, including analysis of guiding principles and associated policies of refugee-serving organizations such as the United Nations High Commissioner for Refugees (UNHCR). The importance of reliance on refugee voices to frame the debate will also be emphasized. At the end of this course students should be able to integrate and apply knowledge of innovation policy and practice to begin to address contemporary challenges faced by humanitarian agencies working with refugee populations.

**INTS 4653 Political Economy of the Resource Curse (4 Credits)**

This course is about one of the more curious findings/non-findings in the history of economics and international relations; that valuable natural resources, such as oil, natural gas, and other mined commodities are not, in the main, associated with better development outcomes and may even depress long-run rates of economic growth and discourage democratization and effective governance. Common sense would seem to suggest that if one finds oneself sitting on a gold mine, then one should mine gold (or drill oil, as in the example above). But countries that have specialized in the production of extractive or "point-source" resources, such as mined commodities like gold, diamonds, and oil, tend to be poor, creating a nagging sense that specialization in extraction is a losing proposition in the global division of labor, condemning countries to be the "hewers of wood and drawers of water." This course briefly reviews the basic economics of the resource curse before turning to a discussion of its effects for deeper institutional determinants of long-run development outcomes: democracy, gender equality, state capacity, and civil strife. It then moves into the realm of interstate politics, examining the ways that resource wealth shapes the foreign relations of resource exporters and major importers, principally the United States and China. The last third of the class investigates both domestic and multilateral attempts to address the resource curse through policy interventions, including civil society-led good governance initiatives like the Kimberley Process and the Extractive Industries Transparency Initiative. This course presumes no deep knowledge of economics but will be of interest to students across the realms of security and development.

**INTS 4654 Sustainable Energy (4 Credits)**

Sustainable energy is much in the news and high on various policy agendas. It is the seventh of the UN Sustainable Development Goals and part of climate and energy policy for numerous national, state, and local governments. This course will examine the politics and policy involved making a transition to a more sustainable energy system. We will explore the history of energy crises, how they have opened opportunities for making changes to the energy system, and the gradual attachment of sustainable energy to environmental issues, most especially climate change. The course will focus on some of the problems and complexities involved in an energy transition, from technological barriers to the need for a just transition.

**INTS 4656 Power, Institutions, and Justice in Environmental Sustainability (4 Credits)**

Sustainability and environmental justice have become ubiquitous buzzwords in society today. We see them everywhere, from politics to popular culture and corporate strategy to grassroots activism. Through an interdisciplinary approach to environmental science, this course examines the relationships between power, institutions, environmental conservation, and environmental justice and explores how issues are defined as problems. The course will cover the theoretical and practical methods used in environmental policy to assist government agencies, from the local to the global, in addressing immediate and long-term environmental sustainability challenges. Particular attention will be focused on power asymmetries among diverse actors, the formal and informal institutions that facilitate or impede environmental sustainability and environmental justice, and how race, class, and gender impacts recognition, participation, and the distribution of natural resource benefits and harms. Students will examine social theories of "nature", as well as, a range of policy responses to address environmental inequities. Emphasis is placed on disadvantaged communities in the United States and the Global South. Theory will be complemented by real-world environmental controversies that will require group collaboration to produce in-class presentations and the completion of policy memos that engage students critically with the course material.

**INTS 4657 Environment & Crises (4 Credits)**

In recent decades, the relationship between the environment and human lives has been increasingly recognized, including the relationships between the environment and crises, so-called natural disasters, conflict, and related human migration. This course explores these relationships. It looks at aspects of local, regional, and international approaches at the nexus between humanitarianism and development, including preparedness, risk mitigation and responses to environmental crises, the impact of environmental factors including climate change on the nature and severity of crises, and the impact of humanitarian crises and responses on the environment. This course is aimed at those with an interest in environment and crisis-affected contexts. Students are not expected to have a background in crisis response and/or the environment.

**INTS 4664 Emerging Powers: Development in Brazil, India and Beyond (4 Credits)**

This course deals with two emerging powers, Brazil and India. We trace the political economy of both countries over time, and spend particular time exploring their historical trajectory, current emergence, challenges they face, and the significance of emerging powers for the international political economy. The course is organized around an understanding of their insertion into the international economy, the implications of international insertion for domestic transformation, and the politics of incorporating newly mobilized domestic social and political actors, especially as this plays out in existing political institutions. Students help define some areas of concentration for the course by identifying policy areas in which concentrated research will occur. This course takes an interdisciplinary approach by drawing on political science, economics, and sociology, and we are concerned to understand the potential for emerging powers to alter international relations, as well as the implications of different strategies of international insertion for domestic social sectors, especially those that have traditionally been excluded.

**INTS 4666 Civilian Protection Practicum (4 Credits)**

The harm to civilians in contexts of armed conflicts presents an ongoing challenge for humanitarian and defense practitioners. While there are no prerequisites for this course, it is designed as a follow-on to the introductory course on "Civilian Protection in Armed Conflict." The course will enable students to put their insights on the protection of civilians into practice. Students will undertake collaborative research projects with a variety of U.S. and international humanitarian and defense organizations. Faculty and practitioner mentorship will help students learn how to advocate for ethical and evidenced-based protection policymaking. At the end of the course, students will brief their final research products to the practitioner clients.

**INTS 4667 Humanitarian Simulation Preparation (4 Credits)**

What does it feel like to be part of a multi-sectoral team assessing needs and planning responses in an emerging humanitarian crisis? How do you use your expertise to support rather than suppress local knowledge and the work of communities and community-based organizations in a complex setting? This course will focus on how humanitarians assess protection and psychosocial needs in a crisis and prioritize and develop interventions while working in volatile and stressful situations. The course is aimed at those interested in working in humanitarian contexts. In line with efforts to "decolonize" aid, the course will emphasize more equitable frameworks and approaches to humanitarianism.

**INTS 4668 Political Economy of Energy (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is the connection between energy systems globally? What are the global and regional dimensions of the geopolitics and geoeconomics of energy systems? What are the linkages between control over energy sources and 21st century prospects for sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism in an age of global warming and climate change? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty, and inequalities in several different dimensions.

**INTS 4670 Gender, Security and Human Rights (4 Credits)**

This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently there has been increasing attention to the importance of "gendering" discussions of international security. For instance, UN Security Council Resolution 1325, passed in 2000, is widely seen as a landmark framework for ensuring women's inclusion in the post-war peace process.

**INTS 4671 Climate, Science, and Society (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate change is a complex international problem that challenges scientific and policy analysis. Its effects extend far into the future, are globally widespread, and impact many aspects of society and ecosystems. There are also substantial uncertainties in these effects and in how well different policies might work. As a result, the climate issue is ripe for political disagreement. This course will examine the kinds of analyses that underlie key scientific conclusions and policy arguments, as well as the role individual scientists can and do play in scientific and policy discourse. While some familiarity with the climate change issue will be helpful, the course does not assume that students have an extensive scientific background.

**INTS 4672 Environmental Peacebuilding (4 Credits)**

Natural resources and the environment can contribute to and amplify conflict, but they also represent opportunities for creating sustainable peace. This course will examine conceptions of peace, peacemaking and peacebuilding, and the insights an environment-centered lens can add. We examine peacemaking on environmental issues. We also consider three trajectories of environmental peacebuilding: technical cooperation, joint capacity building and dialogue, and joint and equitable resource distribution and management systems. Each of these has the ability to contribute to Positive Peace efforts throughout the conflict lifecycle—as preventive diplomacy, as confidence building and communication channels amidst conflict, and as post-conflict peacebuilding and sustainable development. Each approach in this new field could be strengthened through the consideration and application of relevant theory and research. This course also considers critiques of peacebuilding models and methods, and the push for better program MEL—monitoring, evaluation, and learning.

**INTS 4673 Climate Finance and Other Clean Energy Solutions (4 Credits)**

An introduction to climate finance and understanding its ability to advance renewable energy technologies and activities in the global context as a means of significantly reducing carbon emissions. This course will explore financing mechanisms and Green Banks. We will also learn how microfinance can help reduce vulnerabilities. The coursework will involve regular reference to Project Drawdown and specific clean energy technologies such as solar, tidal, wind, carbon sequestration, agroforestry, net zero building, microgrids, as well as other current innovations and their existing use and potential within the developing world. There will be several practitioners in the field serving as guest speakers for this course.

**INTS 4674 Water Policy (4 Credits)**

Water is a key resource for the sustainment of all life. Under many circumstances, it is scarce, too abundant, and inequitably distributed across groups in society and nature. This diversity of situations produces the conditions for the emergence of conflict among users, hence requiring the design of institutions to facilitate effective management. This makes water governance a complex but urgent issue to tackle. This class examines such institutions in a variety of levels –state, federal, and international- and analyzes how they affect water access and use. Students in the class will also engage in a careful examination of the sources of conflict and cooperation among water stakeholders on a regional and global scale. The main goal of the course is to foster the students' capacity to assess how water-related conflicts can be prevented through the design and implementation of relevant policies.

**INTS 4675 Advanced Topic: Defense and Security Policy Lab (4 Credits)**

This is an advanced topics course centered on International Security students gaining, developing, and practicing their professional skills (specifically research and analytics, integration of creativity, academic material, and analysis, peer to peer leadership and coordination, project management and collaborative tools, and communications) via engagement with material/techniques associated with as well as the actual development and execution of a group based professional grade defense/security policy analysis. While the class will contain some traditional academic elements to provide all participants with an enhanced tool kit of skills and analytic options, the bulk of the class takes place through the development of the group defense/security policy analysis executed by 6 person student Project Teams that will be developed through an iterative process over the course and then presented to a group of defense and security professionals for their appraisal. Through this process, security students will be able to get a sense of how real world projects are developed and executed as well as the challenges that confront the production thereof.

**INTS 4676 Insurgency/Counter-Insurgency (4 Credits)**

This course will begin with an examination of insurgencies, the evolution of counterinsurgency, and how the U.S. policy community debates and decides on counterinsurgency strategies. Through a review of case studies, current conflicts, and fundamentals of military tactics, students will learn how governments combat insurgencies with military force and negotiation, how foreign assistance affects each side, how intelligence gathering impacts the fight, and how different types of leaders can strengthen or weaken a force. At the end of the course, students will analyze a contemporary and historical insurgency, articulate and defend counterinsurgency strategies, and compare it to U.S. policy towards the conflict. Prerequisite: INTS 4735.

**INTS 4677 Introduction to Law, Foreign Policy, Politics, and Moral Theory in Human Rights (4 Credits)**

The authors of the American Declaration of Independence wrote: "We hold these truths to be self-evident: That all men (sic) are endowed by their creator with certain inalienable rights." That first authoritative claim that all human beings regardless of color, class, social status, ethnicity, political and religious beliefs, or location have in common a set of rights did not define or enumerate "rights." The definition implied was an indisputable individual and legitimate demand (with corresponding duties on the part of others) to be treated with respect and given space to shape a life in accordance with ability, opportunity, and will. Roughly a century and a half would pass before the first comprehensive enumeration: The Universal Declaration of Human Rights (1948) and another two decades before the aspirational declaration was translated into formal treaties (the International Covenants respectively on Civil and Political and Economic, Social and Cultural Rights). This course explores the processes by which the language of the Universal Declaration and the enumeration of rights embodied in the Covenants and other international agreements is interpreted, fought over, and applied (or not). Those processes are legal and political. They are suffused with discordant views about the obligations of states in relation to their citizens and the citizens of other states. They expose tensions among rights (for example, between freedom of expression and the obligation of states to outlaw speech tending to incite racial, ethnic, and other loathsome forms of discrimination, between religious freedom and protection from discrimination on the basis of religion [see the Colorado wedding cake case in the US Supreme Court]). Those processes occur both in the international arena and domestic ones. They engage domestic and international institutions, courts, parliaments, presidents, armies, civil society, and NGOs of various kinds. Threading through them are conflicting moral theories, national interests, ideologies, and raw inter-group competition and prejudices. Human Rights can be seen as a collective modifier as in "human-rights perspective." Human rights, after all, are a way of viewing all the great issues of our time including migration, cultural conflict, justifications for the use of force, interrogation of suspected terrorists, poverty and gross inequality, the limits (if any) of religious freedom, the rights of majorities, and those of minorities and indigenous peoples. All of those issues will be on the table in this course.

**INTS 4678 The Politics of Global Trade, Investment and Production: The Origins and Consequences of Open Border (4 Credits)**

The last half century has seen national borders opened to the multiple flows now characterized as 'globalization' – the movement of traded goods, capital and people, all of which deserve attention. But if the financial crisis alerted the world to the consequences of free capital flows some years ago, the consensus on free trade and foreign direct investment outside of the developed economies is only now being questioned in national politics, most recently and notably in the 2016 US presidential campaign. In that campaign, both candidates questioned the wisdom of the mega-trade deals – the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) – and one of them promised reverse the tide of outward US company relocation. The loss by the Democrats of much support among voters in blue-collar states affected by deindustrialization has forced a rethinking of both political strategy and policy orientation. The renewed salience of trade politics invites a number of questions, first about how the world managed the politics of surrendering to a large extent trade protectionism from the 1970s onwards, and second, how countries and regions have managed to govern an increasingly open trading order, both in terms of regulating the flow of goods but also in dealing with the domestic consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with the transnationalization of production, whereby older and new forms of foreign direct investment (FDI) have created an international web of supply chains within which the greater part of trade (so-called inter-trade) is now conducted.

**INTS 4679 Economic Statecraft and Diplomacy (4 Credits)**

This course explores how governments use international economic policy to achieve geopolitical objectives. We discuss the ways in which states and international bodies appeal to economic sanctions, foreign aid, and other instruments of economic statecraft in attempts to change the conduct of other state and non-state actors. The course will explore the use of a variety of policy instruments ranging from personal asset freezes and sectoral prohibitions on trade to wholesale trade embargoes and military blockades. We will review the effects of these measures on target countries, discussing the conditions under which sanctions can create incentives for targeted leaders to change their policies and when they can trigger political change. Other topics covered include the effects of sanctions on domestic economies and vulnerable populations, political use of foreign assistance, multilateral vs. unilateral sanctions regimes, international sanctions law, extraterritoriality and the ethics of imposing sanctions. The course will undertake in-depth case studies of the effects of sanctions in several sanctioned economies, including Iran, North Korea, Russia, South Africa, and Venezuela.

**INTS 4681 Modeling for Development, Environment, and Security (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment, and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of "traditional" development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward.

**INTS 4700 United States Foreign Policy (4 Credits)**

An intermediate course on issues and perspectives for evaluating American foreign policy. Topics discussed include theories of foreign policy; historical epochs in Superpower relations: the Cold War, Dente, and confrontation; America's role in the post-Cold War; war, peace, and trade in relation to U.S foreign policy planning and assessment.

**INTS 4701 US National Security Policy (4 Credits)**

An intermediate course which examines the post-war history of U.S. policy and America's response to the post-Cold War environment. Current issues include alternative strategies in nuclear deterrence and arms control; and security policy toward the Third World, Europe and the Atlantic Alliance, and Japan. Prerequisite: INTS 4702.

**INTS 4702 Emerging Issues in International Security (4 Credits)**

This course focuses on contemporary challenges to global security. It seeks to familiarize students with the nature of these challenges and analytical tools with which to make sense of (and consider potential responses to) them. In the context of thinking about general issues, students learn about prominent individual instances (or "cases") of problems, think about problems through different theoretical lenses, and consider both logic and empirical evidence in evaluating different arguments. Beyond the substantive focus, the course also encourages students to develop analytical skills and their ability to communicate their analyses effectively.

**INTS 4703 Foundations of Security (4 Credits)**

This course will focus on the array of factors, options, and realities associated with the creation and execution of Strategy in order to achieve security objectives. The course begins with and centers on the classic works, concepts, and thinkers associated with strategy and then seeks to apply these foundational ideas to a range of current security challenges.

**INTS 4705 Democratization (5 Credits)****INTS 4706 Topics in Int'l Studies (1-4 Credits)****INTS 4708 Topics in International Studies (1-4 Credits)****INTS 4709 Topics in International Studies (1-4 Credits)****INTS 4710 Topics in International Studies (1-4 Credits)****INTS 4711 Topics in International Studies (1-4 Credits)****INTS 4715 Debates About Democracy (4 Credits)**

This is a course in the field of comparative democratization studies and democratic quality. We will cover from the political science perspective topics such as the transition to democracy, consolidation of democracies, and how and why democracy has spread around the world. We will also examine the debates on the virtues and perils of democracy and on the nature and quality of the resulting representative democracies. Through this lens we will also analyze the "democratic backsliding" observed even in well-established democracies during the last decade and a half, which has resulted in the proliferation of new hybrid regimes and other very problematic characteristics of present-day democracies. In this course, we will study many of the aspects that might influence the process of democratization and democratic backsliding such as: institutional design and functioning, political culture, democratic support and the structure of the party system and party competition.

**INTS 4720 Capital Markets in Africa (4 Credits)**

Capital markets – the buying and selling of equity and debt – are vital to the functioning of an economy. Using a comparative study of capital markets in America and Africa, we will explore how they work, and how inefficiencies and structural challenges can inhibit private investment and access to capital among middle and lower classes in emerging economies generally. The tools in this course will also allow students to assess the efficiency of capital markets in emerging economies throughout the world. The course comprises five modules: 1) Banking and microfinance; 2) Mortgage and housing finance; 3) Private equity (including venture capital); 4) Stock markets; 5) Mobile money. For each module, we will begin with a study of how the industry functions in the United States, which is widely regarded to have the most efficient capital markets. We will then compare the US model to markets in Africa, examining the structural and practical limitations that impede those markets in sub-Saharan Africa (and, by extension, other emerging markets). The course will not attempt a comprehensive analysis of specific African countries, although examples will be drawn from specific markets. Instead, we will focus on many of the structural challenges to the development of mature capital markets in sub-Saharan African countries (mostly excluding South Africa). We will explore questions such as, Can microfinance be profitable? Why isn't housing finance widely available? What types of "mobile money" systems are developing in Africa, and what are their business models? Why aren't there more IPOs in Africa? Class participation is important, as the subject matter will range beyond the readings.

**INTS 4722 U.S. Policy in the Middle East Since World War II (4 Credits)**

Various experts and commentators now claim that the U.S. is surrendering its preeminent position of power in the Middle East after more than 70 years of almost unchallenged dominance. In this course, we will examine some of the issues, events, and decisions that may be contributing to this perception and more generally to the evolving role of the U.S. in the Middle East. Is the perception correct? What is might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4730 Foundations in Homeland Security: Response and Recovery (4 Credits)**

This course will examine the post-1945 history of United States efforts at homeland security, and include an overview of other national efforts (e.g., by the Soviet Union, Switzerland, and Israel.) It will then turn to identifying and analyzing the spectrum of issues associated with U.S. homeland security, in the context of evaluating the United States post-9/11 response to date. Those issues include: framing homeland security, prevention, response and recovery overview, foreign actors and issues, domestic actors/issues, problems of intelligence, terrorism vs. violent crime, public expectations, role of the media, funding and resources, and how to address broad spectrum threats.

**INTS 4731 Homeland Defense: Prevention & Mitigation (4 Credits)**

This course will examine the following issues: political leadership, foreign and domestic intelligence organization and functions, role of intelligence, principles of indications and warning, legal/civil rights issues: balancing human rights and security, law enforcement, Public health, and the role of various U.S. federal agencies: Department of Energy, Environmental Protection Agency, the INS, border security among others, plus the role of first responders in prevention/detection, and establishing indicators and reporting procedures.

**INTS 4733 Introduction to Strategic Cyber Threats and Policy (4 Credits)**

At its core, cyber is a suite of complex, interrelated technologies affiliated with computers, communications networks, and digitalization. Like any powerful technology, cyber provides the capabilities for a range of political actors across a range of levels of analysis to increase their capabilities to achieve both benevolent and malignant goals (and which of these any particular effort is often rests in the eyes of the beholder). Yet, the massive scale of the utilization, both current and future, of cyber technologies and the speed, range, and impact that these technologies potentially generate also make cyber a realm, an area of practice, action, and, thus, policy. The challenge with the rise of such a sweeping development in national and international security is understanding the nature of the threat, how unique the characteristics of the threat are versus how much they resemble previous security challenges, how much existing security mechanisms and policies are applicable versus the need for the development of novel solutions and what are the trade-offs that have to be made, and thus will come to define, cyber security policy at the national and international level. This course will engage all four of these basic questions in survey fashion, setting students up for follow-on academic or professional engagement with the realities of strategic level cyber security issues.

**INTS 4735 Defense and Security Methods (4 Credits)**

The purpose of this overview course in defense analysis methods is to provide students with the foundations to successfully conduct research and analysis in defense-related topics, whether within the national security community, in academia, or as a contractor. This course should also help prepare the student to complete his or her Master's thesis. The course aims to improve the student's ability to comprehend and assess the graduate-level readings assigned in other courses, and to write research papers and complete other written assignments for those courses. The course is intended to provide take-away skills that can be applied to professional activities after graduation: in particular, students should have greater confidence in their abilities to locate, read, commission, design, or conduct relevant research, and to draft research proposals. This class focuses on methods employed in both policy analysis and the social sciences. The emphasis is on qualitative rather than quantitative methods.

**INTS 4736 Strategic Intelligence Data Collection and Analysis (4 Credits)**

Course focuses on analytical prod. of strategic intell relative to int'l security issues.

**INTS 4738 Current Issues in Strategic Intelligence (4 Credits)**

Advanced seminar which investigates current issues relative to strategic intell within international studies.

**INTS 4739 Defense and Security Quantitative Analysis (4 Credits)**

This course is the follow-on to INTS 4735 Defense and Security Methods and is designed to engage students in a professional conversation about the applicability of quantitative analysis and big data based analytics for the execution of defense and security analysis/research. Continuing the development of the students' individual research design proposal, but now introducing an array of quantitative ideas, options, and methods, this course begins with the foundational realities of coding and descriptive statistics before introducing students to bivariate and multivariate analysis, index/scale construction, and hypothesis testing techniques. In addition, the course continues to develop the students ability to engage with and understand real world defense and security research, in this case particularly quantitative analysis. Prerequisites: INTS 4735.

**INTS 4750 The Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details from country to country and even from issue to issue within the same country. In this course we study various parts of those processes and some of the inputs into them. In addition, we play close attention to problem framing or problem definition in those policy processes. Within all these disparate policy processes political actors must have some notion of what problem they are trying to solve and what constitutes the set of feasible solutions to those problems. These ideas about problems and feasible solutions are not given exogenously, are not some fact of nature, but instead arise from complicated interactions among actors and institutions in the policy process. The quest we ask throughout the course is how policy problems and solutions could be framed differently, how we can learn to look outside the conceptual box that partisans to policy debates try to draw for us. Students write a series of papers during the course following a policy issue of their choice through the policy process.

**INTS 4753 Intelligence and National Security (4 Credits)**

Focuses on the craft of U.S. Intelligence and its role in the making and implementation of national security policy.

**INTS 4760 Russian Foreign and Defense Policy (4 Credits)**

Course explores Russian foreign and defense policy from Vladimir Lenin to Vladimir Putin - heavy focus on security policy.

**INTS 4786 Planning and Assessment in Complex Environments (4 Credits)**

The primary mission of this course is to provide participating students grounding in the planning methodologies, approaches, and expectations used within the US government in both military and civilian agencies as well as increasingly in the security related private and non-profit sectors. The starting point for this effort is Operational Art & Design and the military's Joint Operational Planning Process (JOPP) as well as related literature. Military planning serves as the starting point both because it is the most mature and sophisticated government planning methodology and because most other US government planning practices are direct, contextually appropriate derivatives of DoD planning mechanics.

**INTS 4787 Civil-Military Practices in Humanitarian Responses (4 Credits)**

Changing U.S. national security priorities following 9/11, including updated Department of Defense doctrine, have led to U.S. military actors prioritizing humanitarian assistance as a central component of theater security cooperation arrangements. This trend includes not only considerations of protection of civilians during military operations but also planning for natural disaster response and steady state engagement to build the capacities of host nations to address crises, including natural and man-made disasters. Through readings, class discussions, group work and individual assignments, students in this course will gain a better understanding of the issues and roles of civilian and military actors in the humanitarian space, with a specific focus on how legal and policy guidance impacts the decision to utilize U.S. military forces in disaster response situations. While this course will focus specifically on how the U.S. government approaches humanitarian activities and the role of the U.S. Department of Defense assets, it will locate this discussion within the broader about the appropriate use of Military and Civil and Defense Assets in international humanitarian community.

**INTS 4801 Major Issues in Human Rights (4 Credits)**

This co-taught course looks at a wide range of contemporary issues in human rights. It is intended equally as an introductory course for students in other degrees and as an advanced course for Human Rights degree students. Each week will be run by the faculty member who has selected the topic. Readings and any other before-class assignments will be on the Canvas page for the course, in the Files tab, in the folder for the instructor.

**INTS 4802 Foundational Ideas in Social Science: Marx and Weber (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.



**INTS 4807 Civil-Military Relations During War (1 Credit)**

The focus of the course will be on civil-military relations—the interaction between the senior military leadership and elected and appointed civilian officials. Students will have a unique opportunity to learn about the development of national security policy and related issues. The course will examine the civil-military relations during three 20th Century wars and two 21st century conflicts and draw insights about the impact of civil-military relations on national security and the requirements for effective civil-military interaction in the future.

**INTS 4808 Foundations of Global Justice: Theories of Power and Transformation (4 Credits)**

Our primary goal will be to understand and assess different approaches and frameworks for pursuing social change – from civil resistance and nonviolent direct action to narrative, experimental cities, and activism. Our goal will be to understand when and why these approaches work – and when and why they don't. Students will hear from activists working in ongoing movements for social change around the world and will get acquainted with their work. We will explore case studies of historical and ongoing social movements, which include struggles for democracy, peace, human rights, environmental justice, racial and gender justice, and more. We will also strategize how movements manage violent repression, backlash, and opposition in different contexts. Students will walk away with practical understandings of how to organize for social change, skills to support ongoing movements, and applied opportunities to understand when, where, how, and why certain efforts at social change succeed, while others fall short of their goals.

**INTS 4810 Social Movements, Global Justice (4 Credits)**

This course is intended for students seeking to gain a theoretical and practical understanding of social movements. It is organized in two parts: (1) (re)imagining power and social movement theory, and case studies of social movements; followed by (2) developments, dilemmas, coalition-building, and other questions in the study of social movements. Students will develop a project to learn about a movement (or nonprofit organization) of their choice. Taking the Foundations to Global Justice course is a useful, but not necessary pre-requisite. Students will conduct assignments scaffolded throughout the term and share their work with peers in teams. We will explore movements from local ones on college campuses, to Women Life Freedom, to the Black Panthers. The class is designed so that students concurrently learn practically to organize collectively with others or ways of engaging in solidarity, and understand theoretically and empirically, the role of social movements.

**INTS 4812 Capstone: Applied Strategies for Catalyzing Social Change (4 Credits)**

Capstone: Applied Strategies for Catalyzing Social Change is a core course required for the Global Justice Certificate. Students will work with activists and/or movements on a specific project identified as a need. Students will gain concrete, real-world skills and training in how to strengthen the work of grassroots movements.

**INTS 4816 Power and Oppression (4 Credits)**

This course is designed to be an introspective practice in examining how frameworks apply to societal norms, personal and cultural identity, and academic settings. We will explore frameworks on racial equity, oppression, gender, implicit bias, and intercultural conflict, in addition to others. We will critique white supremacist structures that influence our everyday interactions, work-environment, and how we view and engage in the world around us.

**INTS 4817 Restorative Justice (2 Credits)**

Restorative Justice is an alternative to punitive discipline methods; restorative approaches focus on building relationships, trust, and respect. Restorative methods center around repairing harm, accepting responsibility, and reintegrating the parties responsible for causing harm back into the community. Reconciliation is paramount in community building to restore communal harm and prevent further harm and violence post resolution. This course centers around domestic and international approaches to Restorative Justice, including restorative circles, truth commissions, and victim offender dialogue. Internationally, we will explore restorative work in Rwanda, South Africa, Bosnia, India, and New Zealand. We will learn methodologies used in restorative approaches in schools, judicial systems, communities, and diversion programming. This course will focus on the mindset shift to culturally integrate restorative approaches systemically in communities.

**INTS 4818 Conflict Sensitive Interventions (2 Credits)**

While interventions are designed to have impacts, these impacts often include unintended and even negative consequences. Particularly in fragile and conflict-affected contexts and contexts of inequality, interventions done without sensitivity to context can undermine sustainability and exacerbate conflicts. Conflict sensitivity is an approach to ensure that interventions do not unintentionally contribute to conflict, but rather, strengthen opportunities for peace and inclusion. It focuses on mitigating the risk of negative impacts and enhancing positive ones. This course will develop skills for analyzing conflict dynamics and actor incentives, mapping an intervention's potential positive and negative influence on systems of inequality and conflict, locating opportunities as well as risks, modifying an intervention to minimize harm and maximize peace and sustainability, and building in the adaptation mechanisms needed for ongoing change in dynamic contexts.

**INTS 4820 Democracy and War (4 Credits)**

This course explores Socrates' speech at his trial and decision to go to his death as, surprisingly, initiating two central features of modern democratic theory. First, Socrates is often depicted as simply hostile to the many, looking down on Athenian democracy. But what he in fact looks down on is tyrannical mob rule, the "democracy" of a particular interest arbitrarily enforced (what we might call a demented Joe McCarthy-kind of democracy). In contrast, Socrates also incarnates the idea of asking questions in a democracy, that is, dissent (prefiguring what is sometimes called today deliberative democracy). That makes a democracy capable of realizing, sometimes, a common good. Second, Socrates provides a paradigm for modern civil disobedience or satyagraha in Gandhi - we read Gandhi's translation of Plato's Apology - and Martin Luther King's letter from the Birmingham City Jail. Nonviolent civil disobedience is necessary in a modern democracy because party-competition focuses mostly on personality issues and not on fundamental injustices. Further, this kind of protest promises major change even in dictatorships (consider Erica Chenoweth and Maria Stephan, *Why Civil Resistance Works*). Thus, this emphasis is a novel interpretation of Plato as opposed to, in scholarship and politics, Plato's supposed link to authoritarian "commander-in-chief" power (Heidegger, Leo Strauss and William Kristol for example) which we also contrast in this course. The course explores the subtlety of these dialogues - the question of what Plato intended to teach his long-standing students like Aristotle who studied with him for 20 years - but leave the main points of Gandhi's and King's interpretation intact. Third, the course explores Thucydides, *History of the Peloponnesian War* and Plato's response to it in the *Republic* in terms of modern critiques of Empire building and the "unhinged" wars by American democracy (we look at W. Robert Connor's elegant break with previous understandings of Thucydides during Viet Nam and John Mearsheimer's striking criticisms of post-Cold War American policy, echoing Obama's 2013 speech at the National Defense University, in "America Unhinged." Thucydides is a far deeper account of imperial expansion and the corruption of and threat to democracy at home than modern realist and neo-realist gestures at him. Neo-realists methodologically attempt to separate global politics from its domestic consequences as supposedly different levels of analysis; this interplay is the heart of Thucydides' argument and deepest insight into the meaning of war and democracy.

**INTS 4822 Contemporary Political Theory (4 Credits)**

An examination of current 21st century political theory and how the events of the 20th century helped mold these ideas/ concepts.

**INTS 4854 Rising China and Challenges to the Global Order (4 Credits)**

This course is for Korbel in DC program participants only. This seminar focuses on contemporary challenges to the global order posed by China's growing economic power. The course charts China's reform and opening, its development and integration into the global economy, and the challenges created for Western economic and security institutions and alliances. Specific topic areas covered include China's non-market status and trade conflict, competition for technological leadership, ICT governance and standard setting, the Belt and Road Initiative, and the implications of China's South China Sea activity. The course will combine extensive background readings, lectures, and discussion. Students will benefit from frequent guest lectures and discussions with experts from the Center for Strategic and International Studies.

**INTS 4856 Global Sustainability and Development (4 Credits)**

This course is for Korbel in DC participants only. This course considers the interaction of environmental, economics, and energy issues on global ecological systems. It offers an overview of relevant international legal frameworks and national governance systems, the state of major ecosystems - forests and species habitats; wetlands, oceans and rivers, and the atmosphere and selected policy issues related to each. Emphasis is less on "what" to think than "how" to think about and formulate policy responses to complex, multidimensional issues.

**INTS 4875 Human Rights and Foreign Policy (4 Credits)**

Global human rights issues and how those issues help mold foreign policy decisions.

**INTS 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**INTS 4890 The Revolutions of Black, Brown, and Indigenous Peoples: Violence or Nonviolence? (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

**INTS 4891 American Intersectional Inequality: From Local to Homeland Security (4 Credits)**

This course advances understanding of how inequality manifest differently by race and ethnicity, class, and gender. Policy topics and case studies will span (1) immigration laws, citizenship, and race-making; (2) state violence, mob rule, and the origins of the American penal system; (3) local law enforcement, courts, and prisons (5) detention centers and homeland security; and (6) demography, census, and democratic representation. The course will feature African American and Latinx populations prominently and incorporate Indigenous, Asian-American, and White populations throughout. The class will center the perspectives of poor Americans, but will incorporate working class, middle class, and elite perspectives when useful comparisons and contrasts are in order. Theories and case studies will be rooted in a U.S. context but occasionally include readings from other democratic nations. Readings will encompass enduring problems and landmark policies, as well as contemporary challenges. Given that this is a writing-in-the-disciplines course, we will devote attention to developing public policy research and memo-writing skills. Students will also gain practice working in teams to sharpen analytical skills and written work.

**INTS 4900 International Politics (4 Credits)**

Topics on discussion include: levels of analysis; realism; neo-realist structuralism; international society and the English school; international anarchy; process variables and international institutions; international security institutions; rationalism, constructivism, and the purposes of theory; norms and ideas; gender and identity; and postmodernism and post-structuralism.

**INTS 4903 Relational Theories of International Relations (4 Credits)**

Examines recent theoretical work in the field of international relations that treats international society and its practices as social constructs.

**INTS 4906 Classics of International Theory (4 Credits)**

Professor will choose various books by classic political theorists for students to read and discuss in class.

**INTS 4907 Terrorism (4 Credits)**

Terrorist violence, an issue facing many countries in international and domestic politics, is used by left and right-wing groups, nationalist and religious organizations, revolutionary movements, and state institutions seeking political power. This course is focused on: understanding terrorism (definitions, causes, evolving tactics); analyzing who becomes a terrorist (jihadist, separatist, supremacist ideologies plus radicalization processes); and evaluating effective counter-terrorism measures to reduce or resolve the problem.

**INTS 4909 Climate Migration and Human Rights (4 Credits)**

The science of climate change, while continuing to become more exact and nuanced, is clear – human behavior has caused the planet to warm unnaturally. Now that the science has been established the next question is how will it affect the ecosystem and, especially human habitation. As seems to be the norm, those most affected by climate change will be the poor, the disempowered, and native populations. The understanding and the possible solutions must be interdisciplinary – human rights, law, economics, development, gender and race equity, security, science – to name a few. The course will look at the history and philosophy of climate justice, which includes such disciplines as environmental justice and sustainability, move through an analysis via a number of different viewpoints, and conclude with a look into the future in terms of education and activism. Climate justice requires a sharp, critical look at systems and an understanding of the interconnectedness of science, ethics, and politics. Examples of this might include the rising of sea levels displacing very large numbers of people adding to the already impossible strain on refugee and IDP resettlement. Or the Brazilian economy's almost sole reliance on hydro-electric power in face of the drying up of rivers and water basins. Or the role of the world's religions and religious leaders in climate justice. One of the unique characteristics of this course will be the number of guest lecturers. It is incumbent on universities and colleges to take a multi-disciplinary approach to climate justice and lower the "silos" between academic units. To that end colleagues from DU and other institutions will bring their disciplines and insights to bear on the topic.

**INTS 4912 Development in Africa: Challenges, Constraints and Strategies (4 Credits)**

This course is for Korbelt in DC participants only. As the Developed World falters over its financial difficulties, many eyes are turning to the third world for resources, markets and solutions. In a real sense, Africa is the "last frontier." With this in mind, this seminar provides an overview of Africa and Development through the eyes of practitioners and scholars from the US and Africa who have devoted considerable effort to trying to affect development on the continent and speculating on what more it will take to make Africa prosperous. Beginning with an overview, the course proceeds through traditional development sectors (agriculture, health and education), newer perspectives and drivers (private sector, ICTs, democratization and China), and the three "C" barriers (corruption, conflict and climate change). Lively exchanges over the role of outsiders and the efficacy of aid as well as Africa's growing role in the outside world, balance more traditional development perspectives.

**INTS 4914 Statecraft and Smart Power in the Digital Era (4 Credits)**

This course is for Korbelt in DC participants only. This course examines new approaches to the practice of statecraft in an era of rapid global change. Globalization is upsetting traditional international order and institutions, and changing the pace and intensity of decision making. Nation-state governments, while still the primary actors, must adjust to new sub-national, regional and transnational forces and players in a far more complex global arena. Digital Communication is revolutionizing relationships and interaction in the global arena. More groups and the general public are involved or mobilized in public participation than ever before. Vastly more information flows ever more quickly. Partisanship rises with segmentation, threatening fragmentation in public life. The new era reflects the imbalances and strains of major demographic change, especially the impact of an expanding tech-savvy younger generation. A significant youth bulge in volatile developing nations fuels reform efforts, but also creates the potential for conflict arising from continuing injustice and unmet expectations Foreign policy institutions and decision makers here and abroad are increasingly subject to cross-pressures from competing domestic and transnational interests. In the U.S. the Inter-Agency must balance influential single-issue stakeholders and constituencies here and abroad. The course explores how the U.S. and other governments are responding to the new global challenges. Participants see to frame new "rules" of statecraft in the digital era.

**INTS 4920 Conflict Resolution (4 Credits)**

An introductory course which identifies the collective factors leading to successful reconciliation or agreeable compromises in conflicts; analyzes the role and influence of cultural norms, gender conditioning and different bargaining strategies on the resolution process; applies the practical fundamental of negotiation on particular problem-solving techniques.

**INTS 4928 Torture (4 Credits)**

This is a reading/seminar course. Students are asked to be well-prepared and contribute to the discussion. We explore mostly modern forms of torture. The use of torture has not abated in the last 100 years despite conventions, treaties and watchdog organizations. What has occurred is that torture has become "stealth", to use Professor Rejali's term. These "stealth" techniques leave no mark and have been developed equally by democratic states and totalitarian regimes. It is also clear that the U.S. has engaged in state sponsored torture (see The Constitution Project bi-partisan report of April, 2013). An important question before us is if there is any place for torture in the 21st century and if torture is an effective means to gather intelligence. If the answer to both questions is "no," and torture violates the most basic ethical, moral, and legal norms of humanity, they why does it persist?

**INTS 4929 Foundations of Human Rights (4 Credits)**

There are many ways to approach human rights. This course has a historical and thematic emphasis, raising questions relevant to contemporary issues. What are the origins of human rights? Is religion compatible to secular views of universal rights? Are human rights predominantly Western? Did the industrial revolution and socialist tradition contribute to human rights? What are the limits of the rights to self-determination? Is globalization improving or harming human rights? Is globalization increasing or decreasing the potential for a vibrant civil society? What are the tensions between cultural rights and universalism? Are there tensions between security and universal rights? Are human rights for ALL humans? What political systems, under what circumstances, are most hospitable for social cohesion and/or human rights?

**INTS 4931 International Organizations (4 Credits)**

An intermediate course on approaches to the study of international organizations, including institutionalism, neofunctionalism, complex interdependence, international regimes, and epistemic communities. Case studies examining collective security and peacekeeping, human rights, Antarctica, and the environment are discussed.

**INTS 4935 International Humanitarian Law of Armed Conflict (4 Credits)**

This course is a theoretical and practical introduction to international humanitarianism law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants in areas of armed conflict and the rules of engagement for soldiers and combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with CPSY 4560.

**INTS 4936 International Law and Human Rights (4 Credits)**

An introductory course examining the concept of human rights, including political, economic, social, and cultural rights. International, regional and national institutions, norms and procedures to protect individual and group rights are discussed.

**INTS 4940 Introduction to Human Rights (4 Credits)**

An introductory course focused around historical and theoretically relevant texts in human rights. First and second generation rights are emphasized. Early liberal, conservative, and socialist understandings of human rights are highlighted against their respective historical background.

**INTS 4941 Human Rights and International Organizations (4 Credits)**

An introductory course exploring the changing roles of international organizations in their efforts to protect and promote human rights. Examination of both the global and regional levels of human rights activities of international intergovernmental organizations are discussed. Recommended prerequisite: INTS 4940.

**INTS 4947 Human Rights and Security (4 Credits)**

In a sense, the debate over human rights and security is rooted in ancient arguments over power and morality. Yet it is particularly since the end of World War II and the defeat of the Nazis, the emergence of the United States as the leading world power, and the onset of the nuclear age, that the debate over the relationship between human rights and national security has been part of operational discourse in real world politics as well as in university classrooms. The course title suggests an amplitude of subject matter far greater than can be encompassed in the ten weeks of the quarter. So, instructors are likely to differ about which issues to explore in the available time, and inevitably, they will differ in their pedagogical methods. Differences in methodology will reflect differences in taste, personality, training and experience.

**INTS 4955 Human Rights Clinic I (0 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4956 Human Rights Clinic II (4 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4958 Human Rights Global Governance, Nationalism and Internationalism (4 Credits)**

The decline of internationalism in its neoliberal garb calls for reflection on the past thirty years of crisis. After over two years of pandemic, and the Russian invasion of Ukraine and now the war between Israel and Hamas, nationalism is spreading across the globe. And yet history shows us that manifestations of internationalism tend to appear with urgency to counter old familiar foes: illiberal nationalism and ultra-religious radicalism. The main question of this course is: How can we build a new internationalism to address global crises driven by nationalist interests? What are the main lampposts to guide us in that search? Informed by history, this course is structured in three parts: First, how did past forms of internationalism gain traction and supersede nationalism, and what was the contribution of progressive internationalist worldviews? Second, how has the neoliberal globalized order, established after the Cold War, brought us to a series of cataclysms? Third, amidst nationalist challenges, how do we approach the possible reconstruction of a new inclusive internationalism, one that could address both lingering and emerging crises and create the conditions for a more robust global governance guided by human rights? In this sense, this course also proposes to map current and future agreements between great powers, states, and civil society to strengthen a new internationalist order.

**INTS 4964 Political Risk Analysis (4 Credits)**

Investigates risks associated with political instability or uncertainty in countries with emerging markets.

**INTS 4966 Applied Field Methods: Africa (4 Credits)**

An introductory course for students planning to conduct research in developing countries. Practical information is presented on transforming hypothesis into a fieldwork setting, questionnaire construction and administration, and interviewing techniques.

**INTS 4972 Global Environmental Governance (4 Credits)**

Global environmental problems pose seemingly intractable problems for international relations and policy. In this seminar, we probe some of the practical and theoretical difficulties associated with solving such problems. These problems include: How can sovereign nation-states agree to cooperate on environmental problems and how can such cooperation include businesses and civil society? No international institution can legitimately coerce nations into such cooperation. Therefore, international institutions must get them to agree to cooperate, must find ways to bring business and civil society into those agreements, and then find ways to monitor and enforce the agreements. This task is harder than it might seem, and we explore both theories and cases that illuminate it.

**INTS 4981 Internship (0-4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. An internship should both complement the student's academic field of study and relate to his/her career goals. Through internships, students will: Apply acquired academic theory, knowledge, and skills to professional practice; Further develop knowledge and skills needed to work effectively in the field; Gain greater understanding of the private, public, or nonprofit/NGO sectors; Build a network of professional contacts; and Develop career-related skills applicable to the future job search. This course requires the internship be at an organization that is not the University of Denver, and is the course that satisfies the degree requirement for all Korbel MA programs. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4986 Humanitarian Assistance Internship (4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her/their career goals. Students will apply acquired academic theory, knowledge, and skills to professional practice; and further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates who are using their internship to also satisfy requirements for the Humanitarian Assistance Certificate. Registration is by instructor and the Director of the Humanitarian Assistance Program after review and approval of materials.

**INTS 4987 Forced Labor and Human Trafficking (4 Credits)**

This course looks at a brief history of slavery, especially as it pertains to the British, West African, West Indies, and American triangle. We then look at contemporary issues of forced labor, human trafficking and contemporary slavery. Human trafficking is a very complex problem that requires a sophisticated, inter-disciplinary critique.

**INTS 4989 North American Defense and Security (4 Credits)**

This course will challenge students to analyze the evolving North American Defense and Security environment since 1945. The course will begin by focusing on the history of the Canada - United States (CANUS) defense and security relationship that began in the wake of World War Two and was predicated upon protecting the North American continent from Soviet attack with the formation of the Permanent Joint Board on Defense (PJBD), Military Cooperation Committee (MCC), and North American Air Defense Command (NORAD). However, the end of the Cold War and subsequent terror attacks of 9/11 dramatically changed the North American Defense and Security environment and created the need for enhanced cooperation between the United States, Canada, and Mexico.

**INTS 4991 Independent Study (1-12 Credits)**

A special individual arrangement for students to pursue more advanced work beyond that available through regular courses. Such study is arranged between professor and student prior to registration. Academic grades are assigned for course performance. Tutorial Record Form required.

**INTS 4995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the master's thesis. Such study is arranged between professor and student. Academic grades are assigned for performance. Independent Research form required.

**INTS 4996 Substantial Research Paper (0-4 Credits)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage student in the process of applied research. In contrast, an independent study tends to be a more general research project, while an MA thesis involves in-depth academic research typically undertaken by students interested in pursuing a PhD. An SRP is typically shorter than an MA thesis, and does not require a review committee or an oral defense. Rather, the SRP will be supervised and graded by a single appointed faculty member.

**INTS 4998 Experiential Learning (0 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her career goals. JKISIS recognizes the professional benefits of experiential learning work that occurs on the University of Denver campus. Through on-campus experiential learning, students will: Apply acquired academic theory, knowledge, and skills to professional practice; and Further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4999 Research Design: Ph.D. Prospectus, Substantial Research Paper, and MA Thesis (4 Credits)**

This workshop is designed for students interested in developing a well-crafted thesis proposal, sustaining their research and writing agenda throughout their studies, and learning about the academic profession as a whole. There will be short formal lectures or presentations by the instructor; yet each student needs have a paper on the subject of interest prior to registration to this class, each needs to be prepared weekly to receive constructive suggestions and assessments from the instructor and peers.

**INTS 5500 Social Science Methods (4 Credits)**

This course is about how to unleash the power of social science to explain and make sense of social behavior, phenomena, and research programs. The course is intended for Ph.D. students interested in developing their skills in research and analysis. As part of the "professionalization" process, the goal of the course is to teach the basic structure of how to produce a research article or larger work—"how to do" political science. We will primarily rely on methodological approaches from the discipline of Political Science but also cover methods from other fields.

**INTS 5991 Independent Study (1-12 Credits)****INTS 5995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the doctoral dissertation preparation. Grades of "P" (pass) are assigned after the dissertation is accepted by the committee. Prerequisite: Ph.D Candidacy (passing Comprehensive exams).

## Courses

**INTS 3665 Comparative State Building (4 Credits)**

Since the fall of the Berlin Wall, countries in East Central Europe have experienced some twenty-five years of fascinating political, economic, and social change as they have tried to rebuild themselves, undergone democratization, and transitioned to a free market. But the legacies of the region's dramatic and often tragic encounters with war and ideology in the 20th and 19th centuries are still shaping how East Central European societies respond to the new horizons following the collapse of the Soviet bloc. This course is designed as an overview and analysis of the processes of state-building in East Central Europe from the eve of imperial independence in the late 19th century to the present day. We will learn about the condition of the states and nations of East Central Europe before WWI and how they embarked on their nation-building projects after the demise of the foreign empires, the Ottoman, the Austro-Hungarian, and the Russian, that had ruled the region for 500 years. We will then discuss the onset of yet another foreign mode of control – communism – and we will learn how communist reality and Soviet hegemony was lived by the people of Poland, Hungary, Czechoslovakia, Serbia, East Germany, Romania, and Bulgaria for over forty years. After the initial wave of optimism after independence, the political chaos and economic backwardness of the interwar period 1918-1939; after the resistance, collaboration and murder of the Second World War; after the terror and senselessness of Stalinism; after the exhilaration and disappointment of the Hungarian Revolution in 1956, of the Prague Spring in 1968, and of Solidarity in Poland in 1981; after the gray monotony of decaying communism and the lonely voices of dissidents, we will come to the triumphant revolutions of 1989 and the challenges of the post-communist transition. For many of these states, the project of building a liberal democratic state and a functioning market economy over the last twenty years can be considered an impressive success. For others, however, the transition has been undermined by political mismanagement, economic backwardness, and ethnic nationalism. We will weigh the roles of domestic actors and of international institutions in bringing about East Central Europe's successes and failures over the last century. At the end we will discuss some of the key outcomes, positive and negative, of the accession to another ("foreign") empire - the European Union, which ten of these post-communist states joined in 2004-07. Prerequisites: INTS 1500 and INTS 1700.

**INTS 4010 Epistemology (4 Credits)**

An introductory course covering philosophy and history of science, epistemology, causality, and the logic of inquiry as related to international studies. The relation between theory and practical politics is explored, and differences between empirical and normative theory are examined in the context of foundational principles of politics and social science.

**INTS 4011 Comparative Genocide (4 Credits)**

This course examines the historical origins, patterns, and legacies of contemporary genocides around the world. We begin with the UN Convention on the Prevention and Punishment of the Crime of Genocide in 1948, which legally codified the definition of genocide and compelled ratifying parties to prevent its reoccurrence. Yet as we'll see, genocide has instead reoccurred with alarming frequency. We will discuss the definitional and analytical challenges facing this subject, as well as academic and policy debates regarding how to define and prevent genocide. We will also explore different approaches to seeking justice and reconciliation in the aftermath. To do so, this class will ground theoretical debates in empirical case studies.

**INTS 4029 International Business: Strategy and Practice (4 Credits)**

This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture, and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

**INTS 4031 Conflict and Security in Cyberspace (4 Credits)**

This course is for Korbel in DC program participants only. Cyber conflict is a new and complicated strategic problem that will engage the international community at many different levels. The cyber environment challenges traditional strategic thinking, and work on an adequate policy framework to assess and manage cyber conflict is at an early stage. Many traditional security concepts will need to be adjusted for the cyber environment through review and discussion. This class will look at both the national and international dimensions of cyber conflict in the larger international security context.

**INTS 4040 Technology and War (4 Credits)**

This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course will begin by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics range from the invention of gunpowder and the use of machine guns, to the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

**INTS 4046 Global Economic Inequality and Human Rights (4 Credits)**

The main purpose of this course is to understand the conceptual and empirical issues underlying the political economy of global inequality and its relation to Human Rights. What is inequality? What are the global dimensions of inequality and what are the connections between global inequalities and human rights? What are the proximate and deeper causes of global inequality? How does the analysis of deeper causes of global inequality and poverty relate to the underlying political economy of global capitalism? In order to do this, we will look at the relationship between the world economic system, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy. A special feature of the course will be an analysis and assessment of the millennium development goals and the prospects for progressive policies in the post-MDG period, e.g., the SDGs. We will also examine the problems of the advanced countries in a rigorous holistic framework that will go beyond the important work of Picketty and his collaborators on inequality.

**INTS 4047 Global Sustainable Development and Human Rights (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between sustainable development and human rights globally. For this purpose we will need to understand both the current global political economy (GPE) and Geopolitics. The key questions are: What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between sustainable development and human rights globally and within particular nation states? How does the discourse of the linkages between sustainable development and human rights relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between sustainable development and human rights relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among sustainable development, human rights, energy, technology, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others within the context of domestic and global political economy. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and within the nation states. For this purpose we will try to find the approximate but deep causal structure of GPE and the place of sustainability and human rights within this GPE. A special feature of the course will be an analysis and assessment of the climate change issues and renewable energy and critiques of technological fix.

**INTS 4048 International Politics of Nuclear Weapons (4 Credits)**

This MA-level course analyzes subjects central to the understanding of the role of nuclear weapons in international politics. The course addresses the origins of the atomic bomb project, early efforts to control nuclear materials, deterrence theory, nuclear strategy and force posture, and considers contemporary challenges to the global nuclear order including nuclear latency and nuclear terrorism. The goal of the course is to introduce students to the evolution of scholarship on the role of nuclear weapons in international politics, and to evaluate contemporary nuclear security issues in light of this broader context. Each class will focus on a different substantive topic, interweaving theory with history to better understand each issue area. The course will start with the initial development and use of nuclear weapons, followed by an in-depth look at the early thinking on nuclear strategy and escalation during the Cold War. These classes will cover the Manhattan Project, the bombings of Hiroshima and Nagasaki, the basics of deterrence theory, the arms race between the United States and Soviet Union, and historical cases of nuclear crises and brinkmanship (the Cuban Missile Crisis being the most well-known example). During weeks 5-7 students will explore the politics of nuclear acquisition, evaluating different explanations for why states build nuclear weapons. This section of the course will also explore the variety of ways that the international community has sought to prevent the spread of nuclear weapons, including the important role of international institutions, norms, and the nuclear disarmament movement. The final three classes are devoted to contemporary topics in nuclear politics, including the threat of nuclear terrorism, nuclear energy and dual-use issues, regional instability in Northeast and South Asia, the Iran nuclear deal, and the implication of new technologies (e.g. autonomous systems, 3D printing, precision weapons) for nuclear issues. The final class will provide the students with the opportunity to take stock of what we have learnt over the course of the quarter and to reevaluate early thinking on nuclear weapons in light of what we know now.

**INTS 4049 Addressing Complex Interagency Problems (4 Credits)**

This class will ask students develop the skills and addresses the challenges associated with the process by which policy recommendations are developed within the United States Government, particularly as they relate to complex multi-dimensional security problems. Students will learn about the roles played by various departments and agencies that are engaged in the policy making process, as well as how external actors impact the development of national security policy. This class will also give students the opportunity to learn about the policy making process in the United States inter-agency environment through a series of presentations from practitioners as well as hands-on experience via role-playing and the development of briefing memos, presentations and other materials. Students will learn about the history, structure and function of the interagency process, including past and current reform processes such as the Clinton Administration's Presidential Decision Directive on Managing Complex Contingency Operations (PDD-56) as well as the more recent Project on National Security Reform. Students will also hear several real-life examples of interagency policy-making from former government officials and various subject-matter experts. Students will be expected to role-play members of a mock National Security Council (NSC) team or as representatives of various US Government Departments and Agencies involved in the interagency decision-making process. Students will identify an actual national security problem and be responsible for debating and agreeing to a set of policy recommendations within the format and structure of the mock NSC. Select students may have the opportunity to present their recommendation to a current member of the National Security Council via video-teleconference. At the end of course, students should have a fundamental understanding of the strengths and weaknesses of the current system; what constitutes good NSC products and how to produce them; and how concession and compromise, trade-offs, external public pressure, intelligence issues and budget realities all can play a role in how national security decisions are made.

**INTS 4050 Statistical Methods I (4 Credits)**

An introductory course featuring statistical reasoning, probability, sampling, statistical inference, nominal and ordinal measures of association, and correlation. Open only to students with no prior background in statistics.

**INTS 4051 Statistical Methods II (4 Credits)**

This course is a continuation of Statistical Methods I, covering the fundamentals and primary methods of statistical inference. Topics include two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, correlation, simple regression and multiple regression. Emphasis will be on problem solving, computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only. Prerequisites: INTS 4050.

**INTS 4052 Statistical Methods III (4 Credits)**

This course will serve as continuation of Statistical Methods II. This will be an applied, non-calculus based course on statistical techniques used in nonparametric and multivariate analysis. Emphasis will be on applications and data analysis using the statistical software package SAS. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4056 Information Management in Humanitarian Crises (4 Credits)**

Accurate, reliable and timely data collection, processing, analysis and dissemination (four steps in information management) are critical for the effective implementation of both development and humanitarian programs. In humanitarian responses, there are numerous challenges to managing information in what may be a rapidly evolving situation. This course introduces students to the theory of information management and its application in the humanitarian context.

**INTS 4057 Statistics (4 Credits)**

This is a fast-paced course which serves as an introduction to basic and intermediate concepts in statistics and probability, as well as the primary methods of statistical inference. Topics include data collection, presenting data in tables and charts, summarizing and describing numerical data, basic probability, discrete probability distributions, normal distribution, sampling distributions, confidence interval estimation, single-sample and two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, simple regression and multiple regression. Emphasis will be on statistical reasoning, problem solving, computer applications (using Stata), and interpretation of results. Prerequisite: Strong quantitative background and a minimum quantitative GRE score of 148 or permission of the instructor.

**INTS 4058 Applied Time-Series Analysis (4 Credits)**

This course serves as an introduction to time-series analysis and panel data analysis techniques. Topics include moving averages, exponential smoothing, time-series decomposition, model identification and estimation, Box-Jenkins method, ARMA and ARIMA models, and VAR analysis. Panel data analysis includes fixed effects and random effects models. Emphasis will be on computer applications (using Stata) and interpretation of results.

**INTS 4059 Data Science With Python (4 Credits)**

Python is a widely used programming language for data exploration. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions, and so forth. They will then learn how to write Python programs to conduct data exploration, statistical analysis, visualization, and predictive analysis techniques like decision trees and text mining. Students will also learn how to use various libraries available in Python (like Numpy, Pandas etc.) in their programs. Finally, they will learn how to read and debug (i.e. fix) Python programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4060 Data Visualization (2 Credits)**

"The simple graph has brought more information to the data analyst's mind than any other device," stated John Tukey, a mathematician distinguished for his contributions to the field of statistics. The course, "Data Visualization" will introduce students to the Grammar of Graphics philosophy which has fundamentally changed thinking about data visualization in the last 20 years. We will use two popular data visualization tools designed using this philosophy: Tableau and the ggplot2 package in R. Students will create a portfolio in which their data visualizations implement best practices – and avoid common pitfalls – to effectively deliver insights.



**INTS 4061 Introduction to Survey Methods (4 Credits)****INTS 4062 Data Science with R (4 Credits)**

R is a widely used programming language for data analysis. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions etc. They will then learn how to write R programs to conduct data exploration, visualization, basic statistical analyses, as well as produce reproducible reports. Students will also learn how to use various packages available in R in their programs. Finally, they will learn how to read and debug (i.e. fix) R programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4063 Advanced Statistics (4 Credits)**

This course is a continuation of INTS 4057 Statistics. Topics include multivariate analyses such as principal component analysis, discriminant analysis, logistic regression and data examination. Emphasis will be on conducting data analyses as well as on interpreting Stata output. In addition, students will develop and write an empirical research paper using a rigorous analysis of the elements of formal research writing. Prerequisite: INTS 4057.

**INTS 4078 Modeling for Policy: Development, Sustainability, and Conflict (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of “traditional” development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward. This course introduces students to professional analysis using one class of quantitative tools called integrated assessment models (IAMs), which quantitatively represent complex systems in interaction. IAMs are tools that formally model the interaction across key development systems, like demographics, economics, energy, and the environment. They can be used to 1) think critically about how key trends are unfolding, 2) identify leverage points; and 3) explore the impact of changing policies and environmental uncertainties on desired outcomes.

**INTS 4090 Values-Based Leadership in International and Public Affairs (4 Credits)**

The professionals who leave Korbelt to enter international and public affairs will come to hold positions of influence, privilege, and leadership as they seek to promote the public good. Their behaviors will have significant consequences for those with whom they work, those they serve, and for third parties. Ethical leaders must be attentive to the challenges and contradictions associated with their positions, influence, and interventions. What values do we hope professionals in international and public affairs will embody, and how might they enact those values? This team-taught course engages the entire Korbelt graduate student body in centrally important, common, and difficult ethical issues that professionals in international affairs and public policy confront in their work. The course examines values-based leadership, which comprises ethical dilemmas but also issues and questions that commonly arise in practice but do not generally “fit” within the field of professional ethics. Traditional ethics courses tend to teach the two or three principal approaches to ethical frameworks and then present cases to apply those frameworks. This course on values-based leadership (VBL) also examines cases—but it takes the view that professional ethics as it is typically taught does not suffice to prepare students for the complexities of the world they will confront. As a corrective, the course is interdisciplinary, and among other fields incorporates troublesome findings from the new field of behavioral ethics. For example, why do virtuous people often violate their own ethical norms and then fail to recognize that they have done so? The course also reaches beyond ethics to engage other values that are central to responsible leadership—such as inclusivity, allyship, and access to decision-making by those targeted for professional research and policy interventions—while also exploring the contradictions and risks associated with professional privilege. Faculty and students will explore the power dynamics of decision-making where the populations that are the most affected by interventions often lack decision-making authority and may even be further disempowered by professionals’ good intentions. The course looks to bring together, in one Korbelt-wide, cross-degree conversation, matters pertaining to values in leadership so that students can engage with others with a broad range of backgrounds, orientations, and career aspirations. No one discipline or professional field has a monopoly on good thinking on VBL. And so the course draws widely on the diverse experiences and expertise of students and faculty at Korbelt as we confront together some of the most difficult challenges professionals face over the course of their careers.

**INTS 4091 Great Issues in International Affairs (4 Credits)**

The course embraces a grand challenges approach that focuses on major issues of the day, while introducing key concepts central to the student of international affairs, notably international political economy, international relations, and governance in all its forms. Issues may vary from year to year, but will be those central to the Korbelt School’s mission. These will likely include: • Economic Inequality • Environmental Sustainability • Democracy and Human Rights • Security A lead professor will teach the first and last weeks of the quarter and coordinate the remaining weeks. Four other faculty members will each teach a two-week unit on one of the core issues. Each unit will seek to develop students understanding of: 1. The nature of the problem, its manifestations, its causes and its consequences 2. The array of possible interventions—by governments, international organizations, private firms, NGOs, and other—that might address causes or ameliorate consequences. 3. How one would decide which course of action to take. The course will utilize a mix of lectures and discussion sections led by PhD students. Generally, the first week of these units will frame the larger issue and the second will focus on a more particular instantiation of that issue. For example, in a unit on Inclusive Economic Growth, a first lecture might be explore the broad contours of economic inequality and its likely causes and second might focus on a narrower topic such as access to education, social mobility, or gendered dimensions of inequality, depending on the expertise of the faculty member leading that unit of the course.

**INTS 4105 Campaigns and Foreign Policy (4 Credits)**

This course will examine the principles of political campaign management and their application to international political campaigns, foreign policy initiatives and international affairs. Students will be introduced to the tools of political campaign management: message development, survey research, audience targeting, and paid and earned communications. Case studies will focus on elements of both US and other nations' foreign policy. Examples of foreign policy playing a significant role in campaigns in the UK, and Denmark will be highlighted. In addition, there will be a focus on human rights and issue campaign. Classes will be comprised of lectures, discussion and some simulation exercises. Outside specialists will be invited to share their experience and expertise in person or via teleconference. Readings include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management. Movies and the Internet will be an integral aspect of the class.

**INTS 4110 Food/Nutrition Security and Sustainable Development (4 Credits)**

This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food and nutrition security. Ultimately, food security is realized when all people within a population consume sufficient nutrients to live active and healthy lives. This normative focus on human health and well-being, as the metric by which food security outcomes will be measured, is critical to the framing of this course. Political, economic, and social institutions—positioned at scales encompassing global, national, “local” (micro-regional, community), and household—are simultaneously charged with producing food in particular physical environments and/or making food available and accessible to their populations, and with protecting environmental resources and public health in ways that contribute to nutritional components of human development. The term “political ecology” has been used to describe an analytical framework that explicitly focuses on the interactions among the structures of political economy and those of physical/biological ecologies (including human), together with the socio-cultural contexts that influence structural impacts and help to explain outcomes. This framework incorporates both an explicit navigation among scales (of power and of analysis) and a long-term perspective. Cumulatively, the readings and exercises of this course will build a political ecology of policy domains central to improving food security and nutrition outcomes in both global north and south. We will examine policy issues and constituencies, institutional approaches, theoretical perspectives, and empirical analyses. You will have opportunities to engage with institutional approaches through structured exercises, including a mid-term graded exercise. You will also have an opportunity to produce an independent project that will include your own policy recommendations.

**INTS 4127 The Rise and Fall of Great Powers (4 Credits)**

This new graduate course provides an in-depth look at often ignored areas of history. Learning about the rise and fall of the Roman Empire, British Empire, Russian Empire, Soviet Empire and Chinese Empire provides an excellent backdrop to understanding important historical lessons that are often downplayed in the early 21st century. The course provides a series of good works that can help students better understand the present and future developments of our century.

**INTS 4134 Forever Emerging? The Developmental Trajectory of Modern Brazil (4 Credits)**

Brazil has the largest population, economy, and industrial basis in Latin America. It is the seventh largest economy in the world, fifth largest country in land area, outranking the continental United States. Like the US, Brazilians are a mix of indigenous, European, and African peoples, along with subsequent inflows of Asian and Middle Eastern immigration, though race, ethnicity, and class have been interpreted with distinct cleavages and hierarchies. We approach our understanding of Brazil through the country's former capital, Rio de Janeiro, a city of numerous complexities, wonders, contradictions, challenges, and potential. By looking at the historical evolution of this fascinating city, the course will offer students an opportunity to study the evolution of Brazil, from the colonial period to the present day, when the country has increasingly been seen as a regional economic and diplomatic powerhouse, as well as a globally emergent player. By focusing on the historical trajectory of Rio de Janeiro, in an in-depth reflection structured along textual, visual, and in-sight materials and experiences, students are invited to reflect about matters of change and continuity as well as how national socio-political trends are reflected in local contexts, thus also learning to reflect about the interpretive relationship between the micro-macro levels of analysis. Historical political and economic narratives, contemporary analysis of the country's place in the world, films, music, architecture, guided visits to neighborhoods and local cultural institutions will be our explanatory prisms into the Carioca (Rio-based) spirit and cultural memories as expressions of national trends and trajectories. Through lectures, seminar discussions, and field studies, we explore Rio's renowned and sometimes notorious informality, from informal housing (favelas) to language, social organization and economic activities. We also explore themes such as tourism, the history of housing policies, and the transformation of local culture into 'national' and 'export' cultures. Moreover, by looking at the urban transformations over the last 200 years, we explore Brazil's drive to become an industrial power, as well as the new social conflicts produced by these efforts. Finally, we investigate Brazil's contemporary culture, politics, sports, achievements, promises and continued challenges as it proceeds as a so-called emergent nation into the 21st century, while still struggling with its colonial past.

**INTS 4136 U.S.-Cuba Relations (4 Credits)**

This class will review relations between the U.S. and Cuba from the Spanish-American War in 1898 to present day. On one hand, we find a stand-off that includes an invasion and trade embargo by the U.S., mutual attempts at political disruption, and the exodus of populations from each country to the other. On the other hand, we find surprising levels of cooperation including a longstanding pattern of “back channel” communication between the two governments as well as a degree of cooperation at the societal level. In addition, each country has had a profound influence on the development of social ideals in the other.

**INTS 4137 China in the World: Global Drivers, Local Conflicts (4 Credits)**

It is impossible to understand the 21st century without discerning China, which now possesses the largest army in the world, the biggest economy in terms of purchasing power parity, and the greatest number of people. Chinese firms provide foreign direct investment (FDI) worth \$3.8 trillion in stocks by 2018 and Chinese policy banks fund official development finance totaling around \$658 billion between 2000 and 2019. Chinese information and communications technology firms have launched some of the most widely used applications such as TikTok and Zoom. The Ministry of Finance, the People's Bank of China, and the State-owned Assets Supervision and Administration Commission of the State Council have been able to rewrite some of the global development architecture, launching the Belt and Road Initiative and Asian Infrastructure Investment Bank and the. Global commodity chains pass through Chinese territories or maritime economic zones, reaching 12.4% of global trade in 2019. In security issues, the Chinese Ministries and the People's Liberation Army have defined norms such as the responsibility to protect in the international community. In global struggle to reduce decarbonization, Chinese electric vehicle companies have been at the forefront of these new technologies and renewable energy companies have made major strides at limiting carbon emissions within its borders. The Chinese Communist Party has redefined human rights, putting the economic definition of the right to livelihood and work above everything else. China's new rich comprise the fastest growing number of billionaires in the world who are responsible for investments in online gambling or wildlife hunting.

**INTS 4141 Domestic/Int'l Conseq:Drug War (4 Credits)**

Domestic and international policy and the impact of the drug war on both.

**INTS 4142 After the Fall: Russia & China (4 Credits)**

Provides analysis of the historical rise of Russia and China, and their complex inter-relationship and interaction with the United States and the world.

**INTS 4147 American Govt & Pol. Making (4 Credits)**

Examines governmental fragmentation affects and policies and examines how policy issues engage different segments of the government.

**INTS 4201 Quantitative Analysis of Global Environmental Change (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate This course examines the role that quantitative analyses play in characterizing risks to society or ecosystems posed by global environmental change, and how various policy options could reduce those risks. We will focus in particular on analyses with "integrated assessment models" (IAMs), which have been influential in shaping the climate change policy debate. IAMs are typically global-scale systems analyses that integrate societal and environmental aspects of the climate issue. The course will survey alternative types of IAMs and explore how they work using one of the original, and still most influential, IAMs in the climate field, the Dynamic Integrated Climate-Economy (DICE) model developed by recent Nobel laureate William Nordhaus. We will use a recent version of DICE to explore how assumptions affect outcomes, and understand the strengths and weaknesses of such models.

**INTS 4205 Hacking for Defense (4 Credits)**

Hacking for Defense (H4D) is designed to provide students the opportunity to learn how to work with the Department of Defense (DoD) and Intelligence Community (IC) to better address the nation's emerging threats and security challenges. (See the background here.) Unlike current practices in the DoD/IC that can stall and in some cases thwart rapid innovation, this course provides a platform to develop prototypes that address DOD/IC users' needs in weeks. Agencies or Commands in the Department of Defense and Intelligence Community may provide follow-on funding to student teams for further refinement and development of prototypes. In this Hacking for Defense (H4D) course, student teams may either select from an existing set of problems provided by the DoD/IC community or introduce their own ideas for DoD/IC problems that need to be solved. Although teams pick a problem to solve, Hacking for Defense is not a product incubator for a specific technology solution. Instead, it provides teams with a deeper understanding of selected problems and the host of potential technological solutions that might be arrayed against them.

**INTS 4207 The Global Political Economy of China (4 Credits)**

China's rise in the 21st century has given rise to complex reactions in both the global North and the global South. This course will explore the rise of China and its possible consequences for the Global Political Economy from a complex systems perspective. The recently developed evolutionary theory of Global Political Economy will be the basic framework. We will build up an applicable ecologically sound evolutionary theory from the bottom up to understand 21st century Chinese paradoxes and ambiguities. These paradoxes and ambiguities are not accidental but relate to tensions in the moral economy of PRC embedded in the world of the early 21st century. Furthermore, the uneven development of both the Chinese and Global Political Economies across space and over time has led to immense inequalities among groups and possible polarizations. We will examine these inequalities and related emerging issues both theoretically and empirically and begin a conversation between the theorists and practitioners. In this way, this course is intended to begin the much needed dialogue among students of global society regarding the contemporary relevance of a complex multilayered innovative economy like that of the PRC. The ecological and geopolitical aspects of China's rise will be analyzed within our Evolutionary Ecological Global Political Economy framework. The well-being of the Chinese people and others in the Global Political Economy will be analyzed by using an extension of Sen's capabilities theory called the Socially Embedded Intersectional Capabilities Theory.

**INTS 4210 Global Value Chains, Multinational Corporations, and Investment Sustainability (4 Credits)**

The emergence of sweeping new legal rights for Multinational Corporations (MNCs) in relation to their foreign direct investment and cross-border trading activities under the avalanche of bilateral investment treaties negotiated in the last few decades and under multilateral conventions such as NAFTA represent what many have termed "revolutionary" changes in the nature of state sovereignty as it relates to state-investor relations. That expansion of investor/MNC rights in relation to state sovereignty has thus seemingly reached a point calling for re-examination of the nature and appropriate scope of MNC rights, as well as the nature of MNE accountability and responsibilities which are the flip side of such rights.

**INTS 4215 Gender and Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has grappled with the concept of gender and how to operationalize it in the context of humanitarian preparedness and response. Through readings, class discussions, guest speakers and assignments, students will have the opportunity to gain a better understanding of how the humanitarian system's approach is evolving in theory and practice.

**INTS 4220 Political Economy of Energy & Sustainable Development (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between energy and sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions.

**INTS 4223 Global Dynamics and Local Threats in Agricultural Development (4 Credits)**

Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

**INTS 4226 Social Entrepreneurship & Sustainable Development (4 Credits)**

This course provides an overview of the role of social entrepreneurs, innovative small firms, and entrepreneurial NGOs in sustainable development and poverty alleviation. Market-driven strategies are increasingly important for all organizations, in government, public, or private sectors, to encourage local solutions that are sustainable and do not require ongoing subsidy. Entrepreneurial NGOs and small firms are a great source of local innovation and adaptation, identifying potential strategies that can be scaled up through partnerships with governments, social purpose organizations, or private capital. These market-driven strategies are based on a good understanding of customers, the value provided, and how to best deliver products and services to vulnerable populations in a responsible way. Further, a strong customer and market focus ensures that all social purpose organizations (both for-profit businesses and NGOs) meet customer needs effectively and develop new products and services efficiently.

**INTS 4227 Social Impact & Sustainability Lab (4 Credits)**

This course combines classroom work with a project-based learning opportunity that matches students to a specific project for a social enterprise organization or research on a social enterprise topic. The class combines structured introduction to social enterprise business models and strategies to enhance social impact and financial sustainability with real organizations and practical challenges of launching and managing social enterprises. This approach allows teams of students to work together on real issues for social enterprises, learn strategies and tools for designing better solutions to development challenges, and learn some basic consulting and research skills with group discussion and shared learning. While INTS 4226 Social Entrepreneurship & Sustainable Development is not a pre-requisite, it provides a helpful overview.

**INTS 4228 Development Practicum in Social Enterprise (4 Credits)**

As global development challenges continue to evolve, many are complex, inter-connected social challenges that we call "wicked problems." These challenges require development organizations and social entrepreneurs to combine human-centered design and systems thinking methods to design better solutions, and to include business planning for implementation and social impact management for continual learning. While not all organizations are "social enterprises" with earned revenue streams to drive their social impact, all social-purpose organizations can benefit from an entrepreneurial approach to problem-solving. They need human-centered and systems-minded impact strategies, market-driven business models, and well-designed performance metrics to guide continual innovation and improvement. Further, organizations that consistently strive to improve customer outcomes and make existing systems work better will be leaders in social innovation that create sustainable change. This Development Practicum is an experiential learning opportunity that matches students with projects for existing development organizations to help strengthen their customer-centered program design, business model, social outcomes, or financial sustainability. This allows teams of students to work together on a real problem, gain experience in how to design better solutions to development challenges, and learn and apply strategies and tools in Human Centered Design, business planning, and social impact management. The Practicum matches teams of 2-3 students to a client consulting projects and provides structured classroom learning about social enterprise principles and strategies for better solution design and successful implementation. This approach gives students structure for their consulting or research projects, and facilitates group learning and insights.

**INTS 4234 International Security, Diplomacy and Force (4 Credits)**

The course examines the ways and means of war and peace with a focus on both multilateral and bilateral forms of diplomacy. We begin with the use of force and the modalities of peacemaking in the Greco-Roman, Indian and Chinese ancient worlds. Ending wars in the “modern” period has often resulted in new constructs to maintain peace. Thus, the Peace of Augsburg (1555) and the Peace of Westphalia (1648) that ended warfare among German states established a foundation for sovereignty as cornerstone of a new state system. When post-1789 France became a “revolutionary” power, she dramatically upset the status quo. After the defeat of Napoleon in 1815, conservative powers gathered in the Congress of Vienna to restore a balance of power. The arrangements they established (dubbed the “Concert of Europe”) successfully avoided general war for 99 years. World War I (1914-18) was followed by multilateral diplomacy at Versailles and formation of the League of Nations and agreement to maintain international security through application of international law. Failure of this design in the interwar period led to another attempt after World War II (1939-45) at Yalta, Potsdam, Dumbarton Oaks, and San Francisco to establish and maintain peace not just by international law (collective security), but also through alliances (collective defense)—both under United Nations auspices. In the seven decades since, both bilateral and multilateral diplomacy have been used to restore or maintain international peace and security, also engaging in peacekeeping and arms control efforts in relation to weapons of mass destruction, confidence- and security-building measures (CSBMs), space and other security-related matters on present-day national and international security agendas.

**INTS 4235 Realism and Great Powers (4 Credits)**

We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schweller, Grieco, VanEvera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

**INTS 4236 Human Security and Sexuality (4 Credits)**

The root of homophobic views are often religious and cultural (mis)understandings deeply embedded in many societies around the world. Expressed in secular terms, the sexual orientation and identity of the majority trump those of sexuality minorities. Lesbian, gay, bisexual, transgender, other “queer” or questioning, intersex, and asexual (LGBTQIA) individuals have a personal stake in both security and the rights they have as human beings wherever they reside around the world. Violence, threats, discrimination, marginalization and other forms of harm directed to persons due to their sexual orientation or identities are worldwide human-security issues the course addresses.

**INTS 4237 Human Rights and Security (4 Credits)**

Throughout their 200,000 year history, humans have gathered into groups ruled by strongmen, to seek protection or prey on others. Just three centuries ago, Enlightenment thinkers challenged that conception of society and governance, which soon led to a remarkable event: the 1776 creation of a state whose rationale for existing was to secure the inalienable rights of all individuals to “life, liberty, and the pursuit of happiness.” That changed world politics. It meant that while the fate of states would continue to be shaped by their relative power, a new moral standard would be applied to governments: the extent to which they recognized universal human rights. As John Quincy Adams put it in 1817, the mixture of America’s emerging power and its avowed commitment to human freedom made America a “dangerous nation” in the eyes of the world’s authoritarian regimes. It also meant that competing conceptions of human rights would permeate American domestic struggles: over rights for white men vs. equal rights for all, over rights to property vs. labor rights, over national security vs. free speech and privacy rights, and over whether to defend rights only at home vs. the need (or obligation) to advance them internationally. Along the way, those U.S. debates led to a Civil War, a war to defeat fascism, and a cold war (including U.S. support for many “third world” dictators) to defend the market democracies of the West against authoritarian Communism. From the early post-cold war promise of an advance toward globally inclusive universal rights—during which such subjects as a “responsibility to protect” and support for democratic transitions entered mainstream policy debates—a “democratic recession” has now reached the point of serious threat to preserving even the United States as a rights-based Republic. For the first time since the 1930’s, a U.S. President offers a conception of national security that rejects promotion of human rights abroad. Domestically, a struggle over whether the object of “national security” is a Republic based on equal rights for all, or a racially and religiously defined “nation,” evokes memories of the clash that once led to civil war. Finally, Vladimir Putin’s effort to subvert all Western democracies presents us with a “cyber” version of the 20th century’s international, state-led assaults on the West by fascist and communist major powers. Those struggles are the subject of this course.

**INTS 4238 Modern Political Violence and Human Rights (4 Credits)**

The landscape of contemporary political violence is marked by a dizzying array of actors, including rebel groups, militias, gangs, and state governments. In this class, students will develop a better understanding of belligerents in modern conflicts and how they relate to one another. Students will also develop an in-depth understanding of a non-state armed group or conflict of their choice.

**INTS 4271 Sex and Violence (4 Credits)**

Some have described war as “long periods of boredom punctuated by moments of sheer terror.” In these periods of ennui, combatants have often found themselves filling the time with affairs of the heart (and other, less PG organs). This course considers how armed groups—ranging from state militaries to non-state armed groups—manage romance, sex, and family within their ranks. Examining these subjects is not an exercise in voyeurism, but rather a means by which we can better understand the quotidian operations of armed groups and, thus, the conduct of war.

**INTS 4290 Gender, Environment, and Development (4 Credits)**

This course is concerned with how and why gender matters in producing environmental, economic, and social outcomes of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of environmental and related economic planning. Beyond these practical implications of gendered environments, the course will engage theoretical and ideological underpinnings for the gendered structures of environmental control and management encountered in a wide range of physical environments.

**INTS 4301 Introduction to Political Theory (4 Credits)**

Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shape—and continue to shape—our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard.

**INTS 4303 Econometrics for Decision Making I (4 Credits)**

The first course in a two course sequence in Applied Econometrics. Introduces basic probabilistic techniques for the quantitative analysis of economic and social data and their application to international public policy decision making. Prepares students to: compile and analyze data sets; build and test regression models; interpret and critically evaluate applied econometric studies; and conduct their own applied econometric research using computerized statistical packages. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4310 International Trade (4 Credits)**

An intermediate course analyzing causes and consequences of international trade. Classical, neo-classical, and product-cycle models included. Topics include international specification, terms of trade of developed and less-developed countries, distribution of gains from trade, instruments and uses of commercial policy, nominal and effective protection, and theory of customs unions and economic integration. Prerequisite: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 should first complete INTS 4536.

**INTS 4320 Int'l Monetary Relations (4 Credits)**

An intermediate course examining history of the monetary system, foreign exchange rates, balance of payments analysis, and adjustment processes under different exchange systems, current status problems, and prospects for reform. Prerequisite: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for 4320 should first complete INTS 4536.

**INTS 4324 International Political Economy (4 Credits)**

The course examines 3 contrasting visions of international political economy: economic security, trade and finance.

**INTS 4327 Advanced Issues in International Studies (4 Credits)**

The purpose of this course is to train students in advanced research in the fields of International Relations and Comparative Politics. The course achieves these ends through an investigation into a particular empirical theme (of the professor's choosing in any given year). While due emphasis is placed on the major findings of the specified literature, as much or more attention is given to the research design, methods and evidence of the selected literature. Students will learn what constitutes a falsifiable hypothesis and what the alternatives to falsifiability are, examine various scholars' methods of operationalization and measurement, consider the merits of treating rival explanations to one's own, and judge the veracity of findings by these and other criteria. In addition, students will apply such knowledge gained by writing their own original research paper during the quarter. The course aims to assist primarily PhD candidates in their abilities to carry out research, to assess the quality of other scholars' research, to teach in the fields of International Relations and Comparative Politics, and to excel in their comprehensive exams. Please note that this course is offered only once every other year. Thus PhD candidates must enroll in the first year it is available in their course program.

**INTS 4330 International Business Transactions (4 Credits)****INTS 4332 Data Analysis and Development (4 Credits)****INTS 4333 International Project Design and Monitoring (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Design and Monitoring course (formerly International Project Analysis) is to provide students with an appreciation for the myriad of considerations in designing and monitoring an international development intervention and exposure to conventional and unconventional methods and means for doing so. The international project cycle begins with identifying an intervention to address a development impediment or opportunity faced by a target group. A development intervention typically falls into a sector or thematic area, such as education and health care, and it is generally directed towards physical, human, institutional/legal capacity building, or a combination of them. Projects can be singular in scope, such as building a new primary school, or broadly scoped to mitigate causes of poverty, such as the Millennium Development Villages project, but they all should be a unique endeavor with a beginning and an end. Much of the physical development today is supported by the private sector or state sponsored organizations, with less support through traditional foreign aid unless it is a major reconstruction effort like in Afghanistan. In this course, students will learn that a project proposal should be designed in concert with the beneficiaries to be relevant, feasible, and supported by their needs, but also recognizing their absorption capacities. Such a project proposal should ideally have gone through a systematic analysis of factors that will affect its design and management of risk, including economic, financial, environmental, technical, and social factors, as well as special safeguard areas. Students will also learn about the continued need for project proposals to define the underlying theory of change, assumptions, and logical framework for linking inputs, activities, outputs, outcomes and ultimately desired impacts. Establishing a performance management plan for the project that defines, among other things, the metrics and milestones for monitoring the process is an essential component of most project proposals. However, students will learn that adherence to plans is challenging under complex development conditions.

**INTS 4337 Current Challenges in the Middle East (4 Credits)**

In this course, we will examine some of the issues, events and decisions that may be contributing to this perception and more generally on the evolving role of the U.S. in the Middle East. Is the perception correct? What might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Can the U.S. play an effective role in any of those challenges? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4339 Microfinance Lessons: Inclusive Markets and Development (4 Credits)**

This course provides an overview of why microfinance and financial inclusion are key strategies and platforms to build sustainable development and inclusive markets and how the financial inclusion ecosystem supports development outcomes through direct impact of microfinance institutions (MFIs) and systems change. Microfinance and financial inclusion are important ways to improve economic choices and household resilience among the poor, providing access to credit, safe savings options, payment systems, and even micro-insurance to help the poor manage risk and financial uncertainty. They are also important tools to create local, inclusive markets and economic opportunity by facilitating micro and small business development and access to development assets like clean energy, clean water, agricultural inputs, education, and healthcare. We will focus on lessons and insights from microfinance's evolution into financial inclusion, how digital finance and other technology innovations are creating new opportunities and risks in development, and the shared characteristics of highly effective microfinance institutions and NGOs that integrate microfinance into their development strategies.

**INTS 4341 Illicit Markets in the Americas (4 Credits)**

This course applies the understandings of International Political Economy (IPE) to the study of illicit market activity in the western hemisphere. While sociologists, criminologists, legal scholars and law enforcement agencies have all contributed substantially to this area of study, IPE has only recently been applied. So what can this approach contribute? Through IPE, we can place illicit market activity within the larger structure of trade and monetary relations, the rise of the informal sector and the existence of economic and other inequalities in particular regions. We can consider the nature and impact of North-South relations and the process of structural adjustments as advised by international financial institutions. Further, we can evaluate the overall function and effectiveness of law enforcement, governing institutions and international organizations in controlling illicit market activity. Finally, through IPE, we can consider the ideational context of participation in illicit market activity.

**INTS 4342 Project Management (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the Project Management course is to expose students to right- and left-brain approaches to managing the knowledge areas of project management, such as time and cost management, as well as approaches used by project managers and their teams. This course concentrates on the implementation and completion/transition phases of the international project cycle. The implementation phase commences after stakeholders approve a project proposal—translated into a project charter—from which a detailed project management plan is developed to execute the project. Project managers rely, to a large extent, on internationally recognized management approaches to move workflow smoothly among project phases, allocate project tasks effectively, efficiency track project milestones, and make adjustment for inevitable and often uncontrollable project delays and cost overruns. The completion/transition phase ends the project and transfers control from the project team to the operational team, preferably through a defined exit strategy. The course covers the knowledge and skills needed to meet the educational requirements for certification by the Project Management Institute (PMI). PMI serves practitioners and organizations by providing standards that describe leading practices, globally recognized credentials that certify project management expertise, and resources for professional development, networking and community. PMI credentials certify your knowledge and experience in project management so you can be more confident at work and more competitive in the job market. Several other organizations will be mentioned that also provide certification, but all share in common required education hours, years of experience, and passing a professional examination. Students in the course will exhibit their new knowledge and skills by joining small teams to prepare a professional project management plan for the selected development project charter and through individual examination.

**INTS 4349 Comparative Public Policy and Finance (4 Credits)**

Course aims to provide in-depth treatment of the question "why do size, form, financing, and distributive outcomes of government differ so greatly across nations?".

**INTS 4350 Economic Development (4 Credits)**

This course combines an introduction to the theories and key issues in economic development with a rigorous analysis of empirical evidence from low- and middle-income countries in Asia, Africa, and Latin America. The course enables participants to develop an in-depth understanding of diverse local, national, and regional patterns of economic development, and to critically assess the design and potential social and economic consequences of global policy frameworks and national economic development strategies. The course starts with providing an outline of global trends in poverty, inequality and growth, including a discussion of key concepts and ways of measuring economic development. Part I focuses on classical, neoclassical, and institutional theories of economic development. Linkages between the intellectual basis of different theories and major political currents and ideologies, and the associated policy design, are assessed. In part II, core themes in economic development are explored, including agriculture, trade, industrialization, labor, and the environment. The analysis of diverse country studies illuminates how historically specific social, political, and institutional conditions shape development outcomes. In part III, we examine the design and implementation of economic development policy through an analysis of international aid agendas and institutional modalities of ODA, with a particular focus on emerging donors. We investigate the strength and weaknesses of national economic development policies through an in-depth study of selected country case studies. Please note that a mastering of quantitative economics is not a requirement for this course.

**INTS 4355 Finance and Development (4 Credits)**

An advanced course which examines the relationship between financial system organization and economic performance. The political economy of financial innovation, liberalization and globalization, state-finance-industry relations, micro-lending, stock markets and regional financing are discussed with reference to Latin America, Asia and African countries. Completion of INTS 4320 and INTS 4350 prior to taking this course are recommended but not required; students with questions should contact the professor.

**INTS 4362 Gender and Health (4 Credits)**

This course will introduce students to theories/concepts of gender and health and examine the interlinkages between global health policies and programs. It will cover the design, delivery, reception, and effectiveness of international programs aimed at improving health outcomes for women and men. The course will review women and men's access to health, and the influence of patriarchy/masculinity on health at micro, meso and macro levels. The readings from the course focus on major theoretical and analytical debates in the field of international/global health, such as HIV/AIDS, gender-based violence (especially in relation to emergencies/humanitarian crises), key populations (MSM (Men who have sex with men), Commercial sex workers, IDUs (Injecting drug users)), LGBT health, and sexual and reproductive health. Research projects provide students an opportunity to explore further the linkage between health and gender, health care or health policy and gender, gender and health-related issues in emergencies, and the relevant health and gender interventions in a country of their choice.



**INTS 4364 Global Poverty and Human Rights (4 Credits)**

This course explores the many dimensions of global poverty and human rights and well-being of people around the world. Three particular areas are emphasized and explored in detail. The first is the exact dimensions and extent of globalization. The second is the exact nature of another complex thought called poverty. The third area explores the connections between globalization, poverty, and human rights. After rigorous discussion of the conceptual foundations, we focus on the U.N. millennium development goals for poverty reduction in particular. At the end we will be able to explore the analytical foundation of alternative policies, strategies and evaluate these for formulating alternative strategies addressing human rights issues and global poverty reduction.

**INTS 4367 Global Health Affairs (4 Credits)**

Introductory survey class for all students interested in intersection of international affairs and global health and security, development and economics.

**INTS 4368 HIV & AIDS in International Affairs (4 Credits)**

Upon completion of the course, students will understand (a) the concept of global health security; (b) HIV/AIDS as an epidemiological phenomenon; (c) the political, economic and social contexts of HIV/AIDS in specific regions of the world; (d) HIV/AIDS as a threat to security and gender; (e) security considerations of HIV/AIDS impacts in development and as a human right.

**INTS 4369 Political Economy of Global Poverty & Inequality (4 Credits)**

The main purpose of this course is to understand the underlying causes of inequality and poverty in the world. In order to do this, we look at the relationship between economic growth, poverty, and inequalities in several different dimensions. First, the process of sustainable growth itself is analyzed. Second, the implications of different types of growth for income distribution and poverty are studied. Finally, the implications of such inequalities for human welfare in developing economies in particular are studied. After an initial exploration of the income-based measures of poverty and inequalities we focus on the more recently developed social capabilities approach developed by Amartya Sen and others.

**INTS 4370 The Global Economy: Conflict, Crisis and Cooperation (4 Credits)**

An introductory course on the nature of global economic integration in the postwar period, including contending theoretic perspectives, and several applied issues and policy dilemmas such as the evolving nature of firms (e.g. globalization of production), the "new international of labor," and the status of national sovereignty/policy autonomy in an integrated world economy, politics and markets, and current themes in political economy.

**INTS 4372 Great Books in Political Economy (4 Credits)**

This course investigates several contemporary approaches to Political Economy, ranging from institutionalist to Marxist, anti-essentialist, and (postmodernist) feminist thought. Rather than attempt to survey quickly a lot of literature, we carefully read a limited number of influential (and provocative) texts that present a range of perspectives with which most students are largely unfamiliar. These are very challenging texts, and students must be prepared to spend a good bit of time on the assigned readings weekly.

**INTS 4379 Gender and Development (4 Credits)**

This course is concerned with how and why gender matters in outcomes and impacts of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of development planning. Beyond these practical implications, the course engages theoretical and ideological underpinnings for the gendered structures of economic, political, and social power encountered in a wide range of economic and social development contexts. Throughout the quarter, the class examines interactions among structural and cultural (including ideational) factors that together comprise and construct gendered environments. Structural and cultural factors are, at the least, mutually reinforcing, and may be mutually constitutive. The class interrogates the ways in which each set of economic and social transformations broadly encompassed within a human-rights or human-development approach to international development. The class also engages interacting dimensions of change, including economic, social, political, physical environmental, and human biological dimensions. The class explicitly examines all interactions across scales from global to local. If we were looking for a label for this approach, it could be called "gendered political ecology." We could also use a term coined by Dianne Rocheleau and others, "feminist political ecology," which suggests the need to examine the responsibilities, freedoms, and control of resources, together with the varying forms of agency, strategy, and tactic deployed by women (often in partnership with men) to redress these inequalities. The class considers numerous cases from the Global South, and some from the Global North. These case studies immerse us in the diversity and complexity of gender and development interactions and in the "grounded agency" (Radcliffe 2006) through which women and men attempt to secure livelihoods – that is, "making a living and making living meaningful" (Bebbington 2000) – to enjoy long and healthy lives, and to participate in full citizenship. These cases also illustrate myriad patterns of gender construction across ethnicity, class, age, marital status, and other differences among women and men. This is a policy-oriented course. The class explores the ways in which the gendered division of labor and resources, and the socio-cultural construction of masculinities and femininities, influence perceptions, formulation, and implementation of development policies and practices. The class traces the differential impacts of development policies and initiatives on women, men, and gender relations in the developing world as well as efforts to target women through more gender-sensitive development initiatives. Ultimately, this course considers how ideologies and institutions of global development might yet enable women's empowerment and facilitate equity in a deeply unequal and interconnected world.

**INTS 4384 Middle East and U.S. Security (4 Credits)**

The course will examine current US strategies toward the Middle East, terrorism, and how Homeland Security in US will respond.

**INTS 4391 Financial Management and Fundraising of Non-Profits (4 Credits)**

This course will introduce students to the legal, governance and financial structures that enable non-profit organizations to function effectively. It will also provide a practical orientation to financial management issues, such as budgeting, financial reporting, and independent audits. Finally, a comprehensive presentation will be given of the fundraising methods needed to sustain the viability of non-profit organizations. These methods include: annual campaigns, direct mail, special events, major gifts, corporate fundraising, foundation grants, and planned giving. The course combines exploration of the general conceptual issues with an emphasis on practical "how-to's" and skill building.

**INTS 4394 The Organizational Psychology of Non-Profits (4 Credits)**

Nonprofit management issues and techniques looks at current NGOs and issues in working with corporations.

**INTS 4397 The Environment, The Economy, and Human Well-Being (4 Credits)**

In this course we will explore the role of the environment plays in society and the determination of human well-being, and how this can be addressed from an economic perspective. A core premise of the course is that the human economy is embedded within the broader context of human society, which in turn is embedded within a natural environment. The natural environment provides a variety of goods and services, which, through interactions between the environment, individuals, and society, contribute to human well-being. Some of these services are directly used by people. Others contribute indirectly by allowing for the continued provision of other services. As such, any discussion of human well-being and development that ignores the natural environment is inherently problematic. We will specifically adopt an economic perspective, but one that goes well beyond that of conventional neoclassical economics.

**INTS 4399 Issues in Global Economics and Financial Security (4 Credits)**

This course is for Korbel in DC participants only. The course discusses global economic and financial security issues through the prism of the current crisis and its aftermath. We begin by developing the analytical framework and then applying it to key countries/regions. We consider the causes, the policy responses and prospects. We look at ways of ensuring global monetary and financial stability, including appropriate policies to ward off financial crises and asset prices bubbles. Other key topics, including food and energy security and the role of finance in promoting development, are also discussed as time permits. The focus is on applied economics and finance, and their importance as analytical tools in policy discussions on economic security and development. This course is less narrowly technical, more policy and political economy oriented, but nonetheless appropriate for students concentrating in global markets, development, finance and trade. These are a few guest speakers on special topics, in addition to answering questions about career choices and professional development.

**INTS 4404 Cities, Security, and Health (4 Credits)**

This course will present a framework to analyze the impact of urbanization on human development and security in a comparative context of major urban centers in the developed and developing world. It will provide a practicum for utilizing cross-disciplinary methods and perspectives to address specific challenges to urban and human development. We will examine urbanization through a framework of human development, environmental health and security, and explore how public policy and planning can create short- and long-term impacts on multiple outcomes.

**INTS 4423 Introduction to Epidemiology (4 Credits)**

Decisions and policy related to global health are based on data from various disciplines such as demography, medicine, and epidemiology. Therefore, it is crucial to correctly understand and interpret what health data and the data in general tell us. This course provides the knowledge and skills required to critically assess data, and understand both strengths and limitations of data and research. This course covers the basic principles and concepts of descriptive and analytic methods in epidemiology and their application to research and practice in public and global health.

**INTS 4427 The Political Economy of Sustainable Development in Africa (4 Credits)**

This course introduces the political economy of sustainable Development in sub-Saharan Africa (SSA). It uses a multidisciplinary approach that draws on literature from development economics, international relations, comparative politics, sociology, and history, as well as a broad range of country case studies. We engage with the main theoretical and empirical debates on sustainable economic and human development in SSA and examine a diverse range of country case studies. The topics covered include past and current political and economic conditions for economic growth and the improvement of human welfare levels, sustainable agricultural development and governance of natural resources, increased resilience - socially and economically - to rapid environmental change, and the role of foreign aid in African development. We explore the region's integration into the global political economy and examine the role of the state in Africa's development today. The course helps students to understand the major development challenges facing African societies today by illuminating patterns as well as diversity in development trajectories across the region.

**INTS 4435 Health and Development (4 Credits)**

Looks at how health status of populations affects culture and environment, and also how successful development affects health.

**INTS 4437 American Public Opinion & Foreign Policy (4 Credits)**

This course examines American public opinion and its impact of foreign policy. The course begins with an investigation of what is public opinion in general and how it is collected, analyzed and used. The primary sources of American public opinion data and analyses are identified. The course proceeds to outline the controversies of American public opinion related to foreign policy decision-making using historical perspectives and the most recent challenges from the first Iraq War to the Arab Spring. Although foreign policy is often a secondary issue for the public compared to domestic issues, in recent times it has been mostly responsible for the transition from a Republican-dominated era to the Democrats' ascendance. A series of principles that have informed practitioners and foreign policy experts concerning American opinion related to foreign policy is examined and affirmed or debunked. Also, media and its persuasive power in opinion formation are considered. At the conclusion of the course, students should be familiar with a selection of foreign policy challenges that America has confronted in the modern era, the role of public opinion in the national decision-making and the existence of guiding principles of public opinion and their exceptions.

**INTS 4438 International Public Opinion and Foreign Policy (4 Credits)**

This course examines international public opinion and introduces the major international opinion trends that impact foreign affairs. The course first reviews international public opinion worldwide, then by major regions and finally a selection of leading countries. The theoretical question is how public opinion influences foreign policy in countries around the world, and if and when it does, under what conditions. Also, how international opinion affects American foreign policy, including the views of foreign publics toward America and its policies, is also examined. The course begins with an investigation of the history of collection and diffusion of international survey research, the quality of the data and the techniques used to collect it. The relationship of public opinion research and democratic government and media freedom is examined. The second part of the course outlines some of the public opinion benchmarks, their variations and similarities among countries and regions, and their change over time. A variety of the best sources of opinion data are used. Benchmarks include: level of satisfaction with the direction of own nation; satisfaction with and preferences for form of government; satisfaction with and preferences for economic system, the role of government intervention and entrepreneurial values; nationalism and approach to neighbors; attitudes toward Americans, American leadership and foreign policy; and impact of cell phones and Internet on opinion formation and collection. The course's orientation is both from an American foreign policy perspective and from the perspective of key international organizations, such as the UN, OAS, EU, etc. At the conclusion of the course, students should be familiar with the history and sources of international public opinion research, the major similarities and differences in international and regional public opinion, and the impact that it has on both American and international, multinational organization foreign policy decision-making. When available, there are guest speakers concerning the impact of public opinion on foreign policy decision makers.

**INTS 4447 Making of Chinese Foreign Policy (4 Credits)**

This seminar course examines and analyzes the making of foreign policy in China, a rising power in the 21st-Century. We look at and identify major driving forces behind China's foreign policy-making, including ideational sources (historical legacy, strategic culture, communism, and nationalism), domestic and institutional sources (foreign policy making institutions, elite politics and key players), and international sources (international system and regimes). We also examine China's strategic relations with major powers and its Asian-Pacific neighbors. This course is aimed to equip students with sophisticated understanding of the ongoing debate about the role that a rising China has played and will play in world affairs.

**INTS 4450 Democracy and Militarism in Latin America (4 Credits)**

Many note that even as democratization has taken place throughout Latin America, there has been a persistent and evolving role for the military, police and private security forces in many cases. The purpose of the class is to explore this apparent contradiction by examining the various internal and external pressures that have come to bear on these societies. Through approaches derived from comparative politics and international political economy we study domestic factors such as interest groups, political parties, social movements and governing institutions on one hand, and the role of international relations and organizations on the other. From this standpoint, the state becomes a mediator of internal and external pressures and is shaped by these pressures in turn. In the first half of the class, we specifically apply institutions, political realist, class analytic and market globalization perspectives to the study of the military. In the second half, we look at the interplay between democratic development and security issues in a changing global environment. This includes a study of the nature of democratization in Latin America, so heavily applauded by scholars, politicians and others, the impact of the truth and reconciliation process that emerged after the bureaucratic-authoritarian era, and the role of civil society and international organizations. In the final part of the class, we turn to the issue of citizen security amid high levels of crime, gang activity, and drug trafficking with a focus on Central America.

**INTS 4453 Political Economy of Latin America (4 Credits)**

In any part of the world, the earth and its resources constitute the fundamental framework of economic development. The study of development in Latin America offers an opportunity to study the interplay between the forces of economic development and efforts to restore and maintain ecological balance. In the first part of the class, we consider the legacies of colonial rule and foreign intervention including uneven patterns of land ownership, political and social divisions, tension between democratic and authoritarian forms of governance, and a central role for social movements in the struggle for economic justice. We also discuss the current era of export-led development, which has prompted a surge in mining, lumbering, and other forms of extraction, along with environmentally disruptive commercial projects. While increasing economic growth and facilitating some of the largest fortunes in the world, this development model is currently devastating the environment, human health, and the prospects for community survival in many places. On the other hand, communities, indigenous groups, and civil society organizations are challenging this model by advancing an alternative that stresses ecological balance.

**INTS 4459 Global Business, Governance & Corporate Social Responsibility (4 Credits)**

In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. This course will dive into contemporary global governance mechanisms to better understand the opportunities and challenges that states, business, and civil society face when in engaging with issues such as global financial crises, labor standards, respect for human rights and the environment.

**INTS 4460 Politics of China's Modernization (4 Credits)**

After more than a century of decline and stagnation, China is reemerging as a great power in the twenty-first century. China's rise to the glorious has never been easy and still faces many changes in the year ahead. This course is designed to provide students with a comprehensive understanding of China's rise in the context of its political development. We examine how revolution, nationalism, communism and liberalism have all affected the development of modern China with a focus on the political dynamics of the People's Republic of China (PRC) and the politics of post-Mao economic and political reform. We start by analyzing the rise of the Chinese Communist Party and its state and nation building efforts in the early years of the PRC and move on to examine the Mao's failed socialist transformation and political campaigns (the Hundred Flow Campaign, Great Leap Forward, and the Cultural Revolution). The remainder of the course explores political dynamics of post-Mao economic and political reforms and the prospect for a democratic China. This course aims at equipping students with an analytical perspective for understanding contemporary Chinese politics.

**INTS 4468 Politics of Development (4 Credits)**

Course explores political factors and parties which affect developing nations and hinder new development.

**INTS 4478 Donald Trump, Democratic Decline and Authoritarian Populism (4 Credits)**

To affirm that on a global level, liberal democracy is declining and authoritarian populism is ascendant, is to state the obvious. This confirms a trend that Larry Diamond predicted ten years ago about a "democratic recession" that shows no sign of abating. What is most intriguing and in need of explanation is the decline of democracy and the rise of authoritarianism in liberal societies of the West, where democracy has long been established and consolidated. According to the 2018 Democracy Index (published by the Economist Intelligence Unit), the United States in the era of Donald Trump, is better described as a "flawed democracy" rather than a "full democracy." Similar trends are discernible in Europe, Latin America and Asia. How can we explain this development? What social conditions have produced this outcome and what are the implications for world order and the study of international affairs? Can the slide toward authoritarian populism be reversed? We will examine these questions theoretically, historically and comparatively.

**INTS 4483 Global Health in Practice (4 Credits)**

The purpose of the course is to prepare Global Health Practitioners for realistic situations utilizing practical tools and exercises forged from decades of hands-on experience. Heavy emphasis is placed on program design based on context, authentic dilemmas in implementation, critical components of leadership, and best practices of field operations management. No prior field experience is necessary to attend or to complete this course. The student will acquire practical knowledge about the following areas of health program design and management in the field: research and preparation, creation and implementation, along with team management and operational leadership. Students will develop detailed field perspectives, analyze the implications of their programs, and ultimately assemble their own personal toolkits to build for success. The intent is to develop a solid understanding of and to practice the usage of tools and skills for Global Health Practitioners to thrive in international and domestic programs.

**INTS 4484 Agriculture and Sustainable Development (4 Credits)**

This course provides an overview of world agriculture and an introduction to agricultural populations, politics, policy paradigms, and institutions. It contains modules in: the history of agricultural production for economic growth and food security; global distributions of (1) agricultural production regimes, (2) land (including historical and contemporary "land grabs") and other productive factors, and (3) uses of agricultural products for food, fuel, feed, fiber, and agro-based construction materials; effects of agricultural trade on economic growth, livelihoods, and food security; relationship between humanitarian food aid and agricultural production and food security; social organization of agriculture and related productivity and human development issues, with special attention to gender; environmental constraints to agricultural sustainability and agricultural constants to environmental sustainability (climate change, water demands and conservation, agricultural energy production and consumption, causes of soil loss and degradation); technological change and innovation in agriculture; and culture and agriculture.

**INTS 4485 International Trade and Economic Negotiations (4 Credits)**

This course is for Korbel in DC participants only. The purpose of the course is to explore the challenges confronting international trade and economic policy, as well as current negotiations designed to address these circumstances.

**INTS 4492 Health and Humanitarian Aid (4 Credits)**

According to the World Health Organization, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." In order to address health in humanitarian settings we must therefore respond to a range of needs and consider the diversity within affected populations. In this course, students will have the opportunity to explore some key sectors of humanitarian aid and how they relate to health. By following a specific ongoing crisis throughout the quarter, each student will have the opportunity to gain a better understanding of the particular challenges inherent in humanitarian assistance and to analyze how the "theory" is actually implemented in practice. Whether the student's future is in the field or at headquarters, internationally or at home, he or she will likely need to quickly and critically review and summarize available information in order to inform decision-making, and students will have ample opportunity to develop this skill during the quarter.

**INTS 4493 Humanitarian Aid in Complex Emergencies (5 Credits)**

This course will focus on the evolution of humanitarian actions, in the context of the international system, since World War II. Complex humanitarian emergencies will be the focus. Themes will include: disasters, conflicts and humanitarian action; the political economy of conflicts and humanitarian aid; civil-military cooperation; and the impacts of humanitarian intervention on the delivery of aid. Vulnerability analysis, capacity analysis, and risk analysis will be key tools. The structure and function of EWS (early warning systems), especially in the context of famine, also will be key.

**INTS 4496 Field Operations for Humanitarian Assistance (4 Credits)**

Within a disaster response, various interrelating factors determine the ability of the humanitarian community to adequately respond. From coordination among governments, donors, non-governmental organizations (NGOs) to internal working components within an agency that drive programmatic support, the realm of humanitarian operations is a complex system that should be understood by anyone with an interest in supporting relief efforts. The main focus of this course is concentrating on the practical, specific systems that drive field operations - namely security, logistics, finance, monitoring and evaluation, human resources, administration, and advocacy that support program planning and implementation. Through understanding these components, the challenges that are encountered, and how each interrelates within an organization and the wider response community students gain a balanced understanding of humanitarian operations. While each emergency response comes with varying contextual challenges, the humanitarian imperative mandates the relief community to respond in a neutral manner based on need. Doing so, places strains on the operational systems that need to be overcome to provide quality interventions. Through this course we take an in depth look at both theoretical and practical ideals for humanitarian assistance.

**INTS 4497 International Campaign Management (4 Credits)**

This course will examine the principles of political campaign management and their application in a number of international political, public affairs and human rights campaigns. It will be an introduction to the tools of political campaign management: message development, survey research, audience targeting, paid and earned communications, fundraising and organizational structure. Case studies of campaigns in countries such as Sweden, the UK, and Australia will be used as examples of these techniques. Class will be comprised of lectures, discussion and some simulation exercises. Efforts will be made to bring outside specialists and experts to the class or by teleconference. Readings may include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management.

**INTS 4499 Evolving Global Security Landscape (4 Credits)**

This course is for Korbel in DC participants only. Change brings with it challenges—at the individual, organizational, and systemic levels. It involves behaviors and cultures with often deep-seated traditions. This course will explore the scope and magnitude of the transformational forces at work in the U.S. and to a lesser extent the global security and defense establishments. By its nature the course will be about peace and war—how the nation goes about the business of preparing, equipping, and training itself to deter and if necessary to fight traditional wars and the new kinds of challenges that might lead to armed conflict as well as shaping the post war environment for an enduring peace—but do NOT think about this as a linear process. It will also be about sociology, bureaucratic politics, the role of the media, economics, health care, power.... Most of all this semester it will be about the transformational nature and effects of ROBOTICS, AUTONOMOUS SYSTEMS, and ARTIFICIAL INTELLIGENCE (RAS/AI) on security and the budget pressures on the national security/ defense budgets—and where to consider taking acceptable risks—geographically and functionally and force posture wise (for example, do we need a \$1 Trillion nuclear modernization program; or 2400+ F-35s; or 12 carrier battle groups?). THIS AGENDA NOW IS BEING SHAPED GOVERNMENT and the PRIVATE SECTOR—COMMONLY KNOWN AS THE 3rd OFFSET. (The roots of this can be found in Secretary Hagel's 214 Innovation Initiative. <http://www.defense.gov/News/Article/Article/603658>).

**INTS 4500 Social Science Methods (4 Credits)**

Prerequisites: The course presumes a basic competence in statistics, social science, international relations, and comparative politics. This is an advanced, fast-paced course that seeks to provide students with a sensitivity to research design choices, both for designing their own projects and as critical consumers of the works of other scholars. The course is primarily intended for Ph.D. students at the pre-dissertation prospectus stage as well as for advanced MA candidates pursuing thesis projects. The course content covers diverse methodological approaches from the discipline of Political Science as well as methods from other fields. The course will cover topics including: research questions and 'puzzles' in political and social science; causality and causal inference; theory construction; measurement; the comparative method; case selection; and quantitative and qualitative methods. Students should enter the course with several research interests in mind since the final project for the course entails producing a research design that could serve as the basis for a future prospectus. The class sessions will include a formal introduction to different methods, a discussion of readings, and work-shopping of student work. We will also informally discuss tips and tradeoffs in the academic profession and for publishing. The class meetings will rely heavily on student participation and peer critique. At the end of the course, students should be able to identify the strengths and weaknesses of different research designs.

**INTS 4501 Comparative Politics in the 21st Century (4 Credits)**

INTS 4501, Comparative Politics: States and Societies in the 21st Century, is a core course in the graduate program curriculum of the Josef Korbel School of International Studies. The course explores theoretical perspectives and policy-relevant knowledge in comparative politics, a sub-field of contemporary political science that considers the ways in which states and societies govern themselves or "allocate value" in countries around the world. Governance is arguably the pivotal variable in the realization of contemporary global development and human security objectives. The principal question the course addresses is: What is "governance," and how does it serve to work for, or against, peace and development in countries around the world?

**INTS 4502 Comparative Revolutions (4 Credits)**

An intermediate course focused around the major revolutions that occurred in England, France, 19th century Europe, and in Russia and China during the 20th century. Emphasis is placed on historical facts, key theoretical debates generated during the various social upheavals, and diverse interpretations seeking to understand the nature and causes of revolutions and their impact on societies. Prerequisites: INTS 4702.

**INTS 4516 Major Diseases in Global Health (From Pathophysiology to Action) (4 Credits)**

As future global health practitioners and policy makers, it is imperative that we each have a complete and solid understanding of the mechanisms, physiology, epidemiology, transmission patterns, and clinical impact of the major diseases affecting global health. How and when does a person transition from simple HIV infection to full-blown AIDS? Why is dracunculiasis so readily amenable to eradication whereas filariasis is not? For what populations is co-infection with HIV and TB or HIV and malaria so critical and why? On the individual patient level, how and why do certain diseases manifest so differently in resource-poor versus resource-rich or urban versus rural settings? Who are the vulnerable populations and how does disease impact them physiologically? When and where would specific program interventions work over other programs and for whom? In this course, the students develop an understanding of the etiology, agents, vectors, burden, methods of detection, basic treatment complexities, and life cycles of major diseases impacting the world. Specifically, this course details HIV/AIDS, TB, malaria, maternal/reproductive health, some protozoa, helminthes, and major parasites, chronic disease such as cancers and diabetes, and violence/trauma. As there is no shortage of amazing and interesting diseases globally, students learn a sound method of inquiry with which to address and disease process. Students also apply this method directly toward program analysis, and in the development of teaching sessions for community health workers.

**INTS 4517 Politics of Deeply Divided Societies (4 Credits)**

This course focuses on the politics, conflicts, and conflict transformation approaches to deeply-divided societies. While ethnic, religious, and other types of communal conflict have been around for millennia, since the decline of colonization, and especially since the end of the Cold War, such struggles seemed to have exploded onto the world scene. This course focuses on these "contemporary" ethnic, religious, racial, and other communal conflicts to better understand why and how such conflicts develop. We then examine both theory and practice on what can be done to ameliorate or remedy them. Units focus on the nature of identity and identity politics; the use of political violence to pursue identity or nationalistic goals, and nonviolent approaches to identity conflicts. We then look at alternative political and conflict-transformational approaches to such conflicts including frameworks for living together (such as consociationalism, federalism, and power-sharing, and scenarios for separation (partition or succession). We also look at the negotiation, mediation, and other peace processes that have been utilized to try to accomplish such ends, and examine which have worked better than others and (to the extent possible) why. Readings will include both case study and theoretical material. Students are required to make several short class presentations, participate actively in discussions and exercises, and prepare and present a term paper analyzing one currently destructive deeply-divided society, analyzing the cause of the current unrest, and possible remedies to that situation.

**INTS 4521 Cultures of Development (4 Credits)**

Explores cultural dimensions of economic and social change from perspectives of actors who create, promote, negotiate, and resist different agendas from global to local.

**INTS 4522 Philosophy of Social Science (4 Credits)**

What is the nature of social science and the knowledge that it produces? This course, which is intended to complement INTS 4500 Social Science Methodology and INTS 4010 Epistemology, it introduces students to the leading mainstream perspectives on the philosophy of social science. Special attention is given to Positivism and Post-Positivism, Post-Structuralism, Pragmatism, and Scientific Realism.

**INTS 4525 Religion-State Relations in Comparative Perspectives (4 Credits)**

This seminar course provides an introduction to the key readings, concepts and debates on religion-state relations. While the focus is on the Western political tradition we explore the case of India and the Islamic world at the end of the course. Themes such as freedom of belief, the role of religion in the public sphere and debates over the political construction, location and meaning of secularism are examined.

**INTS 4526 Modern Islamic Political Thought (4 Credits)**

This seminar course explores the key writings of Muslim thinkers who have shaped Islamic political thought during the 20th Century. We begin with the writings of Jamal Eddin Al Afghani and his Egyptian disciple Muhammad Abduh. We then proceed to read from the selected writings and speeches of Hassan al-Banna (founder of the Muslim Brotherhood), Sayyid Qutb (radical Egyptian Islamist theoretician), Adul Ala Maududi (Pakistani Islamic thinker and founder of Jamaat-i Islami) and Ayatollah Ruhollah Khomeini (leader of Iran's 1979 Islamic Revolution). We also investigate some of the writings of Islamic reformist thinkers such as Abdolkarim Soroush, Nasser Hamed Abu Zayd and Khaled Abou El Fadl. The emphasis in this course is on understanding the historical and political context which has shaped Islamic political thought during the 20th Century.

**INTS 4534 Topics in Middle East Politics (4 Credits)**

This is an advanced topics course centered on major issues in Middle East politics. Students should expect to read one book, as well as relevant scholarly reviews, each week, and should expect regular analytic writing assignments. This class is designed for students who seek a deeper grasp of the Middle East and a more refined understanding of the politics and history of this region. This is not an introductory course on the Middle East, Islam, or the Arab world and previous course work is assumed. Those uncertain about their status should consult with the instructor before enrolling.

**INTS 4536 Economics: Fundamental Knowledge, Global Applications (4 Credits)**

This course provides an introduction to the methods used to analyze contemporary global economic events by examining the environment in which individual economic agents interact. We analyze what the economic problem is, how consumers and business firms make economic decisions, how markets work and how they fail, and how government public policy decisions affect individual and aggregate behavior in both domestic and international markets. A special feature of the course is the application of economic principles to real world problems.

**INTS 4539 Food Security in the United States and the World (4 Credits)**

This course discusses: food security in the United States (community food security, food insecurity); stunting and chronic nutritional deficiencies; global water crisis; land degradation; land deals; climate change; dictatorship and kleptocracy; economic approaches (westernized view, food justice, food sovereignty); World Food Summit; achieving food security (the agriculture-hunger-poverty nexus, biotechnology for smallholders in the (sub)tropics); risks to food security (fossil fuel dependence, genetic erosion in agricultural and livestock biodiversity, hybridization, genetic engineering and loss of biodiversity, price setting, treating food the same as other internationally traded commodities); access to basic food supplies; infant feeding; determining nutritional status; supplementary feeding; therapeutic feeding; malnutrition, nutrient requirements and sources.

**INTS 4549 Managing Microfinance: Balancing Business with Development (4 Credits)**

This course builds on the topics in "Introduction to Microfinance" and delves more deeply into the challenges of managing microfinance institutions (MFIs) and effective social entrepreneurship. How do MFIs make sure they stay in business (with good risk management and financial management) and make sure they have real social impact? How can they innovate financial services and other market-based solutions that create lasting economic opportunity or social change? Whether a market-oriented NGO or a socially-motivated business, an MFI needs a clear development strategy, a clear business strategy, and the operational tools to implement both strategies well. Regardless of legal structure, both NGO and for-profit MFIs need good management and financial information to meet both sustainability and social goals. Whether used for poverty alleviation and or banking services for the poor, there are shared characteristics among successful microfinance organizations, as well as common pitfalls and challenges. As organizations figure out the "business" side of providing loans and savings, they also need to figure out which development services have greatest benefit for clients, choose strategies for social change (e.g. basic education, health care, business skills), and assess how well those strategies are working. For example, large-scale MFIs in India and Latin America have been very successful financially, but have only recently focused on their social impact. Smaller NGOs may serve the poorest and provide many development services, yet struggle to find a viable business strategy and sustainability. MFIs share challenges faced by many development organizations: (1) How do we balance our financial and impact goals; (2) How do we choose where to invest resources for greatest impact (e.g. financial services for many or in-depth assistance for fewer?); (3) What information do we need to ensure financial transparency and accountability; (4) How do we assess social and financial performance to keep improving our business strategies? This class will use weekly readings and case studies of specific microfinance organizations to: Illustrate business challenges and specific business risks in microfinance; Review basic financial statements and key financial measures to assess financial performance and risk, for both for-profit and non-profits; Review different approaches to answering the question "are we making a difference?"; Analyze management situations of "too much profit" and "too much development"; Compare pros and cons of for-profit and NGO legal structures, and implications; Discuss governance and boards of directors, compare and evaluate approaches; Highlight examples of social entrepreneurship powering market-driven change in microfinance and other areas (mobile banking, small-scale solar electricity, etc). Cases include Adelante Foundation, BRAC, Fonkoze, Kenya Women's Finance Trust, ACCION's Center for Financial Inclusion, and others. The first half of each class focuses on a real MFI case study to highlight the issues and understand the topic; the second half on the financial implications of these risks, the financial principles involved, and how well the tools work. Students gain a better understanding of financial statements, MFI operations (with case studies from around the globe), and credit risk, as well as key principles of financial management and good governance.

**INTS 4555 Professional Communications (4 Credits)**

This course is designed to help graduate students improve their ability to communicate professionally to a variety of national and international/ intercultural audiences for a variety of purposes, and to manage through communications. While INTS 4557, Cross-Cultural Communications, focused heavily on immersive experiences in verbal and non-verbal communication in professional, cross-cultural scenarios, this course will use professional writing in cross-cultural contexts as its starting point. Students will learn the tools they need to adapt their writing in varied professional, cross-cultural contexts and to translate it into effective verbal presentations in these settings. In particular, students will develop an awareness of professional language, written conventions, and multimodal communication, including verbal, written, and digital/visual modes. Students will learn skills in rhetorical analysis, which will enable them to adapt to multifaceted professional writing scenarios in the future. They will apply these skills in the context of case studies and other examples that will address challenges professionals must problem-solve using written communication. All students will complete a professional writing portfolio by the end of the quarter with the goal of being more prepared for the job search.

**INTS 4557 Cross-Cultural Communications (4 Credits)**

This course is designed to prepare graduate students for careers as international professionals by focusing on the cultural factors that influence communication in international relations as well as the rules that proscribe and prescribe behavior. The course emphasizes culture and will explore how different cultures: perceive and interpret their surroundings, and create and communicate a shared, cultural construct of reality and identity; develop unique communication rules; and evolve culture-specific verbal and non-verbal communication behaviors. Students will immerse themselves in a particular culture (its history, values, world views and associated thought processes, religion, gender and social perception, language, and nonverbal communication) and research its communication conventions, practices, standards, core metaphors, terms, cultural premises, and meaning systems. Students are expected to demonstrate a critical and informed awareness of cultural content and identity, as well as the communication imperatives and procedural issues in their country through class presentations, discussions, and a long paper. The course rationale is that cross-cultural communication is inevitable, and without an understanding of the cultural communication imperatives, it is very difficult, virtually impossible to understand, work with, manage, or influence individuals from another culture. The course will involve theory and proven models, but will primarily focus on cultural immersion, skills development, practical applications, and case studies—exploring how culture both influences and reflects communication dynamics, how to communicate effectively in a multicultural environment, and how to manage and resolve cross-cultural conflicts.

**INTS 4569 Migration (4 Credits)**

Migration is a fundamental feature of our lives. Indeed, every aspect of our civilization and our self-conception is shaped by the exodus of all humans from our origin as a species in Southern Africa 200,000 years ago. In our own era, the aging of western populations, the rise of new economic powers, and dramatic improvements in human capital have given rise to an era of labor migration unparalleled in magnitude and diversity, though not entirely unique. New technologies have risen to facilitate further migration, enable the transmission of resources and knowledge across borders, and create new transnational patterns of residence and livelihood that challenge our notions of nation, identity, and even the very meaning of the term migrant. To put it simply, migration is the human face of our modern era of globalization, entailing incredible costs, risks, and returns for migrants along with important impacts for host societies, and the global system. Migration comes in many varieties in terms of destruction, permanence, and level of coercion, yet common theoretical, empirical, and policy unite these different forms of mobility. This course offers a holistic view of the migration process from multiple perspectives, at multiple levels of analysis, and on multiple aspects of our world today. As a uniquely individual behavior, migration has proven over time to be notoriously unfriendly to policy, which is often ineffectual or even counterproductive. We explore this cross-cutting concern through case studies illustrating the promise and pitfalls of migration policy.

**INTS 4575 Systems Thinking for Social Scientists (4 Credits)**

The purpose of this course is to introduce students to systems thinking as an approach for understanding and analyzing real-world issues. In addition to introducing the basic principles of systems thinking, questions that will be addressed include: Why do systems behave the way they do? Why do systems resist change and often end up getting worse when we try to change them? How do you find points of leverage within a system? This course uses examples drawn from a range of issues across the field of international studies. In doing so, it illustrates how a systems perspective can allow you to see parallels between seemingly disparate issues. This course introduces both qualitative and quantitative approaches for analyzing systems and discusses the benefits and limitations of each. Quantitative, computer-based modeling is used in this course, but no background is required.

**INTS 4579 International Futures (4 Credits)**

Futures forecasting involved decisions about priorities. Decisions require forecasting the trajectory of a society with and without interventions of various kinds. This course involved students in the forecasting and analysis process. In the lab, students learn to use the International Futures (IFs) forecasting system. That system represents multiple issue areas (demographics, economics, energy, agriculture, education, health, socio-political, and environment subsystems) and is supported by a very large database. Students study the structure of each of these modules, learn how they represent the underlying subsystems, how they are linked to other subsystems, and what they tell us about the processes of change globally and in countries and regions around the world. Students use the system for forecasts and analyses of their own.

**INTS 4581 Introduction to Humanitarian Systems (4 Credits)**

The Humanitarian field has changed significantly since the founding, in 1863, of what is now the International Committee of the Red Cross. Since the early 1990s there have been efforts to improve coordination between humanitarian actors and to improve the quality of international humanitarian response. High profile humanitarian crises such as the Rwandan genocide, the 2004 Indian Ocean Tsunami, the Haitian earthquake, and the conflict in Syria have highlighted weaknesses in the system and spurred reform efforts. Through readings, class discussions, guest speakers, group work and individual assignments, students gain a better understanding of the development of humanitarian systems and policies and how these affect current humanitarian practice. Key debates in the humanitarian system are also discussed and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. At the completion of the course, students should be able to: Discuss the history of humanitarianism; Recall key components of the humanitarian infrastructure; Describe the humanitarian principles, their interpretation and application; Identify ethical issues which may arise for humanitarians; and discuss the implications for humanitarian practice of key emerging challenges.

**INTS 4583 International Protection in the Humanitarian Context (4 Credits)**

At the conclusion of World War II after witnessing the horrific and historic loss of life, and in an effort to save future generations from the direct impact of war and conflict, the Western powers created several important legal instruments to protect civilians. These instruments are largely derived from human rights, refugee, and international humanitarian law. These initial legal instruments were later combined with additional instruments, both regional and international in scope, and are collectively and cumulatively considered the legal framework for "International Protections." After sixty years of the progressive legal and theoretical development of international protection and its practical implementation, a slow but evident shift has developed over time. Theoretically speaking, a shift from the end of the Cold War's position of absolute sovereignty to the ideals of the 1990s and the "responsibility to protect" which developed in direct response to the failed efforts of the international community to protect in Bosnia, Rwanda and other conflicts. As a result of the changing nature of conflicts, confusing mandates, ambiguous definitions, and political will, we have witnessed the failure of international protection in numerous humanitarian settings.

**INTS 4591 Advcd Fundraising Workshop (4 Credits)**

This course compliments INTS 4391, in which an overview of non-profit fundraising - along with financial management - is given. In this course, we take an in-depth look at the major methods of non-profit fundraising, namely, annual giving, special events, corporate fundraising, grant writing, major gifts, and planned giving. The teaching methodology to be employed is that each 3 hour class session is, in effect, an intense workshop on a specific fundraising topic. During each class session, a fundraising professional from the community, who is actively engaged in the particular fundraising activity being discussed, joins the professor in leading the workshop. Due to the advanced nature of this course, enrollment is limited to those who have already been introduced to the major methods of fundraising through the previous completion of INTS 4391, the concurrent enrollment of INTS 4391, or previous fundraising experience or educational pursuit in the fundraising field that is judged by the professor to be sufficient to be an active participant in this course.

**INTS 4595 Civil Wars and International Responses: Evaluating Post-War Peacebuilding (4 Credits)**

Today, civil wars constitute the principle, realized threat to international security (measured in lives lost). This seminar critically explores the problems to international peace and security posed by contemporary civil wars and the efforts of international - primarily, United Nations - "peace building" missions to implement negotiated settlements aimed at substantially ending such wars and preventing their recurrence. The concept of peace building seeks to capture the complex, multidimensional task of implementing the terms of settlements to end war preventing the recurrence of war, and addressing the deep-seated causes of social conflict and deep divisions that gave rise to protracted armed conflict in the first place. Furthermore, the notion of peace building have been augmented by the concept of state building, which implies that the principle strategic objective of external efforts is to help develop and create legitimate, capable states that are able to realize the provision of security and human development and to manage future social conflict through nonviolent bargaining processes and institutions. The scope of the course includes the analysis of theories, concepts and empirical research in the analysis of post-war international interventions in civil wars and in-depth, student led evaluation of specific cases. Prerequisite: INTS 4495.

**INTS 4599 Ethics and International Affairs (4 Credits)**

This course examines the following: social "science" and ethics, power-rivalry and capitalism versus human rights and democracy, what are the dimensions of poverty, what role does the World Bank play, "laws of people," two classes of human rights (according to Rawls), national interest, and tolerance.



**INTS 4620 Introduction to Middle East Politics (4 Credits)**

According to 2017 Global Peace Index, the Middle East and North Africa are the least peaceful parts of the world. The instability from this region has gone global and is now destabilizing large parts of the entire world. Why? Answering this question is the focus of this course. The approach taken will be historical and comparative with an emphasis on the relationship between religion and politics in the Islamic Middle East. The politics of the Middle East today cannot be understood without some examination of the West's relationship with the region and the associated view of the Muslim Orient that grew out of this relationship. In light of this reality, the state system that has emerged in the region since the demise of colonialism will form a framework in which to understand the major themes of this course.

**INTS 4622 Global Governance (4 Credits)**

This course surveys a range of arguments about how, whether, and/or the conditions under which global or transnational issues are governed. It examines different ways of thinking about governance and the governance process. It unpacks the variety of authorities that govern transnational issues. This course also considers different arguments about how the variety of actors engaged in a particular issue affects to the amount and type of governance possible. The course is intended for both masters and PhD students.

**INTS 4624 Private Actors and Conflict (4 Credits)**

General approaches to conflict focus on violence between the military forces or states. The conflicts of the last two decades, however, involved a variety of other actors: private military companies training or fighting with armies, relief workers trying to mitigate the impact of conflict on non-combatants, environmental NGOs working to lessen the impact of conflict on endangered species, multinational corporations trying to continue their business dealings, paramilitary and/or other citizen groups trying to defend their private property or other rights, criminal networks working to exploit conflict for personal gain, and terrorist networks. How do these different actors behave in conflict situations? Does their presence alter the way conflict unfolds, strategies of conflict (and conflict resolution), and/or the prospects for long-term security (peace, stability and development)? How? How do we decide whether these actors are public or private? How do today's "private" actors in conflict compare with the past? Is this a new phenomenon or simply a return to what has been typical at numerous points in history? This course explores the questions presented by the variety of actors involved in conflict today, compare today's situation with the past, and examine the way states and non-state actors are coming to terms with each other in conflict situations.

**INTS 4625 East African Development and Human Rights (4 Credits)**

For our purposes, East Africa encompasses the countries of Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. This course begins with an introduction to the cultural richness and diversity of East African societies, with an overview as to how tribes, chiefdoms, and states function. Religious influences are noted. This history of development, as externally conceptualized, begins with the Berlin Conference of 1884/85 and the so-called "scramble for Africa." It features socio-economic and socio-political processes. 20th- and 21st-Century external development programs are covered, most recently exemplified by the former Soviet Union, the United States, and China. Principles of induced development and participatory development are contrasted. Regarding the latter, indigenous innovations are stressed. The history of human rights, as externally conceptualized, begin much later, with the 1969 refugee-related innovations of the Organization of African Unity (now, the African Union). The "classic" issues of tribalism, corruption, and resource exploitation are covered, as well as the "late-breaking" issues of food security, refugee repatriation, and child soldier rehabilitation. Conceptually and theoretically, the course is grounded in disciplinary understandings derived from cultural anthropology, political science, ecology, and history. Resource use, in the context of socio-cultural systems development, are foundational. Special projects are featured, exemplified by those involving University of Denver personnel in Kibera, Kenya (water and sanitation); Mai Misham, Ethiopia (literacy); and Juba, South Sudan (indigenous leadership). At the broadest level, examples are most often drawn from the water/sanitation, agricultural, and health/mental health sectors.

**INTS 4626 Civil Resistance (4 Credits)**

Civil resistance is the application of unarmed civilian power using nonviolent tactics such as protests, strikes, boycotts, demonstrations, without using or threatening physical harm against the opponent. This method of struggle occurs worldwide in places as diverse as Russia, Moldova, Serbia, Spain, Egypt, Iran, Maldives, the Niger Delta, the West Bank, Thailand, and Burma, among many others. As a consequence of the growing use of civil resistance, the foreign policy community has become interested in understanding the causes, dynamics, outcomes, and consequences of civil resistance campaigns. This course serves as a primer on the topic of civil resistance, introducing students to the primary texts in the field, as well as the policy implications of empirical research on the topic. This five primary goals of this course are to: (1) present leading theories and concepts for understanding civil resistance; (2) explore international history to evaluate theories of civil resistance; (3) apply these theories to analyze current trends and make predictions about future development; (4) provide students with opportunities to synthesize their knowledge in a major written assignment; and (5) allow students to deepen their knowledge about several historical cases around the globe.

**INTS 4630 Civilian Protection in Armed Conflicts (4 Credits)**

Studies of armed conflict tend to focus on the production of violence to the neglect of how civilians might instead be protected. In this course, we will study how to limit violence against civilians. We will begin with an overview of theories of violence and legal and ethical frameworks governing the use of force. We will then consider how various actors throughout society, from state actors, to international actors, to illegal arms actors, to NGO's, to civilians and their communities—the would-be victims of violence—can either promote or restrain the use of violence. We will also consider the conditions under which the protection of civilians is most feasible as well as research methods for analyzing populations and their protection strategies. In their final projects, students will analyze the threats of violence faced by a particular population and design appropriate protection strategies and policies to deal with them.

**INTS 4632 Qualitative Research Methods (4 Credits)**

This course provides training in ethnographic and engaged research methods while giving students the opportunity to apply their skills to the local Denver immigrant community. This class requires a commitment to doing fieldwork outside of the classroom and to organizational partners in the community. Students should expect to spend 3-4 hours a week in the field and 1-2 hours on their field note write-ups. Students will work on the Wage Theft in the Denver Construction Industry project being led by Professor Galemba in collaboration with El Centro Humanitario, a day laborer center in Denver. Or they may choose projects with Casa de Paz and the Colorado Immigrant Rights Coalition. Students will gain experience with participant observation, qualitative interviews, data security protections, qualitative data coding, analysis, reflexivity and positionality in research, and writing. The course culminates in a public presentation to share results with the community. Spanish skills are a plus, but are not required for all students.

**INTS 4633 Int'l Project Evaluation (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Evaluation course is to provide students with a better understanding of and practical tools for designing, implementing, and reporting project evaluations. In all cases, a good evaluation design that is well implemented will allow the project manager to identify supportable findings, conclusions, and recommendations. The recommendations from both performance and impact evaluations can be directed to decision makers to support changes necessary to correct project deficiencies or to provide lessons learned for designing subsequent development interventions. Project managers can also use community or stakeholder participation in the process to build evaluation capacity and to gain support for the results. More specifically, students will learn about similar approaches used by four organizations that evaluate project, programs, and policies—the U.S. Government Accountability Office, the World Bank, United Nations Development Program, and United States Agency for International Development (USAID). Each of these organizations has developed templates for evaluation design, use similar methods and techniques to collection and analyze data, and share common elements in the framework of their evaluation reports. Two of these organizations have protocols to contract out evaluations to other groups through the preparation of an evaluation statement of work (SOW) or terms of reference (TOR). In this course, students will have the opportunity to compare evaluation approaches and to apply these approaches in preparing evaluation products. Small student teams will produce an evaluation SOW patterned after USAID guidance and defend their design in a final presentation.

**INTS 4635 Civil-Military Relations (4 Credits)**

Who guards the guardians?" has been a long-standing dilemma in international politics. How can we make sure that military leaders enjoying the control of coercive power submit to civilian political authorities? How can military organizations be powerful enough to counter external threats without becoming themselves a threat to the political community they should protect? How can hierarchical institutions created to exert physical violence be compelled to respect human rights and democratic values? These questions lie at the heart of civil-military relations theory. Analyzing the different ways in which military organizations, political authorities and the broader society interact is crucial to understand political outcomes such as state-building, democratization and the outbreak of war. This course provides students with a comprehensive understanding of the problems surrounding civil-military relations. Besides looking at the theoretical foundations of the field, it offers a comprehensive overview of civil-military relations over time and across countries. Specifically, it focuses on some topical and yet poorly understood cases and phenomena, such as the impact of the rise of private military and security companies on control over the use of force and the role played by military in Middle Eastern countries such as Turkey, Egypt, Syria, Libya, and Pakistan.

**INTS 4642 Environmental Security (4 Credits)**

This course surveys the expanding literature on the complex interrelationships between the environment, natural resources, conflict, and human security. Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental. Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a source of conflict, ranging from "water wars" between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel. This course will survey the expanding literature on environmental impacts on conflict, as well as conflict impacts on the environment, and the potential for making co-management of valuable natural resources and wildlife a source of cooperation, rather than conflict, between communities and states.

**INTS 4644 Human Rights Research Methods (4 Credits)**

This course is about how social science research can be used as a tool to understand and promote human rights. The field of human rights is bedeviled by several challenging obstacles to research, including reporting bias, hidden abuses, missing data and politicization of the facts. To deal with these obstacles, we learn about various methodological tools and how they are applied for the analysis of special human rights topics. By the end of the course, students are equipped to compile and present information to highlight patterns of rights abuses and identify patterns of cause and effects.

**INTS 4646 European Integration: States in Transition (4 Credits)**

Not only have the global financial turmoil threatened by the Eurozone crisis and the negotiations of a trade agreement between the European Union (EU) and the United States made the study of EU integration increasingly important for students of International Relations. As a unique political entity distinct from both states and traditional international organizations, the EU remains an unidentified object, whose development has challenged the traditional paradigms of both international relations and political science. Besides providing an in-depth knowledge of a crucial political and economic actor, the study of the EU integration process, its drivers and its shortcomings will therefore enhance students' understanding of some of the most crucial theoretical debates underlying today's international studies. This course intends to provide students with a comprehensive knowledge of the politics and institutions of the EU, analyzing its development from its origins until the present day and beyond. It will do so by focusing on the following core issues: Firstly, it will briefly analyze the history of the EU, seeking to identify the rivers of the integration process and explain why, after the end of World War II, European countries have set aside their centuries-old antagonism and embedded themselves within an ever close political Union. Secondly, it will examine what the EU is and how it functions, analyzing its key institutions, the architecture of its system of multilevel governance and its policy-making processes. Thirdly, it will investigate some key consequences of European integration, focusing on topical debates such as whether and to what extent the shifting of national decision-making powers at the EU level has created a democratic deficit, what is the impact of EU enlargement on both the Union and the institutions, societies and economies of new member states and what have been the economic and political consequences of the introduction of a single currency. Finally, the course intends to engage students in a debate on what is the future of the European Union in light of the latest development brought about by the entering into force of the Lisbon Treaty and the economic and financial crisis suffered by Southern European member countries. Prerequisite:.

**INTS 4647 Critical Issues in International Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has undergone significant changes related to developments in global governance, lessons learned and relationships between agencies (UN/NGO), governments (donors, affected countries), as the nature of crises themselves the contexts in which they occur and actors involved in crisis response continue to evolve, the humanitarian system and those that work within it must contend with new challenges and critiques. Through readings, class discussions, guest speakers and assignments, students have the opportunity to gain a better understanding of the major emerging policy issues and internal and external challenges facing the international humanitarian system. The class discusses important debates in the humanitarian system and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. This course is aimed at those with an interest in humanitarian policy as well those who wish to explore the challenges that may face them as they prepare to work in the humanitarian field. Prerequisite: INTS 4581.

**INTS 4648 Theories of Security in World Politics (4 Credits)**

In the 40 years following World War II, the study of security assumed a divide between international relations (the politics between states) and domestic politics (the politics within states) and gradually became separated from studies of international economics. International or national security largely centered on one empirical and two different theoretical enterprises. The empirical enterprise explored the relationship between the US and Soviet Union, focusing particularly on deterrence and the effect of nuclear weapons. The theoretical enterprises explored the likelihood of conflict between states in different systems and scenarios (when does conflict occur? When is stability more likely?) and examined the causes and consequences for actors of pursuing different strategies (What determines which strategy states will choose and what are the consequences for security – i.e., war, conquest, security gain, security loss, etc. – of different choices). After the end of the Cold War debates about the meaning of security joined change in the prevalence of intra-state conflicts and growing attention to terrorism in ways that led many scholars to question the usefulness of assumed differences between international and domestic politics, and, to a lesser extent, between security and economics. Also studies of conflict and stability have increasingly focused on a variety of transitional and global actors that do not fall into the realm of the nation, the state, or even the "international" system at all. This course focuses on this post-Cold War security agenda. The class begins with a (rather old by now) debate over the definition of security, then consider the role of states and other actors and finally turn to a list of prominent questions. In examining these questions, the class reads studies based in a variety of explanations, research strategies and methods. Students are encouraged to think about prominent explanations that stretch across the questions in different weeks. Students should also consider the costs, benefits, and alternatives to the research strategies and methods that individual authors have chosen. While the focus is on the substance of debates in security studies, the professor hopes to also spend time each session talking about how to frame productive questions and research strategies. In the way of background, if students have never read Kenneth Waltz, *Man, the State, and War*, they are recommended to do so. It would also be useful to have some familiarity with some basic texts in political theory, particularly Hobbes, Machiavelli, Kant, and Weber.

**INTS 4649 Human Rights and the Middle East (4 Credits)**

This course is shaped in three parts; each focuses on a set of critical human rights questions drawn from different phases of the Arab uprisings. Part I focuses on the Arab Uprising and Promises of Human Rights Progress and asks: 1. What can we learn from past contagion of human rights struggles, while the class analyzes the Middle Eastern social transformation? 2. What are the main causes that shook the Arab Middle East? 3. What was/is the role of major social actors? Part II covers the Rise of the 2012 Islamist tides, which gained new momentums after the electoral victory of the Muslim Brotherhood in Tunisia and Egypt and asks: 1. Are these religious trends consistent with human rights efforts? What accounts for waves of contagious revival of religious fundamentalism in the Middle East and North African region before and after 2012? 3. What is the impact of religious fundamentalism and nationalism among Israelis and Palestinians? Part III analyses the Possible Paths of Democratization and Human Rights in the Middle East and explores: 1. What accounts for different Revolutionary Arab Paths? 2. Is there a human rights answer to the Israeli/Palestinian quandary regarding one or two state solution? What are the current and possible roles of external forces for the region (international and/or regional)?

**INTS 4650 Globalization and Economic Crime (4 Credits)**

This course explores the policy issues raised by international economic crime, a phenomenon that has mushroomed with globalization and now accounts by some estimates for one-fifth by value of all international commerce. But who gets to define "crime?" Are there standards applicable globally to all situations? Nation states, corporations, nongovernmental organizations and political advocacy groups have issued multiple and often conflicting definitions of acceptable and unacceptable behavior and have been free in affixing blame on other sectors. To assess the part played by economic liberalization in the increase of crime, readings focuses attention on the political, technological and economic factors that encourage criminal activity and on the direct and indirect economic costs of activities such as identity theft and counterfeiting; mislabeling and trade in illicit goods; political corruption; money-laundering; and securities and accounting fraud. The class discusses activities posing definitional challenges to policymakers, such as currency and commodity speculation, re-export, gray marketing and state sponsorship of organized crime. This class also looks at policy options available when state-supported criminal economic activity is deemed to violate peremptory norms, create a substantial domestic effect, or constitute an act of war. This course examines self-help programs such as due-diligence and know-your-customer rules as well as statutory regimes such as the U.S. Foreign Corrupt Practices Act, and the movement toward transparency and uniform financial standards.

**INTS 4652 Contemporary Issues in Refugee Studies (4 Credits)**

This course is designed to provide a stimulating interdisciplinary environment in which students explore contemporary issues in refugee studies. Through examination of relevant international instruments, research, case studies, agency policies and reports, students will begin to develop the skills necessary for understanding refugee-serving agencies and associated programs in large scale refugee operations. Specific emphasis will be given to recent developments in - refugee terminology, refugee status determination, urban refugee populations, refugee camps, durable solutions, and extremely vulnerable refugees. Throughout, the course will focus on humanitarian assistance and protection frameworks, including analysis of guiding principles and associated policies of refugee-serving organizations such as the United Nations High Commissioner for Refugees (UNHCR). The importance of reliance on refugee voices to frame the debate will also be emphasized. At the end of this course students should be able to integrate and apply knowledge of innovation policy and practice to begin to address contemporary challenges faced by humanitarian agencies working with refugee populations.

**INTS 4653 Political Economy of the Resource Curse (4 Credits)**

This course is about one of the more curious findings/non-findings in the history of economics and international relations; that valuable natural resources, such as oil, natural gas, and other mined commodities are not, in the main, associated with better development outcomes and may even depress long-run rates of economic growth and discourage democratization and effective governance. Common sense would seem to suggest that if one finds oneself sitting on a gold mine, then one should mine gold (or drill oil, as in the example above). But countries that have specialized in the production of extractive or "point-source" resources, such as mined commodities like gold, diamonds, and oil, tend to be poor, creating a nagging sense that specialization in extraction is a losing proposition in the global division of labor, condemning countries to be the "hewers of wood and drawers of water." This course briefly reviews the basic economics of the resource curse before turning to a discussion of its effects for deeper institutional determinants of long-run development outcomes: democracy, gender equality, state capacity, and civil strife. It then moves into the realm of interstate politics, examining the ways that resource wealth shapes the foreign relations of resource exporters and major importers, principally the United States and China. The last third of the class investigates both domestic and multilateral attempts to address the resource curse through policy interventions, including civil society-led good governance initiatives like the Kimberley Process and the Extractive Industries Transparency Initiative. This course presumes no deep knowledge of economics but will be of interest to students across the realms of security and development.

**INTS 4654 Sustainable Energy (4 Credits)**

Sustainable energy is much in the news and high on various policy agendas. It is the seventh of the UN Sustainable Development Goals and part of climate and energy policy for numerous national, state, and local governments. This course will examine the politics and policy involved making a transition to a more sustainable energy system. We will explore the history of energy crises, how they have opened opportunities for making changes to the energy system, and the gradual attachment of sustainable energy to environmental issues, most especially climate change. The course will focus on some of the problems and complexities involved in an energy transition, from technological barriers to the need for a just transition.

**INTS 4656 Power, Institutions, and Justice in Environmental Sustainability (4 Credits)**

Sustainability and environmental justice have become ubiquitous buzzwords in society today. We see them everywhere, from politics to popular culture and corporate strategy to grassroots activism. Through an interdisciplinary approach to environmental science, this course examines the relationships between power, institutions, environmental conservation, and environmental justice and explores how issues are defined as problems. The course will cover the theoretical and practical methods used in environmental policy to assist government agencies, from the local to the global, in addressing immediate and long-term environmental sustainability challenges. Particular attention will be focused on power asymmetries among diverse actors, the formal and informal institutions that facilitate or impede environmental sustainability and environmental justice, and how race, class, and gender impacts recognition, participation, and the distribution of natural resource benefits and harms. Students will examine social theories of "nature", as well as, a range of policy responses to address environmental inequities. Emphasis is placed on disadvantaged communities in the United States and the Global South. Theory will be complemented by real-world environmental controversies that will require group collaboration to produce in-class presentations and the completion of policy memos that engage students critically with the course material.

**INTS 4657 Environment & Crises (4 Credits)**

In recent decades, the relationship between the environment and human lives has been increasingly recognized, including the relationships between the environment and crises, so-called natural disasters, conflict, and related human migration. This course explores these relationships. It looks at aspects of local, regional, and international approaches at the nexus between humanitarianism and development, including preparedness, risk mitigation and responses to environmental crises, the impact of environmental factors including climate change on the nature and severity of crises, and the impact of humanitarian crises and responses on the environment. This course is aimed at those with an interest in environment and crisis-affected contexts. Students are not expected to have a background in crisis response and/or the environment.

**INTS 4664 Emerging Powers: Development in Brazil, India and Beyond (4 Credits)**

This course deals with two emerging powers, Brazil and India. We trace the political economy of both countries over time, and spend particular time exploring their historical trajectory, current emergence, challenges they face, and the significance of emerging powers for the international political economy. The course is organized around an understanding of their insertion into the international economy, the implications of international insertion for domestic transformation, and the politics of incorporating newly mobilized domestic social and political actors, especially as this plays out in existing political institutions. Students help define some areas of concentration for the course by identifying policy areas in which concentrated research will occur. This course takes an interdisciplinary approach by drawing on political science, economics, and sociology, and we are concerned to understand the potential for emerging powers to alter international relations, as well as the implications of different strategies of international insertion for domestic social sectors, especially those that have traditionally been excluded.

**INTS 4666 Civilian Protection Practicum (4 Credits)**

The harm to civilians in contexts of armed conflicts presents an ongoing challenge for humanitarian and defense practitioners. While there are no prerequisites for this course, it is designed as a follow-on to the introductory course on "Civilian Protection in Armed Conflict." The course will enable students to put their insights on the protection of civilians into practice. Students will undertake collaborative research projects with a variety of U.S. and international humanitarian and defense organizations. Faculty and practitioner mentorship will help students learn how to advocate for ethical and evidenced-based protection policymaking. At the end of the course, students will brief their final research products to the practitioner clients.

**INTS 4667 Humanitarian Simulation Preparation (4 Credits)**

What does it feel like to be part of a multi-sectoral team assessing needs and planning responses in an emerging humanitarian crisis? How do you use your expertise to support rather than suppress local knowledge and the work of communities and community-based organizations in a complex setting? This course will focus on how humanitarians assess protection and psychosocial needs in a crisis and prioritize and develop interventions while working in volatile and stressful situations. The course is aimed at those interested in working in humanitarian contexts. In line with efforts to "decolonize" aid, the course will emphasize more equitable frameworks and approaches to humanitarianism.

**INTS 4668 Political Economy of Energy (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is the connection between energy systems globally? What are the global and regional dimensions of the geopolitics and geoeconomics of energy systems? What are the linkages between control over energy sources and 21st century prospects for sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism in an age of global warming and climate change? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty, and inequalities in several different dimensions.

**INTS 4670 Gender, Security and Human Rights (4 Credits)**

This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently there has been increasing attention to the importance of "gendering" discussions of international security. For instance, UN Security Council Resolution 1325, passed in 2000, is widely seen as a landmark framework for ensuring women's inclusion in the post-war peace process.

**INTS 4671 Climate, Science, and Society (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate change is a complex international problem that challenges scientific and policy analysis. Its effects extend far into the future, are globally widespread, and impact many aspects of society and ecosystems. There are also substantial uncertainties in these effects and in how well different policies might work. As a result, the climate issue is ripe for political disagreement. This course will examine the kinds of analyses that underlie key scientific conclusions and policy arguments, as well as the role individual scientists can and do play in scientific and policy discourse. While some familiarity with the climate change issue will be helpful, the course does not assume that students have an extensive scientific background.

**INTS 4672 Environmental Peacebuilding (4 Credits)**

Natural resources and the environment can contribute to and amplify conflict, but they also represent opportunities for creating sustainable peace. This course will examine conceptions of peace, peacemaking and peacebuilding, and the insights an environment-centered lens can add. We examine peacemaking on environmental issues. We also consider three trajectories of environmental peacebuilding: technical cooperation, joint capacity building and dialogue, and joint and equitable resource distribution and management systems. Each of these has the ability to contribute to Positive Peace efforts throughout the conflict lifecycle—as preventive diplomacy, as confidence building and communication channels amidst conflict, and as post-conflict peacebuilding and sustainable development. Each approach in this new field could be strengthened through the consideration and application of relevant theory and research. This course also considers critiques of peacebuilding models and methods, and the push for better program MEL—monitoring, evaluation, and learning.

**INTS 4673 Climate Finance and Other Clean Energy Solutions (4 Credits)**

An introduction to climate finance and understanding its ability to advance renewable energy technologies and activities in the global context as a means of significantly reducing carbon emissions. This course will explore financing mechanisms and Green Banks. We will also learn how microfinance can help reduce vulnerabilities. The coursework will involve regular reference to Project Drawdown and specific clean energy technologies such as solar, tidal, wind, carbon sequestration, agroforestry, net zero building, microgrids, as well as other current innovations and their existing use and potential within the developing world. There will be several practitioners in the field serving as guest speakers for this course.

**INTS 4674 Water Policy (4 Credits)**

Water is a key resource for the sustainment of all life. Under many circumstances, it is scarce, too abundant, and inequitably distributed across groups in society and nature. This diversity of situations produces the conditions for the emergence of conflict among users, hence requiring the design of institutions to facilitate effective management. This makes water governance a complex but urgent issue to tackle. This class examines such institutions in a variety of levels –state, federal, and international- and analyzes how they affect water access and use. Students in the class will also engage in a careful examination of the sources of conflict and cooperation among water stakeholders on a regional and global scale. The main goal of the course is to foster the students' capacity to assess how water-related conflicts can be prevented through the design and implementation of relevant policies.

**INTS 4675 Advanced Topic: Defense and Security Policy Lab (4 Credits)**

This is an advanced topics course centered on International Security students gaining, developing, and practicing their professional skills (specifically research and analytics, integration of creativity, academic material, and analysis, peer to peer leadership and coordination, project management and collaborative tools, and communications) via engagement with material/techniques associated with as well as the actual development and execution of a group based professional grade defense/security policy analysis. While the class will contain some traditional academic elements to provide all participants with an enhanced tool kit of skills and analytic options, the bulk of the class takes place through the development of the group defense/security policy analysis executed by 6 person student Project Teams that will be developed through an iterative process over the course and then presented to a group of defense and security professionals for their appraisal. Through this process, security students will be able to get a sense of how real world projects are developed and executed as well as the challenges that confront the production thereof.

**INTS 4676 Insurgency/Counter-Insurgency (4 Credits)**

This course will begin with an examination of insurgencies, the evolution of counterinsurgency, and how the U.S. policy community debates and decides on counterinsurgency strategies. Through a review of case studies, current conflicts, and fundamentals of military tactics, students will learn how governments combat insurgencies with military force and negotiation, how foreign assistance affects each side, how intelligence gathering impacts the fight, and how different types of leaders can strengthen or weaken a force. At the end of the course, students will analyze a contemporary and historical insurgency, articulate and defend counterinsurgency strategies, and compare it to U.S. policy towards the conflict. Prerequisite: INTS 4735.

**INTS 4677 Introduction to Law, Foreign Policy, Politics, and Moral Theory in Human Rights (4 Credits)**

The authors of the American Declaration of Independence wrote: "We hold these truths to be self-evident: That all men (sic) are endowed by their creator with certain inalienable rights." That first authoritative claim that all human beings regardless of color, class, social status, ethnicity, political and religious beliefs, or location have in common a set of rights did not define or enumerate "rights." The definition implied was an indisputable individual and legitimate demand (with corresponding duties on the part of others) to be treated with respect and given space to shape a life in accordance with ability, opportunity, and will. Roughly a century and a half would pass before the first comprehensive enumeration: The Universal Declaration of Human Rights (1948) and another two decades before the aspirational declaration was translated into formal treaties (the International Covenants respectively on Civil and Political and Economic, Social and Cultural Rights). This course explores the processes by which the language of the Universal Declaration and the enumeration of rights embodied in the Covenants and other international agreements is interpreted, fought over, and applied (or not). Those processes are legal and political. They are suffused with discordant views about the obligations of states in relation to their citizens and the citizens of other states. They expose tensions among rights (for example, between freedom of expression and the obligation of states to outlaw speech tending to incite racial, ethnic, and other loathsome forms of discrimination, between religious freedom and protection from discrimination on the basis of religion [see the Colorado wedding cake case in the US Supreme Court]). Those processes occur both in the international arena and domestic ones. They engage domestic and international institutions, courts, parliaments, presidents, armies, civil society, and NGOs of various kinds. Threading through them are conflicting moral theories, national interests, ideologies, and raw inter-group competition and prejudices. Human Rights can be seen as a collective modifier as in "human-rights perspective." Human rights, after all, are a way of viewing all the great issues of our time including migration, cultural conflict, justifications for the use of force, interrogation of suspected terrorists, poverty and gross inequality, the limits (if any) of religious freedom, the rights of majorities, and those of minorities and indigenous peoples. All of those issues will be on the table in this course.

**INTS 4678 The Politics of Global Trade, Investment and Production: The Origins and Consequences of Open Border (4 Credits)**

The last half century has seen national borders opened to the multiple flows now characterized as 'globalization' – the movement of traded goods, capital and people, all of which deserve attention. But if the financial crisis alerted the world to the consequences of free capital flows some years ago, the consensus on free trade and foreign direct investment outside of the developed economies is only now being questioned in national politics, most recently and notably in the 2016 US presidential campaign. In that campaign, both candidates questioned the wisdom of the mega-trade deals – the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) – and one of them promised reverse the tide of outward US company relocation. The loss by the Democrats of much support among voters in blue-collar states affected by deindustrialization has forced a rethinking of both political strategy and policy orientation. The renewed salience of trade politics invites a number of questions, first about how the world managed the politics of surrendering to a large extent trade protectionism from the 1970s onwards, and second, how countries and regions have managed to govern an increasingly open trading order, both in terms of regulating the flow of goods but also in dealing with the domestic consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with the transnationalization of production, whereby older and new forms of foreign direct investment (FDI) have created an international web of supply chains within which the greater part of trade (so-called inter-trade) is now conducted.

**INTS 4679 Economic Statecraft and Diplomacy (4 Credits)**

This course explores how governments use international economic policy to achieve geopolitical objectives. We discuss the ways in which states and international bodies appeal to economic sanctions, foreign aid, and other instruments of economic statecraft in attempts to change the conduct of other state and non-state actors. The course will explore the use of a variety of policy instruments ranging from personal asset freezes and sectoral prohibitions on trade to wholesale trade embargoes and military blockades. We will review the effects of these measures on target countries, discussing the conditions under which sanctions can create incentives for targeted leaders to change their policies and when they can trigger political change. Other topics covered include the effects of sanctions on domestic economies and vulnerable populations, political use of foreign assistance, multilateral vs. unilateral sanctions regimes, international sanctions law, extraterritoriality and the ethics of imposing sanctions. The course will undertake in-depth case studies of the effects of sanctions in several sanctioned economies, including Iran, North Korea, Russia, South Africa, and Venezuela.

**INTS 4681 Modeling for Development, Environment, and Security (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment, and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of "traditional" development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward.

**INTS 4700 United States Foreign Policy (4 Credits)**

An intermediate course on issues and perspectives for evaluating American foreign policy. Topics discussed include theories of foreign policy; historical epochs in Superpower relations: the Cold War, Dente, and confrontation; America's role in the post-Cold War; war, peace, and trade in relation to U.S. foreign policy planning and assessment.

**INTS 4701 US National Security Policy (4 Credits)**

An intermediate course which examines the post-war history of U.S. policy and America's response to the post-Cold War environment. Current issues include alternative strategies in nuclear deterrence and arms control; and security policy toward the Third World, Europe and the Atlantic Alliance, and Japan. Prerequisite: INTS 4702.

**INTS 4702 Emerging Issues in International Security (4 Credits)**

This course focuses on contemporary challenges to global security. It seeks to familiarize students with the nature of these challenges and analytical tools with which to make sense of (and consider potential responses to) them. In the context of thinking about general issues, students learn about prominent individual instances (or "cases") of problems, think about problems through different theoretical lenses, and consider both logic and empirical evidence in evaluating different arguments. Beyond the substantive focus, the course also encourages students to develop analytical skills and their ability to communicate their analyses effectively.

**INTS 4703 Foundations of Security (4 Credits)**

This course will focus on the array of factors, options, and realities associated with the creation and execution of Strategy in order to achieve security objectives. The course begins with and centers on the classic works, concepts, and thinkers associated with strategy and then seeks to apply these foundational ideas to a range of current security challenges.

**INTS 4705 Democratization (5 Credits)****INTS 4706 Topics in Int'l Studies (1-4 Credits)****INTS 4708 Topics in International Studies (1-4 Credits)****INTS 4709 Topics in International Studies (1-4 Credits)****INTS 4710 Topics in International Studies (1-4 Credits)****INTS 4711 Topics in International Studies (1-4 Credits)****INTS 4715 Debates About Democracy (4 Credits)**

This is a course in the field of comparative democratization studies and democratic quality. We will cover from the political science perspective topics such as the transition to democracy, consolidation of democracies, and how and why democracy has spread around the world. We will also examine the debates on the virtues and perils of democracy and on the nature and quality of the resulting representative democracies. Through this lens we will also analyze the "democratic backsliding" observed even in well-established democracies during the last decade and a half, which has resulted in the proliferation of new hybrid regimes and other very problematic characteristics of present-day democracies. In this course, we will study many of the aspects that might influence the process of democratization and democratic backsliding such as: institutional design and functioning, political culture, democratic support and the structure of the party system and party competition.

**INTS 4720 Capital Markets in Africa (4 Credits)**

Capital markets – the buying and selling of equity and debt – are vital to the functioning of an economy. Using a comparative study of capital markets in America and Africa, we will explore how they work, and how inefficiencies and structural challenges can inhibit private investment and access to capital among middle and lower classes in emerging economies generally. The tools in this course will also allow students to assess the efficiency of capital markets in emerging economies throughout the world. The course comprises five modules: 1) Banking and microfinance; 2) Mortgage and housing finance; 3) Private equity (including venture capital); 4) Stock markets; 5) Mobile money. For each module, we will begin with a study of how the industry functions in the United States, which is widely regarded to have the most efficient capital markets. We will then compare the US model to markets in Africa, examining the structural and practical limitations that impede those markets in sub-Saharan Africa (and, by extension, other emerging markets). The course will not attempt a comprehensive analysis of specific African countries, although examples will be drawn from specific markets. Instead, we will focus on many of the structural challenges to the development of mature capital markets in sub-Saharan African countries (mostly excluding South Africa). We will explore questions such as, Can microfinance be profitable? Why isn't housing finance widely available? What types of "mobile money" systems are developing in Africa, and what are their business models? Why aren't there more IPOs in Africa? Class participation is important, as the subject matter will range beyond the readings.

**INTS 4722 U.S. Policy in the Middle East Since World War II (4 Credits)**

Various experts and commentators now claim that the U.S. is surrendering its preeminent position of power in the Middle East after more than 70 years of almost unchallenged dominance. In this course, we will examine some of the issues, events, and decisions that may be contributing to this perception and more generally to the evolving role of the U.S. in the Middle East. Is the perception correct? What is might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4730 Foundations in Homeland Security: Response and Recovery (4 Credits)**

This course will examine the post-1945 history of United States efforts at homeland security, and include an overview of other national efforts (e.g., by the Soviet Union, Switzerland, and Israel.) It will then turn to identifying and analyzing the spectrum of issues associated with U.S. homeland security, in the context of evaluating the United States post-9/11 response to date. Those issues include: framing homeland security, prevention, response and recovery overview, foreign actors and issues, domestic actors/issues, problems of intelligence, terrorism vs. violent crime, public expectations, role of the media, funding and resources, and how to address broad spectrum threats.

**INTS 4731 Homeland Defense: Prevention & Mitigation (4 Credits)**

This course will examine the following issues: political leadership, foreign and domestic intelligence organization and functions, role of intelligence, principles of indications and warning, legal/civil rights issues: balancing human rights and security, law enforcement, Public health, and the role of various U.S. federal agencies: Department of Energy, Environmental Protection Agency, the INS, border security among others, plus the role of first responders in prevention/detection, and establishing indicators and reporting procedures.

**INTS 4733 Introduction to Strategic Cyber Threats and Policy (4 Credits)**

At its core, cyber is a suite of complex, interrelated technologies affiliated with computers, communications networks, and digitalization. Like any powerful technology, cyber provides the capabilities for a range of political actors across a range of levels of analysis to increase their capabilities to achieve both benevolent and malignant goals (and which of these any particular effort is often rests in the eyes of the beholder). Yet, the massive scale of the utilization, both current and future, of cyber technologies and the speed, range, and impact that these technologies potentially generate also make cyber a realm, an area of practice, action, and, thus, policy. The challenge with the rise of such a sweeping development in national and international security is understanding the nature of the threat, how unique the characteristics of the threat are versus how much they resemble previous security challenges, how much existing security mechanisms and policies are applicable versus the need for the development of novel solutions and what are the trade-offs that have to be made, and thus will come to define, cyber security policy at the national and international level. This course will engage all four of these basic questions in survey fashion, setting students up for follow-on academic or professional engagement with the realities of strategic level cyber security issues.

**INTS 4735 Defense and Security Methods (4 Credits)**

The purpose of this overview course in defense analysis methods is to provide students with the foundations to successfully conduct research and analysis in defense-related topics, whether within the national security community, in academia, or as a contractor. This course should also help prepare the student to complete his or her Master's thesis. The course aims to improve the student's ability to comprehend and assess the graduate-level readings assigned in other courses, and to write research papers and complete other written assignments for those courses. The course is intended to provide take-away skills that can be applied to professional activities after graduation: in particular, students should have greater confidence in their abilities to locate, read, commission, design, or conduct relevant research, and to draft research proposals. This class focuses on methods employed in both policy analysis and the social sciences. The emphasis is on qualitative rather than quantitative methods.

**INTS 4736 Strategic Intelligence Data Collection and Analysis (4 Credits)**

Course focuses on analytical prod. of strategic intell relative to int'l security issues.

**INTS 4738 Current Issues in Strategic Intelligence (4 Credits)**

Advanced seminar which investigates current issues relative to strategic intell within international studies.



**INTS 4739 Defense and Security Quantitative Analysis (4 Credits)**

This course is the follow-on to INTS 4735 Defense and Security Methods and is designed to engage students in a professional conversation about the applicability of quantitative analysis and big data based analytics for the execution of defense and security analysis/research. Continuing the development of the students' individual research design proposal, but now introducing an array of quantitative ideas, options, and methods, this course begins with the foundational realities of coding and descriptive statistics before introducing students to bivariate and multivariate analysis, index/scale construction, and hypothesis testing techniques. In addition, the course continues to develop the students ability to engage with and understand real world defense and security research, in this case particularly quantitative analysis. Prerequisites: INTS 4735.

**INTS 4750 The Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details from country to country and even from issue to issue within the same country. In this course we study various parts of those processes and some of the inputs into them. In addition, we pay close attention to problem framing or problem definition in those policy processes. Within all these disparate policy processes political actors must have some notion of what problem they are trying to solve and what constitutes the set of feasible solutions to those problems. These ideas about problems and feasible solutions are not given exogenously, are not some fact of nature, but instead arise from complicated interactions among actors and institutions in the policy process. The quest we ask throughout the course is how policy problems and solutions could be framed differently, how we can learn to look outside the conceptual box that partisans to policy debates try to draw for us. Students write a series of papers during the course following a policy issue of their choice through the policy process.

**INTS 4753 Intelligence and National Security (4 Credits)**

Focuses on the craft of U.S. Intelligence and its role in the making and implementation of national security policy.

**INTS 4760 Russian Foreign and Defense Policy (4 Credits)**

Course explores Russian foreign and defense policy from Vladimir Lenin to Vladimir Putin - heavy focus on security policy.

**INTS 4786 Planning and Assessment in Complex Environments (4 Credits)**

The primary mission of this course is to provide participating students grounding in the planning methodologies, approaches, and expectations used within the US government in both military and civilian agencies as well as increasingly in the security related private and non-profit sectors. The starting point for this effort is Operational Art & Design and the military's Joint Operational Planning Process (JOPP) as well as related literature. Military planning serves as the starting point both because it is the most mature and sophisticated government planning methodology and because most other US government planning practices are direct, contextually appropriate derivatives of DoD planning mechanics.

**INTS 4787 Civil-Military Practices in Humanitarian Responses (4 Credits)**

Changing U.S. national security priorities following 9/11, including updated Department of Defense doctrine, have led to U.S. military actors prioritizing humanitarian assistance as a central component of theater security cooperation arrangements. This trend includes not only considerations of protection of civilians during military operations but also planning for natural disaster response and steady state engagement to build the capacities of host nations to address crises, including natural and man-made disasters. Through readings, class discussions, group work and individual assignments, students in this course will gain a better understanding of the issues and roles of civilian and military actors in the humanitarian space, with a specific focus on how legal and policy guidance impacts the decision to utilize U.S. military forces in disaster response situations. While this course will focus specifically on how the U.S. government approaches humanitarian activities and the role of the U.S. Department of Defense assets, it will locate this discussion within the broader about the appropriate use of Military and Civil and Defense Assets in international humanitarian community.

**INTS 4801 Major Issues in Human Rights (4 Credits)**

This co-taught course looks at a wide range of contemporary issues in human rights. It is intended equally as an introductory course for students in other degrees and as an advanced course for Human Rights degree students. Each week will be run by the faculty member who has selected the topic. Readings and any other before-class assignments will be on the Canvas page for the course, in the Files tab, in the folder for the instructor.

**INTS 4802 Foundational Ideas in Social Science: Marx and Weber (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

**INTS 4807 Civil-Military Relations During War (1 Credit)**

The focus of the course will be on civil-military relations—the interaction between the senior military leadership and elected and appointed civilian officials. Students will have a unique opportunity to learn about the development of national security policy and related issues. The course will examine the civil-military relations during three 20th Century wars and two 21st century conflicts and draw insights about the impact of civil-military relations on national security and the requirements for effective civil-military interaction in the future.

**INTS 4808 Foundations of Global Justice: Theories of Power and Transformation (4 Credits)**

Our primary goal will be to understand and assess different approaches and frameworks for pursuing social change – from civil resistance and nonviolent direct action to narrative, experimental cities, and activism. Our goal will be to understand when and why these approaches work – and when and why they don't. Students will hear from activists working in ongoing movements for social change around the world and will get acquainted with their work. We will explore case studies of historical and ongoing social movements, which include struggles for democracy, peace, human rights, environmental justice, racial and gender justice, and more. We will also strategize how movements manage violent repression, backlash, and opposition in different contexts. Students will walk away with practical understandings of how to organize for social change, skills to support ongoing movements, and applied opportunities to understand when, where, how, and why certain efforts at social change succeed, while others fall short of their goals.

**INTS 4810 Social Movements, Global Justice (4 Credits)**

This course is intended for students seeking to gain a theoretical and practical understanding of social movements. It is organized in two parts: (1) (re)imagining power and social movement theory, and case studies of social movements; followed by (2) developments, dilemmas, coalition-building, and other questions in the study of social movements. Students will develop a project to learn about a movement (or nonprofit organization) of their choice. Taking the Foundations to Global Justice course is a useful, but not necessary pre-requisite. Students will conduct assignments scaffolded throughout the term and share their work with peers in teams. We will explore movements from local ones on college campuses, to Women Life Freedom, to the Black Panthers. The class is designed so that students concurrently learn practically to organize collectively with others or ways of engaging in solidarity, and understand theoretically and empirically, the role of social movements.

**INTS 4812 Capstone: Applied Strategies for Catalyzing Social Change (4 Credits)**

Capstone: Applied Strategies for Catalyzing Social Change is a core course required for the Global Justice Certificate. Students will work with activists and/or movements on a specific project identified as a need. Students will gain concrete, real-world skills and training in how to strengthen the work of grassroots movements.

**INTS 4816 Power and Oppression (4 Credits)**

This course is designed to be an introspective practice in examining how frameworks apply to societal norms, personal and cultural identity, and academic settings. We will explore frameworks on racial equity, oppression, gender, implicit bias, and intercultural conflict, in addition to others. We will critique white supremacist structures that influence our everyday interactions, work-environment, and how we view and engage in the world around us.

**INTS 4817 Restorative Justice (2 Credits)**

Restorative Justice is an alternative to punitive discipline methods; restorative approaches focus on building relationships, trust, and respect. Restorative methods center around repairing harm, accepting responsibility, and reintegrating the parties responsible for causing harm back into the community. Reconciliation is paramount in community building to restore communal harm and prevent further harm and violence post resolution. This course centers around domestic and international approaches to Restorative Justice, including restorative circles, truth commissions, and victim offender dialogue. Internationally, we will explore restorative work in Rwanda, South Africa, Bosnia, India, and New Zealand. We will learn methodologies used in restorative approaches in schools, judicial systems, communities, and diversion programming. This course will focus on the mindset shift to culturally integrate restorative approaches systemically in communities.

**INTS 4818 Conflict Sensitive Interventions (2 Credits)**

While interventions are designed to have impacts, these impacts often include unintended and even negative consequences. Particularly in fragile and conflict-affected contexts and contexts of inequality, interventions done without sensitivity to context can undermine sustainability and exacerbate conflicts. Conflict sensitivity is an approach to ensure that interventions do not unintentionally contribute to conflict, but rather, strengthen opportunities for peace and inclusion. It focuses on mitigating the risk of negative impacts and enhancing positive ones. This course will develop skills for analyzing conflict dynamics and actor incentives, mapping an intervention's potential positive and negative influence on systems of inequality and conflict, locating opportunities as well as risks, modifying an intervention to minimize harm and maximize peace and sustainability, and building in the adaptation mechanisms needed for ongoing change in dynamic contexts.

**INTS 4820 Democracy and War (4 Credits)**

This course explores Socrates' speech at his trial and decision to go to his death as, surprisingly, initiating two central features of modern democratic theory. First, Socrates is often depicted as simply hostile to the many, looking down on Athenian democracy. But what he in fact looks down on is tyrannical mob rule, the "democracy" of a particular interest arbitrarily enforced (what we might call a demented Joe McCarthy-kind of democracy). In contrast, Socrates also incarnates the idea of asking questions in a democracy, that is, dissent (prefiguring what is sometimes called today deliberative democracy). That makes a democracy capable of realizing, sometimes, a common good. Second, Socrates provides a paradigm for modern civil disobedience or satyagraha in Gandhi - we read Gandhi's translation of Plato's Apology - and Martin Luther King's letter from the Birmingham City Jail. Nonviolent civil disobedience is necessary in a modern democracy because party-competition focuses mostly on personality issues and not on fundamental injustices. Further, this kind of protest promises major change even in dictatorships (consider Erica Chenoweth and Maria Stephan, *Why Civil Resistance Works*). Thus, this emphasis is a novel interpretation of Plato as opposed to, in scholarship and politics, Plato's supposed link to authoritarian "commander-in-chief" power (Heidegger, Leo Strauss and William Kristol for example) which we also contrast in this course. The course explores the subtlety of these dialogues - the question of what Plato intended to teach his long-standing students like Aristotle who studied with him for 20 years - but leave the main points of Gandhi's and King's interpretation intact. Third, the course explores Thucydides, *History of the Peloponnesian War* and Plato's response to it in the *Republic* in terms of modern critiques of Empire building and the "unhinged" wars by American democracy (we look at W. Robert Connor's elegant break with previous understandings of Thucydides during Viet Nam and John Mearsheimer's striking criticisms of post-Cold War American policy, echoing Obama's 2013 speech at the National Defense University, in "America Unhinged.") Thucydides is a far deeper account of imperial expansion and the corruption of and threat to democracy at home than modern realist and neo-realist gestures at him. Neo-realists methodologically attempt to separate global politics from its domestic consequences as supposedly different levels of analysis; this interplay is the heart of Thucydides' argument and deepest insight into the meaning of war and democracy.

**INTS 4822 Contemporary Political Theory (4 Credits)**

An examination of current 21st century political theory and how the events of the 20th century helped mold these ideas/ concepts.

**INTS 4854 Rising China and Challenges to the Global Order (4 Credits)**

This course is for Korbel in DC program participants only. This seminar focuses on contemporary challenges to the global order posed by China's growing economic power. The course charts China's reform and opening, its development and integration into the global economy, and the challenges created for Western economic and security institutions and alliances. Specific topic areas covered include China's non-market status and trade conflict, competition for technological leadership, ICT governance and standard setting, the Belt and Road Initiative, and the implications of China's South China Sea activity. The course will combine extensive background readings, lectures, and discussion. Students will benefit from frequent guest lectures and discussions with experts from the Center for Strategic and International Studies.

**INTS 4856 Global Sustainability and Development (4 Credits)**

This course is for Korbel in DC participants only. This course considers the interaction of environmental, economics, and energy issues on global ecological systems. It offers an overview of relevant international legal frameworks and national governance systems, the state of major ecosystems - forests and species habitats; wetlands, oceans and rivers, and the atmosphere and selected policy issues related to each. Emphasis is less on "what" to think than "how" to think about and formulate policy responses to complex, multidimensional issues.

**INTS 4875 Human Rights and Foreign Policy (4 Credits)**

Global human rights issues and how those issues help mold foreign policy decisions.

**INTS 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**INTS 4890 The Revolutions of Black, Brown, and Indigenous Peoples: Violence or Nonviolence? (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

**INTS 4891 American Intersectional Inequality: From Local to Homeland Security (4 Credits)**

This course advances understanding of how inequality manifest differently by race and ethnicity, class, and gender. Policy topics and case studies will span (1) immigration laws, citizenship, and race-making; (2) state violence, mob rule, and the origins of the American penal system; (3) local law enforcement, courts, and prisons (5) detention centers and homeland security; and (6) demography, census, and democratic representation. The course will feature African American and Latinx populations prominently and incorporate Indigenous, Asian-American, and White populations throughout. The class will center the perspectives of poor Americans, but will incorporate working class, middle class, and elite perspectives when useful comparisons and contrasts are in order. Theories and case studies will be rooted in a U.S. context but occasionally include readings from other democratic nations. Readings will encompass enduring problems and landmark policies, as well as contemporary challenges. Given that this is a writing-in-the-disciplines course, we will devote attention to developing public policy research and memo-writing skills. Students will also gain practice working in teams to sharpen analytical skills and written work.

**INTS 4900 International Politics (4 Credits)**

Topics on discussion include: levels of analysis; realism; neo-realist structuralism; international society and the English school; international anarchy; process variables and international institutions; international security institutions; rationalism, constructivism, and the purposes of theory; norms and ideas; gender and identity; and postmodernism and post-structuralism.

**INTS 4903 Relational Theories of International Relations (4 Credits)**

Examines recent theoretical work in the field of international relations that treats international society and its practices as social constructs.

**INTS 4906 Classics of International Theory (4 Credits)**

Professor will choose various books by classic political theorists for students to read and discuss in class.

**INTS 4907 Terrorism (4 Credits)**

Terrorist violence, an issue facing many countries in international and domestic politics, is used by left and right-wing groups, nationalist and religious organizations, revolutionary movements, and state institutions seeking political power. This course is focused on: understanding terrorism (definitions, causes, evolving tactics); analyzing who becomes a terrorist (jihadist, separatist, supremacist ideologies plus radicalization processes); and evaluating effective counter-terrorism measures to reduce or resolve the problem.

**INTS 4909 Climate Migration and Human Rights (4 Credits)**

The science of climate change, while continuing to become more exact and nuanced, is clear – human behavior has caused the planet to warm unnaturally. Now that the science has been established the next question is how will it affect the ecosystem and, especially human habitation. As seems to be the norm, those most affected by climate change will be the poor, the disempowered, and native populations. The understanding and the possible solutions must be interdisciplinary – human rights, law, economics, development, gender and race equity, security, science – to name a few. The course will look at the history and philosophy of climate justice, which includes such disciplines as environmental justice and sustainability, move through an analysis via a number of different viewpoints, and conclude with a look into the future in terms of education and activism. Climate justice requires a sharp, critical look at systems and an understanding of the interconnectedness of science, ethics, and politics. Examples of this might include the rising of sea levels displacing very large numbers of people adding to the already impossible strain on refugee and IDP resettlement. Or the Brazilian economy's almost sole reliance on hydro-electric power in face of the drying up of rivers and water basins. Or the role of the world's religions and religious leaders in climate justice. One of the unique characteristics of this course will be the number of guest lecturers. It is incumbent on universities and colleges to take a multi-disciplinary approach to climate justice and lower the "silos" between academic units. To that end colleagues from DU and other institutions will bring their disciplines and insights to bear on the topic.

**INTS 4912 Development in Africa: Challenges, Constraints and Strategies (4 Credits)**

This course is for Korbelt in DC participants only. As the Developed World falters over its financial difficulties, many eyes are turning to the third world for resources, markets and solutions. In a real sense, Africa is the "last frontier." With this in mind, this seminar provides an overview of Africa and Development through the eyes of practitioners and scholars from the US and Africa who have devoted considerable effort to trying to affect development on the continent and speculating on what more it will take to make Africa prosperous. Beginning with an overview, the course proceeds through traditional development sectors (agriculture, health and education), newer perspectives and drivers (private sector, ICTs, democratization and China), and the three "C" barriers (corruption, conflict and climate change). Lively exchanges over the role of outsiders and the efficacy of aid as well as Africa's growing role in the outside world, balance more traditional development perspectives.

**INTS 4914 Statecraft and Smart Power in the Digital Era (4 Credits)**

This course is for Korbelt in DC participants only. This course examines new approaches to the practice of statecraft in an era of rapid global change. Globalization is upsetting traditional international order and institutions, and changing the pace and intensity of decision making. Nation-state governments, while still the primary actors, must adjust to new sub-national, regional and transnational forces and players in a far more complex global arena. Digital Communication is revolutionizing relationships and interaction in the global arena. More groups and the general public are involved or mobilized in public participation than ever before. Vastly more information flows ever more quickly. Partisanship rises with segmentation, threatening fragmentation in public life. The new era reflects the imbalances and strains of major demographic change, especially the impact of an expanding tech-savvy younger generation. A significant youth bulge in volatile developing nations fuels reform efforts, but also creates the potential for conflict arising from continuing injustice and unmet expectations. Foreign policy institutions and decision makers here and abroad are increasingly subject to cross-pressures from competing domestic and transnational interests. In the U.S. the Inter-Agency must balance influential single-issue stakeholders and constituencies here and abroad. The course explores how the U.S. and other governments are responding to the new global challenges. Participants see to frame new "rules" of statecraft in the digital era.

**INTS 4920 Conflict Resolution (4 Credits)**

An introductory course which identifies the collective factors leading to successful reconciliation or agreeable compromises in conflicts; analyzes the role and influence of cultural norms, gender conditioning and different bargaining strategies on the resolution process; applies the practical fundamental of negotiation on particular problem-solving techniques.

**INTS 4928 Torture (4 Credits)**

This is a reading/seminar course. Students are asked to be well-prepared and contribute to the discussion. We explore mostly modern forms of torture. The use of torture has not abated in the last 100 years despite conventions, treaties and watchdog organizations. What has occurred is that torture has become "stealth", to use Professor Rejali's term. These "stealth" techniques leave no mark and have been developed equally by democratic states and totalitarian regimes. It is also clear that the U.S. has engaged in state sponsored torture (see The Constitution Project bi-partisan report of April, 2013). An important question before us is if there is any place for torture in the 21st century and if torture is an effective means to gather intelligence. If the answer to both questions is "no," and torture violates the most basic ethical, moral, and legal norms of humanity, they why does it persist?

**INTS 4929 Foundations of Human Rights (4 Credits)**

There are many ways to approach human rights. This course has a historical and thematic emphasis, raising questions relevant to contemporary issues. What are the origins of human rights? Is religion compatible to secular views of universal rights? Are human rights predominantly Western? Did the industrial revolution and socialist tradition contribute to human rights? What are the limits of the rights to self-determination? Is globalization improving or harming human rights? Is globalization increasing or decreasing the potential for a vibrant civil society? What are the tensions between cultural rights and universalism? Are there tensions between security and universal rights? Are human rights for ALL humans? What political systems, under what circumstances, are most hospitable for social cohesion and/or human rights?

**INTS 4931 International Organizations (4 Credits)**

An intermediate course on approaches to the study of international organizations, including institutionalism, neofunctionalism, complex interdependence, international regimes, and epistemic communities. Case studies examining collective security and peacekeeping, human rights, Antarctica, and the environment are discussed.

**INTS 4935 International Humanitarian Law of Armed Conflict (4 Credits)**

This course is a theoretical and practical introduction to international humanitarianism law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants in areas of armed conflict and the rules of engagement for soldiers and combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with CPSY 4560.

**INTS 4936 International Law and Human Rights (4 Credits)**

An introductory course examining the concept of human rights, including political, economic, social, and cultural rights. International, regional and national institutions, norms and procedures to protect individual and group rights are discussed.

**INTS 4940 Introduction to Human Rights (4 Credits)**

An introductory course focused around historical and theoretically relevant texts in human rights. First and second generation rights are emphasized. Early liberal, conservative, and socialist understandings of human rights are highlighted against their respective historical background.

**INTS 4941 Human Rights and International Organizations (4 Credits)**

An introductory course exploring the changing roles of international organizations in their efforts to protect and promote human rights. Examination of both the global and regional levels of human rights activities of international intergovernmental organizations are discussed. Recommended prerequisite: INTS 4940.

**INTS 4947 Human Rights and Security (4 Credits)**

In a sense, the debate over human rights and security is rooted in ancient arguments over power and morality. Yet it is particularly since the end of World War II and the defeat of the Nazis, the emergence of the United States as the leading world power, and the onset of the nuclear age, that the debate over the relationship between human rights and national security has been part of operational discourse in real world politics as well as in university classrooms. The course title suggests an amplitude of subject matter far greater than can be encompassed in the ten weeks of the quarter. So, instructors are likely to differ about which issues to explore in the available time, and inevitably, they will differ in their pedagogical methods. Differences in methodology will reflect differences in taste, personality, training and experience.

**INTS 4955 Human Rights Clinic I (0 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4956 Human Rights Clinic II (4 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4958 Human Rights Global Governance, Nationalism and Internationalism (4 Credits)**

The decline of internationalism in its neoliberal garb calls for reflection on the past thirty years of crisis. After over two years of pandemic, and the Russian invasion of Ukraine and now the war between Israel and Hamas, nationalism is spreading across the globe. And yet history shows us that manifestations of internationalism tend to appear with urgency to counter old familiar foes: illiberal nationalism and ultra-religious radicalism. The main question of this course is: How can we build a new internationalism to address global crises driven by nationalist interests? What are the main lampposts to guide us in that search? Informed by history, this course is structured in three parts: First, how did past forms of internationalism gain traction and supersede nationalism, and what was the contribution of progressive internationalist worldviews? Second, how has the neoliberal globalized order, established after the Cold War, brought us to a series of cataclysms? Third, amidst nationalist challenges, how do we approach the possible reconstruction of a new inclusive internationalism, one that could address both lingering and emerging crises and create the conditions for a more robust global governance guided by human rights? In this sense, this course also proposes to map current and future agreements between great powers, states, and civil society to strengthen a new internationalist order.

**INTS 4964 Political Risk Analysis (4 Credits)**

Investigates risks associated with political instability or uncertainty in countries with emerging markets.

**INTS 4966 Applied Field Methods: Africa (4 Credits)**

An introductory course for students planning to conduct research in developing countries. Practical information is presented on transforming hypothesis into a fieldwork setting, questionnaire construction and administration, and interviewing techniques.

**INTS 4972 Global Environmental Governance (4 Credits)**

Global environmental problems pose seemingly intractable problems for international relations and policy. In this seminar, we probe some of the practical and theoretical difficulties associated with solving such problems. These problems include: How can sovereign nation-states agree to cooperate on environmental problems and how can such cooperation include businesses and civil society? No international institution can legitimately coerce nations into such cooperation. Therefore, international institutions must get them to agree to cooperate, must find ways to bring business and civil society into those agreements, and then find ways to monitor and enforce the agreements. This task is harder than it might seem, and we explore both theories and cases that illuminate it.

**INTS 4981 Internship (0-4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. An internship should both complement the student's academic field of study and relate to his/her career goals. Through internships, students will: Apply acquired academic theory, knowledge, and skills to professional practice; Further develop knowledge and skills needed to work effectively in the field; Gain greater understanding of the private, public, or nonprofit/NGO sectors; Build a network of professional contacts; and Develop career-related skills applicable to the future job search. This course requires the internship be at an organization that is not the University of Denver, and is the course that satisfies the degree requirement for all Korbel MA programs. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4986 Humanitarian Assistance Internship (4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her/their career goals. Students will apply acquired academic theory, knowledge, and skills to professional practice; and further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates who are using their internship to also satisfy requirements for the Humanitarian Assistance Certificate. Registration is by instructor and the Director of the Humanitarian Assistance Program after review and approval of materials.

**INTS 4987 Forced Labor and Human Trafficking (4 Credits)**

This course looks at a brief history of slavery, especially as it pertains to the British, West African, West Indies, and American triangle. We then look at contemporary issues of forced labor, human trafficking and contemporary slavery. Human trafficking is a very complex problem that requires a sophisticated, inter-disciplinary critique.

**INTS 4989 North American Defense and Security (4 Credits)**

This course will challenge students to analyze the evolving North American Defense and Security environment since 1945. The course will begin by focusing on the history of the Canada - United States (CANUS) defense and security relationship that began in the wake of World War Two and was predicated upon protecting the North American continent from Soviet attack with the formation of the Permanent Joint Board on Defense (PJBD), Military Cooperation Committee (MCC), and North American Air Defense Command (NORAD). However, the end of the Cold War and subsequent terror attacks of 9/11 dramatically changed the North American Defense and Security environment and created the need for enhanced cooperation between the United States, Canada, and Mexico.

**INTS 4991 Independent Study (1-12 Credits)**

A special individual arrangement for students to pursue more advanced work beyond that available through regular courses. Such study is arranged between professor and student prior to registration. Academic grades are assigned for course performance. Tutorial Record Form required.

**INTS 4995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the master's thesis. Such study is arranged between professor and student. Academic grades are assigned for performance. Independent Research form required.

**INTS 4996 Substantial Research Paper (0-4 Credits)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage student in the process of applied research. In contrast, an independent study tends to be a more general research project, while an MA thesis involves in-depth academic research typically undertaken by students interested in pursuing a PhD. An SRP is typically shorter than an MA thesis, and does not require a review committee or an oral defense. Rather, the SRP will be supervised and graded by a single appointed faculty member.

**INTS 4998 Experiential Learning (0 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her career goals. JKISIS recognizes the professional benefits of experiential learning work that occurs on the University of Denver campus. Through on-campus experiential learning, students will: Apply acquired academic theory, knowledge, and skills to professional practice; and Further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4999 Research Design: Ph.D. Prospectus, Substantial Research Paper, and MA Thesis (4 Credits)**

This workshop is designed for students interested in developing a well-crafted thesis proposal, sustaining their research and writing agenda throughout their studies, and learning about the academic profession as a whole. There will be short formal lectures or presentations by the instructor; yet each student needs have a paper on the subject of interest prior to registration to this class, each needs to be prepared weekly to receive constructive suggestions and assessments from the instructor and peers.

**INTS 5500 Social Science Methods (4 Credits)**

This course is about how to unleash the power of social science to explain and make sense of social behavior, phenomena, and research programs. The course is intended for Ph.D. students interested in developing their skills in research and analysis. As part of the "professionalization" process, the goal of the course is to teach the basic structure of how to produce a research article or larger work—"how to do" political science. We will primarily rely on methodological approaches from the discipline of Political Science but also cover methods from other fields.

**INTS 5991 Independent Study (1-12 Credits)****INTS 5995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the doctoral dissertation preparation. Grades of "P" (pass) are assigned after the dissertation is accepted by the committee. Prerequisite: Ph.D Candidacy (passing Comprehensive exams).

## Morgridge College of Education

The University of Denver's Morgridge College of Education is committed to preparing highly competent, socially responsible, ethical and caring professionals to promote learning in diverse settings. With a guiding commitment to excellence, our programs offer high-quality and rigorous academics with an emphasis on relevant, impactful practices through field experiences, research and community-oriented projects. Through our focus on inclusiveness and innovation, we strive to create purposeful learning experiences designed to transform people and ideas.

With several regionally and nationally recognized programs, the College is known for its diverse, high quality students and alumni. The College offers face-to-face, hybrid, and online certificate, master's and doctoral programs in Educational Leadership and Policy Studies; Higher Education; Research Methods and Statistics; Library and Information Science; Teacher Preparation; Curriculum and Instruction; Early Childhood Special Education; School Counseling; School Psychology; and Counseling Psychology.

## Counseling Psychology

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 Mail Code: 1999 E. Evans Avenue, Denver, CO 80208  
 Phone: 303.871.2473  
 Email: mce@du.edu

Web Site: [morgridge.du.edu/programs/counseling-psychology/](http://morgridge.du.edu/programs/counseling-psychology/) (<http://morgridge.du.edu/programs/counseling-psychology/>)

### Counseling Psychology

As a graduate student in the Department of Counseling Psychology (CP), you'll develop the skills necessary to become an effective practitioner, researcher and/or leader in your field. Our goal is to develop professionals who are insightful and self-reflective, who are passionate about access and equity in mental health care. Our faculty research explores many exciting and critically important areas such as culturally responsive psychotherapy, work and well-being, culturally sensitive healthcare, disordered eating, media and mental health, and college adjustment. Our highly selective doctoral program is accredited by the American Psychological Association and is well known for providing access to high-quality practica and national internships for our students. This scientist-practitioner program has a strong focus on both research and practice. Similarly, the master's program has excellent practicum and internship sites all over the Denver area, and is accredited by the Masters in Psychology and Counseling Accreditation Council. One of the strengths for our Counseling Psychology program for both master's and doctoral students is the opportunity to provide counseling in our in-house clinic.

We want our students not only to demonstrate accurate and current knowledge, but to have expertise related to the many issues that confront society, and to have the skills to create effective strategies and approaches to address these challenges.

## Doctor of Philosophy in Counseling Psychology

The goal of the CP doctoral curriculum at the University of Denver is to educate counseling psychologists who have a solid foundation in science, practice, and social justice and equity from an intersectional framework. Our PhD program is intended for those preparing to become counseling psychologists. Through coursework and hands-on experience, you will learn to evaluate theories and research critically, while gaining a deeper understanding of the communities and individuals you will serve. Although CP programs may lie at various points on the continuum from a very heavy emphasis on science to a very heavy emphasis on practice, the Counseling Psychology program at DU lies close to the middle of the continuum. Although the course of study provides students with some flexibility to emphasize either the practice or scientific side of the continuum, we expect that all students will have a solid foundation in science and practice and will approach each aspect of their training from a multiculturally informed position. Many of our graduates work in practice settings after graduation, and some are in research/faculty positions across the country. Regardless of their specific work setting, we believe they are trained to practice from a scientific/critical perspective infused with cultural awareness. In this way, our philosophy is consistent with the perspective of Pepinsky (1954), who suggested that the scientist portion of the scientist-practitioner model is reflected in the way counseling psychology practitioners think about and conduct their practice: they think critically and are appropriately skeptical about theories, research findings, and clinical practices, including their own as well as others. In addition, our students strive for cultural competence in order to be effective with diverse clients.

Counseling psychologists encourage groups of individuals in an array of cultural contexts to better understand themselves and their own behavior, to develop an increased repertoire of adaptive skills, and to more effectively approach life problems in light of this understanding and skill development. Counseling psychologists also help individuals make vocational-educational decisions, take productive action in marriage or family systems, and assist individuals with health-related crises, being careful to take cultural consideration into account. Counseling psychologists are also trained to provide supervision, consultation, and interprofessional/interdisciplinary skills and to use these skills in a variety of settings. Consistently, DU Counseling Psychology PhD program emphasizes multicultural counseling and social justice, health psychology, vocational psychology, psychotherapy processes and outcomes, psychological assessment, group dynamics, and treatment of addictions. Seminars are offered in all of these areas.

The faculty encourages students to develop individualized programs of study commensurate with their career goals. Practicum settings are arranged to further intensify training in particular specialty areas (e.g., college counseling, VA, in-patient, integrative care, correctional settings, community mental health). Students whose goals include college teaching are encouraged to co-facilitate introductory counseling classes with faculty and teach undergraduate psychology and counseling courses. Students are also required to participate in and contribute to a pre-dissertation research project that leads to a presentation and/or a submission for publication.

The program offers areas of focus, where you can further your skills and become better equipped to provide solutions for the societal and interpersonal challenges facing clients. Students will be able to integrate research to practice and engage in practice that is informed by research.

We offer an Emphasis in Health Psychology with at least two health-related didactic courses and two supervised clinical practica. Courses may include health psychology, health disparities, integrated health, neurophysiological assessment, and infectious disease in addictive behavior. Please note that the health-related courses are in addition to the required courses for completion of the PhD in Counseling Psychology. Practicum opportunities have included integrated health settings, academic medical centers, and VA Hospitals serving adults, children, and families. Students interested in practicum in health psychology settings may work with their advisor and the training director to identify relevant sites and obtain guidance and support in the application process, but health-related practicum are not guaranteed. Similar to the practicum component, students interested in completing a health psychology related dissertation have several faculty who can support them in this process, but students in consultation with their advisor and/or dissertation chair, select their dissertation topic. The Emphasis in Health Psychology offers an exciting opportunity to build upon excellent foundational broad and general psychology training to dive deeper into advocating for health equity, developing interprofessional competencies, and partnering with our Denver communities.

Importantly, some faculty research areas include:

- Multicultural counseling
- LGBTQ+ health
- Psychotherapy research
- Romantic relationships
- Health psychology and health disparities
- Disordered eating
- Media psychology
- Supervision and training
- Vocational psychology and career development
- Cancer survivorship

Upon completion of our PhD program, and with the additional post-doctoral required hours, you'll be able to apply for licensure as a psychologist in Colorado and various other states (Please check with your state's licensing board to ensure our program meets their licensing requirements).



## **Interim Master of Arts in Counseling Psychology with a Concentration in General Counseling (for PhD students only)**

This concentration leads to a general Master's degree in Counseling, and is available as an interim degree for PhD candidates only. This concentration requires a minimum of 55 quarter hour credits, including a 150-hour practicum, but it does not lead to licensure as a professional counselor on its own.

## **Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling**

The Clinical Mental Health Counseling concentration is accredited by the Masters in Psychology and Counseling Accreditation Council (MPCAC) and is aligned with the requirements of the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Students who complete this degree and two years of post-master's work in the field can apply to become a Licensed Professional Counselor in the State of Colorado and various other states (Please check with your state's licensing board to ensure our program meets their licensing requirements). This degree requires two years and 90 quarter credits. It also includes a 150-hour practicum, a 600-hour internship, and two quarters of counseling in our in-house clinic.

## **Master of Arts in Counseling Psychology with a Concentration in Research Counseling**

Some students wish to develop more advanced research skills as well as counseling skills. This concentration requires two years and 72 credit hours to complete. Students wishing to complete a master's thesis are strongly encouraged to apply to participate in this concentration during the winter quarter of the first year of study. If the student chooses to apply for the Research concentration later, it will take longer to complete the degree. It is recommended they begin discussing this option with their advisor during their first quarter of graduate work. Students who complete a thesis are not required to take the comprehensive examination. This is the only concentration students may pursue if they are interested in writing a thesis. The Research concentration does not meet requirements to achieve licensure. Students are not eligible for applying to become a Licensed Professional Counselor after graduation.

## **Master of Arts in School Counseling: SchoolCounseling@Denver**

The Master of Arts in School Counseling (online) program has been designed to help students develop individual, group, and career counseling skills to meet the academic, career, and social/emotional needs of students from diverse backgrounds within the P-12 school system(s) and across the communities in which they serve. Students receive training in the profession as a whole, with focus on counseling skills, development, social justice, application of skills in a school environment, and many other areas. This degree requires a 100-hour practicum and two 300-hour internship experiences, during which students receive on-site supervision at their practicum/internship setting. This 90 quarter hour online Master's degree in School Counseling allows students to apply for licensure as a school counselor in Colorado (through the Colorado Department of Education [CDE]) and various other states. Note that licensing requirements vary from state to state. Check with the licensing board for the state in which you are interested.

## **Doctor of Philosophy in Counseling Psychology**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## **Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling, Concentration in General Counseling, Concentration in Research Counseling**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the

baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

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The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in School Counseling: SchoolCounseling@Denver

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Counseling Psychology

#### Degree Requirements

A total of 135 hours are required for the doctorate in the Morgridge College of Education and up to 45 credits from a master's degree may be eligible to be transferred depending on the content overlap with current courses. Students are able to transfer in up to an additional 15 hours for graduate work provided the credits have been earned after the master's degree was awarded and it does not conflict with the doctoral residency requirement.

#### Coursework Requirements for Students Entering with a Master's Degree That Included a Supervised Practicum/Clinical Requirement

Code	Title	Credits
<b>PROGRAM REQUIREMENTS</b>		
<b>FOUNDATIONS</b>		
CNP 4788	Physiological Psychology	3
CNP 4775	Counseling Psychology: Cognitive & Affective Basis of Behavior	3
CNP 4768	Counseling Psychology: Social Psychology	3
CNP 4794	Counseling Psychology Seminar: Special Topics (Advanced Integrative Course)	1
CNP 4702	Introduction to Assessment (can be waived)	5
RMS 4921	Psychometric Theory	3
CNP 4704	Psychological Assessment	5
CNP 4645	Lifespan Development	5
CNP 4706	Cognitive Assessment	5
CNP 4772	Diversity Seminar: Psycho-Social Issues	2

CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues (can be waived)	5
CNP 4705	History and Systems of Psychology	3
CNP 4790	Counseling Psychology Seminar: Ethics	3
<b>COUNSELING REQUIREMENTS</b>		
CNP 4700	Counseling Theory (can be waived)	5
CNP 4701	Advanced Seminar: Counseling Theory	3
CNP 4710	Career Counseling (can be waived)	5
CNP 4720	Group Counseling Theory (can be waived)	5
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) *	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) *	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) *	3
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4754	Couns Psych: PhD Internship	1
CNP 4756	PhD Counseling Clinic (2 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (2 qtrs/ 1 credit each) ***	1
CNP 4770	Counseling Psychology Seminar: Research	3
CNP 4780	Counseling Psychology Seminar: Supervision ****	3
CNP 4792	Pro-Seminar in Counseling Psychology	1
CNP 4784	Psychopathology (can be waived)	5
CNP 4800	Consultation	1
CNP 4794	Counseling Psychology Seminar: Special Topics (Electives in Counseling Psychology/Special Topics - e.g., Grief and Loss, Health Psychology, Trauma Informed Counseling)	6
CNP 4758	PhD Field Experience (no syllabus; these credits are not paid for by the student) #	8
CNP 5771	Counseling Psychology: Doctoral Research Seminar	3
<b>Total Credits</b>		<b>109</b>

# (Register for this Fall, Winter, and Spring terms during internship year for 8 credits per quarter)

\* Assumes completion of a supervised field experience of 400 hours in the MA/MS program (if not, see section on coursework required for those who did not complete a practicum as part of their MA/MS program)

\*\* Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (a minimum of which 250 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences. All three quarters of each practicum placement must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

\*\*\* PhD Clinic is generally taken for two consecutive quarters in winter-spring of the student's third year of study.

\*\*\*\* Students must have successfully completed Advanced Practicum I and have completed or are completing Advanced Practicum II.

Code	Title	Credits
<b>RESEARCH REQUIREMENTS</b>		
RMS 4910	Introductory Statistics (*)	4
RMS 4930	Quantitative Research Design (*)	3
RMS 4941	Introduction to Qualitative Research	4
RMS 4911	Correlation and Regression (Prerequisite: RMS 4910)	4
<b>Total Required</b>		<b>8-15</b>

\*\*May test out or waive; see Counseling Psychology Academic Services Associate regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively

**RMS Electives: Select At Least Three Courses**

RMS 4951	Mixed Method Research Design (Prerequisite: RMS 4910, 4941)	4
RMS 4912	Analysis of Variance	5
RMS 4924	Advanced Measurement	4
RMS 4922	Item Response Theory (Prerequisite: RMS 4921)	3

RMS 4914	Structural Equation Modeling (Prerequisite: RMS 4911)	4
RMS 4915	Hierarchical Linear Modeling (Prerequisite: RMS 4911)	4
RMS 4916	Latent Growth Curve Modeling (Prerequisite: RMS 4914)	4
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4945	Community-Based Research (Prerequisite: RMS 4942)	4
RMS 4932	Meta-Analysis Social Science Research (Prerequisite: RMS 4910)	3
RMS 4939	Topics in Quantitative Research Methods (Prerequisite: RMS 4939)	3
RMS 4946	Advanced Qualitative Research	4
Other statistical/methodology electives can be approved by advisor***		
<b>Total Electives</b>		<b>9-13</b>
<b>Dissertation Credits</b>		
CNP 5995	Independent Research (7 minimum) <sup>1</sup>	7

<sup>1</sup> Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.

### Coursework Requirements for Students Entering with a Master's Degree without Clinical Training (e.g., a supervised a Practicum/Clinical requirement)

For students entering without a supervised M.A. practicum or clinical experience, there are several extra requirements included in the list below.)

Code	Title	Credits
<b>PROGRAM REQUIREMENTS</b>		
<b>FOUNDATIONS</b>		
CNP 4788	Physiological Psychology	3
CNP 4775	Counseling Psychology: Cognitive & Affective Basis of Behavior	3
CNP 4768	Counseling Psychology: Social Psychology	3
RMS 4921	Psychometric Theory	3
CNP 4794	Counseling Psychology Seminar: Special Topics (Advanced Integrative Course)	1
CNP 4645	Lifespan Development	5
CNP 4702	Introduction to Assessment	5
CNP 4704	Psychological Assessment	5
CNP 4706	Cognitive Assessment	5
CNP 4772	Diversity Seminar: Psycho-Social Issues	2
CNP 4705	History and Systems of Psychology	3
CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues	5
CNP 4790	Counseling Psychology Seminar: Ethics	3
<b>COUNSELING REQUIREMENTS</b>		
CNP 4700	Counseling Theory	5
CNP 4701	Advanced Seminar: Counseling Theory	3
CNP 4710	Career Counseling	5
CNP 4720	Group Counseling Theory	5
CNP 4740	Basic Counseling Techniques	3
CNP 4741	Int Counseling Techniques	3
CNP 4743	Professional Development in Counseling	1
CNP 4750	Counseling Psychology Beginning Practicum *	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4754	Couns Psych: PhD Internship	1

CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4780	Counseling Psychology Seminar: Supervision ****	3
CNP 4770	Counseling Psychology Seminar: Research	3
CNP 4792	Pro-Seminar in Counseling Psychology	1
CNP 4784	Psychopathology	5
CNP 4800	Consultation	1
CNP 4758	PhD Field Experience (students do not pay for these credits) #	8
CNP 5771	Counseling Psychology: Doctoral Research Seminar	3

**Total Credits****115**

# (Register for this each term during internship year for a total of 8 credits per quarter)

\* Students must complete CNP 4740: Basic Counseling Techniques and CNP 4741: Intermediate Counseling Techniques with a grade of "B-" or better before enrolling in Beginning Practicum.

\*\* Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (of which 250-300 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences). All quarters must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

\*\*\* PhD Clinic is taken for 1 credit for two consecutive quarters in winter-spring of the student's first year of study and is taken again for two consecutive quarters in winter-spring of the fourth year of study.

\*\*\*\* Students must have successfully completed Advanced Practicum I.

Code	Title	Credits
<b>RESEARCH REQUIREMENTS</b>		
RMS 4910	Introductory Statistics (*)	4
RMS 4930	Quantitative Research Design (*)	3
RMS 4941	Introduction to Qualitative Research	4
RMS 4911	Correlation and Regression (Prerequisite: RMS 4910)	4
<b>Total Required</b>		<b>8-15</b>

\*May test out or waive; see CP Academic Services Associate regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively.

**RMS Electives: Select At Least Three Courses**

RMS 4951	Mixed Method Research Design (Prerequisite: RMS 4910, 4941)	4
RMS 4922	Item Response Theory (Prerequisite: RMS 4921)	3
RMS 4912	Analysis of Variance	5
RMS 4914	Structural Equation Modeling (Prerequisite: RMS 4911)	4
RMS 4915	Hierarchical Linear Modeling (Prerequisite: RMS 4911)	4
RMS 4916	Latent Growth Curve Modeling (Prerequisite: RMS 4914)	4
RMS 4924	Advanced Measurement	4
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4945	Community-Based Research (Prerequisite: RMS 4942)	4
RMS 4946	Advanced Qualitative Research	4
RMS 4932	Meta-Analysis Social Science Research (Prerequisite: RMS 4910)	3
RMS 4939	Topics in Quantitative Research Methods (Prerequisite: RMS 4939)	3

Other statistical/methodology electives can be approved by advisor\*\*\*

**Total Electives****9-13****Dissertation Credits**

CNP 5995	Independent Research (7 minimum) <sup>1</sup>	7
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<sup>1</sup> Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.

### Coursework Requirements for Students Entering with a Bachelor's Degree

(135 qtr. hrs. for completion of PhD requirements)

A total of 135 post-Bachelor's quarter hours is the minimum required for the doctorate in the Morgridge College of Education for students coming in without a master's degree.

Code	Title	Credits
<b>PROGRAM REQUIREMENTS</b>		
<b>FOUNDATIONS</b>		
CNP 4788	Physiological Psychology	3
CNP 4775	Counseling Psychology: Cognitive & Affective Basis of Behavior	3
CNP 4768	Counseling Psychology: Social Psychology	3
RMS 4921	Psychometric Theory	3
CNP 4645	Lifespan Development	5
CNP 4702	Introduction to Assessment	5
CNP 4704	Psychological Assessment	5
CNP 4706	Cognitive Assessment	5
CNP 4794	Counseling Psychology Seminar: Special Topics (Advanced Integrative Course)	1
CNP 4772	Diversity Seminar: Psycho-Social Issues	2
CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues	5
CNP 4705	History and Systems of Psychology	3
CNP 4790	Counseling Psychology Seminar: Ethics	3
<b>COUNSELING REQUIREMENTS</b>		
CNP 4700	Counseling Theory	5
CNP 4701	Advanced Seminar: Counseling Theory	3
CNP 4710	Career Counseling	5
CNP 4720	Group Counseling Theory	5
CNP 4740	Basic Counseling Techniques	3
CNP 4741	Int Counseling Techniques	3
CNP 4743	Professional Development in Counseling	1
CNP 4750	Counseling Psychology Beginning Practicum *	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4752	Counseling Psychology Advanced Practicum I (3 qtrs/ 3 credits each) **	3
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4753	Counseling Psychology Advanced Practicum II (3 qtrs/ 1 credit each) **	1
CNP 4754	Couns Psych: PhD Internship	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4756	PhD Counseling Clinic (4 qtrs/ 1 credit each) ***	1
CNP 4770	Counseling Psychology Seminar: Research	3
CNP 4780	Counseling Psychology Seminar: Supervision ****	3
CNP 4792	Pro-Seminar in Counseling Psychology	1
CNP 4784	Psychopathology	5
CNP 4800	Consultation	1
CNP 4758	PhD Field Experience (* students do not pay for these credits) #	8

CNP 5771	Counseling Psychology: Doctoral Research Seminar	3
<b>Total Credits</b>		<b>115</b>

# (Register for this each term during internship year for 8 credits per term)

\* Students must complete CNP 4740: Basic Counseling Techniques and CNP 4741: Intermediate Counseling Techniques with a grade of "B-" or better before enrolling in Beginning Practicum.

\*\* Advanced Practicum I and Advanced Practicum II students are required to spend 15 to 20 hours per week in practicum placement for three consecutive quarters for a total of 500-600 hours per practicum experience (of which 250-300 should be direct client time per practicum setting). Ideally a minimum of 500 to 600 direct service hours will be accumulated at the end of the two practicum experiences). All quarters must be at the same site and must be consecutive. Some students take an additional practicum placement if necessary based on goals for internship and career. For more information on practicum requirements, please see the separate practicum handbook.

\*\*\* PhD Clinic is taken for 1 credit for two consecutive quarters in winter-spring of the student's first year of study and is taken again for two consecutive quarters in winter-spring of the fourth year of study.

\*\*\*\* Students must have successfully completed Advanced Practicum I.

Code	Title	Credits
<b>RESEARCH REQUIREMENTS</b>		
RMS 4910	Introductory Statistics *	4
RMS 4930	Quantitative Research Design *	3
RMS 4941	Introduction to Qualitative Research	4
RMS 4911	Correlation and Regression (Prerequisite: RMS 4910)	4
<b>Total Required</b>		<b>8-15</b>

\*May test out or waive; see CP Academic Services Associate regarding testing out or waiving based on previous coursework for RMS 4910, RMS 4930, and RMS 4941 respectively.

<b>RMS Electives: Select At Least Three Courses</b>		<b>9-13</b>
RMS 4951	Mixed Method Research Design (Prerequisite: RMS 4910, 4941)	4
RMS 4922	Item Response Theory (Prerequisite: RMS 4921)	3
RMS 4912	Analysis of Variance	5
RMS 4914	Structural Equation Modeling (Prerequisite: RMS 4911)	4
RMS 4915	Hierarchical Linear Modeling (Prerequisite: RMS 4911)	4
RMS 4916	Latent Growth Curve Modeling (Prerequisite: RMS 4914)	4
RMS 4924	Advanced Measurement	4
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4945	Community-Based Research (Prerequisite: RMS 4942)	4
RMS 4932	Meta-Analysis Social Science Research (Prerequisite: RMS 4910)	3
RMS 4939	Topics in Quantitative Research Methods (Prerequisite: RMS 4939)	3
RMS 4946	Advanced Qualitative Research	4

Other statistical/methodology electives can be approved by advisor\*\*\*

<b>Dissertation Credits</b>		
CNP 5995	Independent Research (7 minimum) <sup>1</sup>	7

<sup>1</sup> Students can take up to 5 credits prior to comprehensive exams. In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

A minimum of 135 credits is required for the PhD in Counseling Psychology.

### **Interim Master of Arts in Counseling Psychology with a Concentration in General Counseling**

To be eligible, students must enter the PhD program **without** an earned master's degree. Students must submit an application to graduate and meet with their advisor for candidacy sign-off by the deadline.

The interim MA does not prepare students for licensure as a Licensed Professional Counselor (LPC). It is intended for students who wish to complete a Master's degree as they pursue their PhD. Students must meet the requirements for the Master of Arts in Counseling Psychology with a Concentration in General Counseling listed below.

## Master's Programs

### Master of Arts in Counseling Psychology with a Concentration in Clinical Mental Health Counseling

#### Degree Requirements

##### Coursework Requirements

Minimum of 90 credits required for the degree

Code	Title	Credits
<b>Program Requirements</b>		
CNP 4645	Lifespan Development	5
CNP 4700	Counseling Theory	5
CNP 4702	Introduction to Assessment	5
CNP 4710	Career Counseling	5
CNP 4720	Group Counseling Theory	5
CNP 4730	Research Methods and Program Evaluation	5
CNP 4740	Basic Counseling Techniques	3
CNP 4741	Int Counseling Techniques	3
CNP 4743	Professional Development in Counseling	1
CNP 4755	MA Clinic (2 qtrs/ 5 credits each)	5
CNP 4755	MA Clinic (2 qtrs/ 5 credits each)	5
CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues	5
CNP 4784	Psychopathology	5
CNP 4795	Master of Arts Counseling: Legal and Ethical Issues	5
<b>Practicum and Internship</b>		
CNP 4750	Counseling Psychology Beginning Practicum	3
CNP 4751	M.A. Internship <sup>1</sup>	9
<b>Electives</b>		<b>16</b>
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> 3 credit hour course taken 3 times.

#### Non-coursework Requirements

- Comprehensive Exam

### Master of Arts in Counseling Psychology with a Concentration in General Counseling <sup>1</sup>

#### Degree Requirements

##### Coursework Requirements

Minimum of 55 credits required for the degree

Code	Title	Credits
<b>Foundations</b>		
CNP 4702	Introduction to Assessment	5
<b>Concentration</b>		
CNP 4645	Lifespan Development	5
CNP 4700	Counseling Theory	5
CNP 4710	Career Counseling	5
CNP 4720	Group Counseling Theory	5
CNP 4740	Basic Counseling Techniques	3
CNP 4741	Int Counseling Techniques	3
CNP 4743	Professional Development in Counseling	1
CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues	5
CNP 4756	PhD Counseling Clinic (2 qtrs/1 credit each)	1
CNP 4756	PhD Counseling Clinic (2 qtrs/1 credit each)	1
CNP 4772	Diversity Seminar: Psycho-Social Issues	2



CNP 4784	Psychopathology	5
CNP 4790	Counseling Psychology Seminar: Ethics	3
<b>Practicum</b>		
CNP 4750	Counseling Psychology Beginning Practicum	3
<b>Electives</b>		<b>3</b>
<b>Total Credits</b>		<b>55</b>

<sup>1</sup> The General Counseling Concentration is open only to doctoral students pursuing the interim MA.

## Master of Arts in Counseling Psychology with a Concentration in Research Counseling

### Degree Requirements

#### Coursework requirements

Minimum of 72 credits required for the degree

Code	Title	Credits
<b>Research</b>		<b>10-11</b>
Select one of the following:		
RMS 4930	Quantitative Research Design	
or RMS 4900	Education Research and Measurement	
Plus:		
RMS 4910	Introductory Statistics	
CNP 4995	Independent Research	
<b>Foundations</b>		
CNP 4702	Introduction to Assessment	5
<b>Concentration</b>		
CNP 4645	Lifespan Development	5
CNP 4700	Counseling Theory	5
CNP 4710	Career Counseling	5
CNP 4720	Group Counseling Theory	5
CNP 4730	Research Methods and Program Evaluation	5
CNP 4740	Basic Counseling Techniques	3
CNP 4741	Int Counseling Techniques	3
CNP 4743	Professional Development in Counseling	1
CNP 4773	Diversity: Multicultural Counseling Psychosocial Issues	5
CNP 4784	Psychopathology	5
CNP 4795	Master of Arts Counseling: Legal and Ethical Issues	5
<b>Practicum</b>		
CNP 4750	Counseling Psychology Beginning Practicum	3
<b>Electives</b>		<b>6-7</b>
<b>Total Credits</b>		<b>72</b>

#### Non-coursework Requirements

- Comprehensive examination (may be waived if completing master's thesis)
- Thesis (may be waived if completing comprehensive examination)

## Master of Arts in School Counseling: Schoolcounseling@Denver

Curriculum (18 four-credit courses)

Code	Title	Credits
COUN 4600	Orientation to Professional Counseling & Ethical Practice	4
COUN 4610	Counseling Techniques	4
COUN 4620	Counseling Theory	4
COUN 4630	Research Methods	4

COUN 4700	Social & Cultural Diversity	4
COUN 4710	Group Counseling	4
COUN 4720	Assessment & Appraisal	4
COUN 4730	Lifespan Development	4
COUN 4740	Roles & Responsibilities of the School Counselor	4
COUN 4800	Career Counseling	4
COUN 4810	Comprehensive School Counseling Programs	4
COUN 4820	Counseling Youth & Families	4
COUN 4830	Diagnosis in Counseling	4
COUN 4840	Educational Strategies and Policies	4
COUN 4850	School Counselor Interventions	4
COUN 4900	Practicum	4
COUN 4910	Internship I	4
COUN 4920	Internship II	4
COUN 4001	School Counseling Immersion	0
<b>Total Credits</b>		<b>72</b>

#### Non-coursework Requirements

- Comprehensive examination

## Graduate Certificate Program

For individuals who have already earned an eligible Master's degree, the 24-credit Certificate in School Counseling leads to recommendation for the Colorado Special Services Provider License as a School Counselor and may lead to eligibility as a school counselor in various other states, depending on credentialing requirements in each individual state at the time of application. Through coursework from the CACREP-accredited School Counseling MA degree, this certificate program offers focused school counseling content to prepare counselors to meet the academic, career, and social/emotional needs of students from diverse backgrounds within P-12 school systems. This certificate requires two 300-hour internship experiences, completed in a P-12 school in your community, which are integrated into the coursework (i.e., COUN 4910, COUN 4920). The program can be completed in as few as three quarters (depending on start term and course offerings) and is offered in a fully online format with weekly, synchronous live class meetings held in evenings via video conferencing software.

Code	Title	Credits
<b>Requirements</b>		
COUN 4740	Roles & Responsibilities of the School Counselor	4
COUN 4810	Comprehensive School Counseling Programs	4
COUN 4840	Educational Strategies and Policies	4
COUN 4850	School Counselor Interventions	4
COUN 4910	Internship I	4
COUN 4920	Internship II	4
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Program

For individuals who have already earned an eligible Master's degree, the 18-credit Specialized Certificate in Counseling provides the opportunity to earn additional counseling credits through coursework in our CACREP-accredited School Counseling MA degree program. Depending on individual states' school/mental health counseling licensure requirements, districts' salary schedule, and/or other circumstances, the credits completed through the Certificate in Counseling may position students for eligibility for additional credential(s) and/or earning potential. The program can be completed in as few as nine months (depending on start term and course offerings) and is offered in a fully online format with weekly, synchronous live class meetings held in evenings via video conferencing software. Required coursework may be substituted based on individual student needs; individual student plans of study will be determined through collaboration with Program leadership.

## Specialized Certificate in Counseling

Code	Title	Credits
<b>Requirements</b>		
COUN 4805	Gender & Sexuality	4
COUN 4835	Counseling for Trauma, Crisis, & Grief	4

Electives		10
COUN 4750	Exceptionalities	
COUN 4801	Developmental Application	
COUN 4815	Program Evaluation	
COUN 4825	Activity-Based Counseling	
COUN 4901	School Counseling Field Supervision	

**Total Credits**

**18**

## Counseling Psychology (CNP)

### **CNP 4642 Adult Development (3 Credits)**

Literature on normal development of adult thinking and problem-solving processes and the self-esteem. Physiological changes and relationship between cognitive development and developmental tasks of adults included.

### **CNP 4645 Lifespan Development (5 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development.

### **CNP 4700 Counseling Theory (5 Credits)**

Basic counseling theories and philosophical principles as a foundation for professional training including history, concepts, techniques and trends.

### **CNP 4701 Advanced Seminar: Counseling Theory (3 Credits)**

Focus on advanced practice issues and (doctoral students only) integration of theory and practice.

### **CNP 4702 Introduction to Assessment (5 Credits)**

This is a biweekly course designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course will provide students with exposure to basic objective tests, projective tests, personality tests and other diagnostic techniques.

### **CNP 4704 Psychological Assessment (5 Credits)**

Administration, scoring and interpretation of objective and projective personality-assessment techniques, the DSM IV, diagnostic categories, report-writing skills, ethical standards for testing. Lab fee required. Prerequisite: counseling or school of psychology Ph.D. student or instructor approval.

### **CNP 4705 History and Systems of Psychology (3 Credits)**

Historical and philosophical basis of modern psychological theories; basic issues as related to major school of psychology.

### **CNP 4706 Cognitive Assessment (5 Credits)**

This course provides students in Counseling Psychology with experience in individual intelligence, learning and memory, and neurocognitive screening test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed on synthesizing and integrating information from cognitive assessment with other sources to produce effective intervention and therapeutic recommendations. Issues regarding the use of such tests are discussed, as well as appropriate use in agencies and clinical practice. Lab fee required.

### **CNP 4707 Introduction to Integrated Health (3 Credits)**

This course is designed to provide students with an introduction to issues in the practice of integrated health psychology, including the topics of interprofessionalism, diagnosis and assessment, treatment, treatment adherence, and consultation. Students will learn about the roles held by behavioral health providers, particularly in the primary care medical setting. Emphasis is placed on evidence-based and culturally competent practice in the integrated health environment.

### **CNP 4710 Career Counseling (5 Credits)**

This course is designed to facilitate student development of knowledge, skills and competencies to engage in counseling clients with career issues; utilize occupational/career resources including technology-based resources and assessments; examine theories of career development and decision-making; develop the ability to evaluate and implement appropriate assessments; collaborate with clients in identifying personal and career goals; and organize and implement program planning and techniques and do so in a diversity of work settings. Lab fee required.

### **CNP 4720 Group Counseling Theory (5 Credits)**

This course is designed to introduce graduate counseling students to group counseling theory, research, and practice. This course will focus on group theory and research but will also provide instruction and experiences in a variety of group techniques. The course is designed for students in counseling psychology, school psychology, and other related fields who work with persons in a group context. This course focuses on the entire age range from children, adolescents, and adults. This course aims to define therapeutic groups broadly. Students will learn about group theory, research, and techniques through class lectures and discussion, group demonstrations, videotapes on group topics, reading assignments, a group presentation, an experiential task group, a required paper related to the task group presentation, and other required assignments.

### **CNP 4730 Research Methods and Program Evaluation (5 Credits)**

This course is designed to provide an introduction and overview of comprehensive program development and evaluation, and research methods. The course will provide direction on the following topics: causation, research hypotheses, independent and dependent variables, sampling, internal and external validity, experimental, quasi-experimental, single-subject, causal-comparative, and correlational designs, measurement and data collection procedures, types of instrumentation and methods for determining reliability.

**CNP 4740 Basic Counseling Techniques (3 Credits)**

Basic counseling and interviewing skills; emphasis on building counseling relationships and facilitating client's self-exploration; skills of empathy, advanced empathy, self-disclosure, confrontation and immediacy.

**CNP 4741 Int Counseling Techniques (3 Credits)**

Sample of counseling techniques and effectiveness with different types of clients. Prerequisite: CNP 4740.

**CNP 4743 Professional Development in Counseling (1 Credit)**

Introduction to the field of counseling with special emphasis on practicum placement. Prerequisite: admission to the MA program in counseling psychology.

**CNP 4750 Counseling Psychology Beginning Practicum (3 Credits)**

Supervised practice in counseling for master's students. Prerequisite: CNP 4740, and be a counseling psychology student.

**CNP 4751 M.A. Internship (1-5 Credits)**

Yearlong, 600-hour supervised field practice for second-year master's students with weekly seminar. Prerequisites: CNP 4750 and be a counseling psychology master's students.

**CNP 4752 Counseling Psychology Advanced Practicum I (3 Credits)**

Supervised practice in counseling for doctoral students. Prerequisites: CNP 4750 or prior practicum, and be a counseling psychology student.

**CNP 4753 Counseling Psychology Advanced Practicum II (1 Credit)**

Group supervised practice in counseling for second-year doctoral students with emphasis on process and countertransference issues. Prerequisite: CNP 4752.

**CNP 4754 Couns Psych: PhD Internship (1 Credit)**

Meets 12-month internship requirement in counseling psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CNP 4755 MA Clinic (1,5 Credit)**

MA clinic is a required course for all students in the 90-credit Clinical Mental Health Counseling Concentration.

**CNP 4756 PhD Counseling Clinic (1 Credit)**

On-campus, advanced-experience counseling of clients from the community with close supervision and observation. Prerequisite: Doctoral student in counseling psychology.

**CNP 4758 PhD Field Experience (8 Credits)**

Required 12-month, 40-hour-per-week internship for doctoral students in Counseling Psychology. Registration for this course indicates full-time enrollment. This course is not graded. Prerequisites: completion of comprehensive examination and dissertation proposal. Department approval is required for registration. Fall quarter enrollment must be done in conjunction with CNP 4754.

**CNP 4760 School Counseling Practicum (1-4 Credits)**

A minimum of 100 hours supervised practice in School Counseling for Master's students in the School Counseling Concentration. Students must be supervised by a licensed school counselor. Enforced Prerequisites: CNP 4740 with a minimum grade of C.

**CNP 4761 School Counseling Internship I (1-4 Credits)**

100-hour supervised field practice in a school setting for Master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4762 School Counseling Internship II (1 Credit)**

A minimum of 600-hour supervised field practice in a school setting for master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4768 Counseling Psychology: Social Psychology (3 Credits)**

Social Psychology is designed to provide students a broad and general understanding of social psychology. The course will cover aspects of self, cultural dynamics, group processes, emotional/cognitive aspects of social behavior.

**CNP 4769 Cognitive Behavioral Therapy (4 Credits)**

Cognitive Behavior Therapy (CBT) is a treatment approach that incorporates a multitude of evidence-based strategies to construct an individualized and comprehensive treatment plan for a wide variety of mental/behavioral disorders. CBT has been extensively investigated in both research and applied setting. CBT offers foundational knowledge and skills to provide an active, client involved approach to resolving individual and family challenges. CBT is structured, goal-directed, and focuses directly on client problem areas. Students will practice and develop the skills necessary to implement CBT techniques and strategies.

**CNP 4770 Counseling Psychology Seminar: Research (3 Credits)**

Review of current process and outcome research in counseling and psychotherapy; substantive issues, including client and therapist variables as well as methodological issues and experimental designs. Prerequisite: doctoral student.

**CNP 4772 Diversity Seminar: Psycho-Social Issues (1-5 Credits)**

Series of courses to analyze social and psychological impacts of oppression related to minority status, socioeconomic status, gender and family configurations; taught using an awareness and knowledge approach; implications for counseling; series includes general seminar and series of 1 credit follow-up seminars on particular topics, e.g., American Indian mental health, African-American mental health and women's mental health. Prerequisites: CNP 4773 and students must take the 3-credit general seminar prior to the individual seminars.

**CNP 4773 Diversity: Multicultural Counseling Psychosocial Issues (5 Credits)**

The purpose of this course is to provide an overview of multicultural and social justice issues in the United States. While this is not a skills training course, implications for multicultural counseling skills will also be discussed. Issues and concepts related to gender, race, ethnicity, sexual orientation, gender identity, and social class will be examined within a framework of privilege and oppression. This course is designed to present a general introduction to multicultural and social justice issues as well as culturally responsive counseling. Due to the extensive amount of material in this area, only some selected issues and topics will be presented. Students interested in gaining more specific, or in-depth knowledge of topics covered in this class may pursue the one-credit Counseling Psychology diversity seminars offered in the Counseling Psychology program. Significant emphasis will also be placed on experiential learning and the application of students' awareness and knowledge accrued throughout the quarter.

**CNP 4775 Counseling Psychology: Cognitive & Affective Basis of Behavior (3 Credits)**

The seminar is intended to enhance students' understanding of the fundamental psychological concepts in cognitive and affective sciences and of the relevance of these theories and concepts to clinical practitioners. This seminar will provide weekly lectures to engage students in core issues surrounding the scientific study of affective and cognitive processes involved in human behavior. Academic inquiry and dialogue will also be fostered through group presentations and discussions of peer-reviewed journal articles and book chapters.

**CNP 4776 Family Counseling (3 Credits)**

Introduction to family counseling, including survey of major theories and research, and in-class demonstrations of techniques. Prerequisite: advanced master's or doctoral student.

**CNP 4778 Health Psychology (3 Credits)**

Overview of rapidly expanding field of health psychology; wide variety of topics dealing with role of psychological processes in health and health care; includes impact of stress on physical health, and psychological factors that determine health-related behavior, psychological aspects of delivery of health care, and assessment issues in health psychology.

**CNP 4780 Counseling Psychology Seminar: Supervision (3 Credits)**

Introduces literature and research on counseling supervision, including awareness of individual differences; provides experience supervising master's level counselors. Prerequisites: doctoral student and CNP 4752.

**CNP 4781 Counseling Psychology: Introduction to Psychodynamic Theory (4 Credits)**

This class will explore psychodynamic theory, with an emphasis on creating case formulations and practicing an analytic position in the treatment process. We will be focusing primarily on individual treatment with adults in outpatient settings using a developmental lens. You will be encouraged to develop and deepen your capacities for curiosity and self-reflection, in part as they relate to the exploration of countertransference reactions and meaning making. You will be learning both professionally and personally, as they mutually influence one another, what it means to be a psychodynamic clinician.

**CNP 4783 Counseling Psychology: Eating Disorders (3 Credits)**

This class will offer the opportunity to learn about the diagnosis, assessment, theory, and treatment of eating, weight and shape disorders. While working with clients with eating disorders (EDs) can present unique challenges, we will explore the perception/stigma that these clients are notoriously difficult to treat. We will focus on the importance of integrative treatments, and the role of behavioral, symptom focused techniques in addition to psychodynamic approaches that explore underlying characterological and developmental issues. This class will also consider the impact of culture and media on body image, and the effects of these messages on personal beliefs, attitudes and behaviors.

**CNP 4784 Psychopathology (5 Credits)**

This course is designed to provide students with a thorough understanding of assessment, diagnosis and classification of psychological abnormalities. Psychopathology is typically characterized by deviance from cultural norms, personal distress, danger to oneself or others, or an inability to function in daily life. We will explore the empirical basis for understanding psychopathology as defined in the DSM 5, as well as, the inherent limitations of the current diagnostic system. Interactions of biological, social, psychological, cultural, political, and environmental factors will be stressed, particularly as they contribute to the development and maintenance of mental disorders. Cultural perspectives on each disorder will be addressed every week to attend to issues of social justice and multiculturalism related to diagnosis.

**CNP 4787 Motivational Interviewing (4 Credits)**

Motivational Interviewing is a client-centered collaborative style of therapeutic relationship designed to strengthen a person's motivation for and commitment to change. This class will facilitate skill development in managing client ambivalence, eliciting change-talk and honoring the client's autonomy regarding taking steps toward a commonly agreed upon goal.

**CNP 4788 Physiological Psychology (3 Credits)**

Physiological Psychology is designed to expose students to the field of physiology and highlights its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g., substance abuse, mental illness, and biological rhythms). Given the limited time devoted to each area, more in-depth coverage should be pursued by interested persons.

**CNP 4789 Pharmacology of Addictive Behavior I and II (4 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors.

**CNP 4790 Counseling Psychology Seminar: Ethics (3 Credits)**

Professional ethics in practice and research in counseling psychology, including informed consent, confidentiality, clients' rights, psychologists' obligations, etc.; basic APA documents. Prerequisite: doctoral student.

**CNP 4791 Counseling Psychology Seminar: Counseling Couples (3 Credits)**

Introduction to couples counseling, including survey of major theories and research.

**CNP 4792 Pro-Seminar in Counseling Psychology (1 Credit)**

Introduction to field of counseling psychology required for all first-quarter doctoral students. Prerequisite: counseling psychology doctoral students.

**CNP 4794 Counseling Psychology Seminar: Special Topics (1-15 Credits)**

Variety of special topics on research and practice in counseling psychology; readings, lectures and projects to provide an in-depth understanding of topics, which vary from to year and cover areas such as counseling women, counseling in business and industry, advanced group therapy, time-limit counseling, vocational counseling, etc.

**CNP 4795 Master of Arts Counseling: Legal and Ethical Issues (5 Credits)**

Introduction to ethical and legal issues in school and agency counseling for master's students. Prerequisite: Master's student in Counseling Psychology.

**CNP 4797 Counseling Addictive Behavior (4 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and nonchemical addictive behaviors. Requirements include abstinence from a "compulsive" behavior; journaling about one's cognitive, emotional and behavioral reactions during the abstinence period; attending 12-step meetings; participating in a quasi-12-step in class meeting; critiquing a film depicting dynamics of an alcoholic family.

**CNP 4799 Infectious Diseases in Addictive Behaviors (2 Credits)**

Drug and alcohol abuse and infectious diseases go hand in hand. This class explores the high risk for contracting and spreading infectious diseases among drug abusers. This class helps prepare students to identify such diseases, determine client risk for infection, and educate students about disease prevention and treatment options.

**CNP 4800 Consultation (1 Credit)**

This course is designed to teach the basic theories of psychological consultation that can be used to guide practice in a variety of settings. Students learn to differentiate process, collaborative and expert consultation. The class format includes presentations from practitioners working in school, medical, forensic, and business settings. In addition, students also learn about the ethical principles that guide their practice and to also become sensitive to how their work with diverse cultural backgrounds may be perceived. Prerequisite: must be enrolled in the Counseling Psychology doctoral program.

**CNP 4991 MA Independent Study (1-10 Credits)****CNP 4995 Independent Research (1-10 Credits)****CNP 5771 Counseling Psychology: Doctoral Research Seminar (3 Credits)**

The purpose of this course is to guide students in completing the Dissertation. This is not a research methods course but a course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**CNP 5991 PhD Independent Study (1-10 Credits)****CNP 5995 Independent Research (1-20 Credits)**

## School Counseling (COUN)

**COUN 4001 School Counseling Immersion (0 Credits)**

This on-campus experience is for students in the SchoolCounseling@Denver online program.

**COUN 4600 Orientation to Professional Counseling & Ethical Practice (4 Credits)**

This course provides an introduction to the counseling profession, including an overview of legal, ethical, and structural issues.

**COUN 4610 Counseling Techniques (4 Credits)**

Foundations and application of counseling and interviewing skills. This course emphasizes building and maintaining counseling relationships, facilitating client self-exploration and expression, and skills including, but not limited to, empathy, reflection, and challenging.

**COUN 4620 Counseling Theory (4 Credits)**

This course introduces students to basic counseling and psychological theories and philosophical principles as a foundation for professional training including history, concepts, techniques, and trends. Students gain an understanding of the theories and research related to helping relationships and develop the skills to apply their knowledge in therapeutic relationships through experiential activities. Students also develop and refine their own counseling orientation.

**COUN 4630 Research Methods (4 Credits)**

This course provides an introduction and overview of quantitative, qualitative, and mixed-methods research in counseling and education, including the development of program evaluations and assessments.

**COUN 4700 Social & Cultural Diversity (4 Credits)**

Overview of multicultural and social justice issues in the United States and their relationship with and implications for counseling. Content includes but is not limited to examination of concepts related to race, ethnicity, religion, socioeconomic status, gender, sexuality, and neurodiversity within a framework of privilege, oppression, and intersectionality. Prerequisites: COUN 4600 & COUN 4610.

**COUN 4710 Group Counseling (4 Credits)**

This course provides an introduction to group counseling theory, process, leadership, and techniques. It includes participation as a group member in a small group activity, as articulated within the course. Prerequisites: COUN 4600, COUN 4610, and COUN 4620.

**COUN 4720 Assessment & Appraisal (5 Credits)**

This course is designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course provides students with exposure to basic objective tests, projective tests, personality tests, and other diagnostic techniques. Prerequisite: COUN 4600 & COUN 4630.

**COUN 4730 Lifespan Development (4 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development. Prerequisites: COUN 4600.

**COUN 4740 Roles & Responsibilities of the School Counselor (4 Credits)**

This course provides an in-depth study into the roles and responsibilities of a school counselor including counselor, consultant, coordinator, and educational leader. Strategies for increasing collaboration among interested parties, attendance among students, and involvement among caregivers are included. Students will understand the role of the school counselor as an educational leader and advocate for social justice in the school setting.

**COUN 4750 Exceptionalities (2 Credits)**

Survey of research and theory related to learners with exceptionalities. This includes but is not limited to differences (e.g., cognitive, behavioral, physical) which warrant additional services toward meeting the needs of the individual. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4800 Career Counseling (4 Credits)**

This course facilitates development of knowledge, skills and competencies to engage in counseling clients with career issues, utilize occupational/career resources including technology-based resources and assessments, examine theories of career development and decision-making, develop the ability to evaluate and implement appropriate assessments, collaborate with clients in identifying personal and career goals, and organize and implement program planning and techniques in a diversity of work settings. Prerequisite: COUN 4630.

**COUN 4801 Developmental Application (2 Credits)**

Application of developmentally informed counseling skills and theories. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4805 Gender & Sexuality (4 Credits)**

This course provides students with an understanding of human sexuality and gender identities/expressions throughout the lifespan. It highlights awareness, knowledge, and skills in working with affectionally-, sexually-, and gender-diverse students in schools. The course explores impacts of our dynamic, intersecting identities on sex, sexuality, gender, intimacy, and diverse relationship structures. Prerequisites: COUN 4700 and COUN 4730.

**COUN 4810 Comprehensive School Counseling Programs (4 Credits)**

This course provides a framework for developing a comprehensive school counseling program in order to meet the development needs of students in the domains of academic, career, and social/emotional development. Students become familiar with the American School Counselor Association's National Model, the use of data to inform programmatic decision making, and factors related to school attendance and safety. The course is designed to provide students with practical experience in needs assessment, and program development, implementation, and evaluation. Prerequisites: COUN 4600.

**COUN 4815 Program Evaluation (2 Credits)**

This course facilitates familiarity with application and implementation of program evaluation concepts, including evaluation design, statistical methods, and ethical and cultural considerations. Prerequisites: COUN 4630, COUN 4730, and COUN 4740.

**COUN 4820 Counseling Youth & Families (4 Credits)**

Introduction to counseling children and adolescents, with considerations related to counseling within the family system. Includes integration of developmental, psychological, counseling, and family theories, and application of evidence-based interventions. Prerequisites: COUN 4730.

**COUN 4825 Activity-Based Counseling (3 Credits)**

This course explores activity-based counseling theory and interventions. Emphasis is placed on the ways children and youth use play, fantasy, art, and other activities to communicate. Students learn developmentally appropriate play and activity-based therapy techniques, theory, and practical application. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4830 Diagnosis in Counseling (4 Credits)**

This course covers the identification and treatment of psychological disorders and substance use and abuse across the lifespan. Special emphasis is placed on risks, signs, and symptoms of mental health and substance use disorders from a school counseling perspective, including common treatments and both school- and community-based resources and supports. Prerequisites: COUN 4720 and COUN 4730.

**COUN 4835 Counseling for Trauma, Crisis, & Grief (4 Credits)**

Through combination of lecture, role plays, and case conceptualization, this course provides students with foundational knowledge of theories, models, and best practices for trauma, grief, and crisis across the lifespan. Emphasis will be placed on learning how to differentiate between trauma, grief, and crisis when assessing, conceptualizing, and providing services to P-12 students. This course will also address the individual and systemic impact of trauma, crisis, and grief on students, families, and communities. Prerequisite: COUN 4700 & COUN 4730.

**COUN 4840 Educational Strategies and Policies (4 Credits)**

This course provides an overview of the history and current issues in legislation and government policy relevant to school counseling. It provides training in advocacy, leveraging community resources, differentiated instruction, multilingual learners, and classroom management to prepare students for engaging with a diverse P-12 student population. Prerequisites: COUN 4740.

**COUN 4850 School Counselor Interventions (4 Credits)**

This course focuses on developmentally appropriate evidence-based interventions used in a school setting for prevention and intervention to support and promote academic achievement and post-secondary success. The course explores interventions to address common social emotional, academic, and career-related issues faced by students in schools, including culturally competent peer-, community-, and family-based approaches. Prerequisites: COUN 4810.

**COUN 4900 Practicum (4 Credits)**

A minimum of 100-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4740.

**COUN 4901 School Counseling Field Supervision (1 Credit)**

This course provides group supervision for students completing supervised field experience in roles and settings with clients relevant to their specialty area. Prerequisite: COUN 4900. This prerequisite may be taken concurrently with COUN 4901.

**COUN 4910 Internship I (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4900.

**COUN 4920 Internship II (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4910.

**Counseling Psychology Courses****CNP 4642 Adult Development (3 Credits)**

Literature on normal development of adult thinking and problem-solving processes and the self-esteem. Physiological changes and relationship between cognitive development and developmental tasks of adults included.

**CNP 4645 Lifespan Development (5 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development.

**CNP 4700 Counseling Theory (5 Credits)**

Basic counseling theories and philosophical principles as a foundation for professional training including history, concepts, techniques and trends.

**CNP 4701 Advanced Seminar: Counseling Theory (3 Credits)**

Focus on advanced practice issues and (doctoral students only) integration of theory and practice.

**CNP 4702 Introduction to Assessment (5 Credits)**

This is a biweekly course designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course will provide students with exposure to basic objective tests, projective tests, personality tests and other diagnostic techniques.

**CNP 4704 Psychological Assessment (5 Credits)**

Administration, scoring and interpretation of objective and projective personality-assessment techniques, the DSM IV, diagnostic categories, report-writing skills, ethical standards for testing. Lab fee required. Prerequisite: counseling or school of psychology Ph.D. student or instructor approval.

**CNP 4705 History and Systems of Psychology (3 Credits)**

Historical and philosophical basis of modern psychological theories; basic issues as related to major school of psychology.

**CNP 4706 Cognitive Assessment (5 Credits)**

This course provides students in Counseling Psychology with experience in individual intelligence, learning and memory, and neurocognitive screening test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed on synthesizing and integrating information from cognitive assessment with other sources to produce effective intervention and therapeutic recommendations. Issues regarding the use of such tests are discussed, as well as appropriate use in agencies and clinical practice. Lab fee required.

**CNP 4707 Introduction to Integrated Health (3 Credits)**

This course is designed to provide students with an introduction to issues in the practice of integrated health psychology, including the topics of interprofessionalism, diagnosis and assessment, treatment, treatment adherence, and consultation. Students will learn about the roles held by behavioral health providers, particularly in the primary care medical setting. Emphasis is placed on evidence-based and culturally competent practice in the integrated health environment.



**CNP 4710 Career Counseling (5 Credits)**

This course is designed to facilitate student development of knowledge, skills and competencies to engage in counseling clients with career issues; utilize occupational/career resources including technology-based resources and assessments; examine theories of career development and decision-making; develop the ability to evaluate and implement appropriate assessments; collaborate with clients in identifying personal and career goals; and organize and implement program planning and techniques and do so in a diversity of work settings. Lab fee required.

**CNP 4720 Group Counseling Theory (5 Credits)**

This course is designed to introduce graduate counseling students to group counseling theory, research, and practice. This course will focus on group theory and research but will also provide instruction and experiences in a variety of group techniques. The course is designed for students in counseling psychology, school psychology, and other related fields who work with persons in a group context. This course focuses on the entire age range from children, adolescents, and adults. This course aims to define therapeutic groups broadly. Students will learn about group theory, research, and techniques through class lectures and discussion, group demonstrations, videotapes on group topics, reading assignments, a group presentation, an experiential task group, a required paper related to the task group presentation, and other required assignments.

**CNP 4730 Research Methods and Program Evaluation (5 Credits)**

This course is designed to provide an introduction and overview of comprehensive program development and evaluation, and research methods. The course will provide direction on the following topics: causation, research hypotheses, independent and dependent variables, sampling, internal and external validity, experimental, quasi-experimental, single-subject, causal-comparative, and correlational designs, measurement and data collection procedures, types of instrumentation and methods for determining reliability.

**CNP 4740 Basic Counseling Techniques (3 Credits)**

Basic counseling and interviewing skills; emphasis on building counseling relationships and facilitating client's self-exploration; skills of empathy, advanced empathy, self-disclosure, confrontation and immediacy.

**CNP 4741 Int Counseling Techniques (3 Credits)**

Sample of counseling techniques and effectiveness with different types of clients. Prerequisite: CNP 4740.

**CNP 4743 Professional Development in Counseling (1 Credit)**

Introduction to the field of counseling with special emphasis on practicum placement. Prerequisite: admission to the MA program in counseling psychology.

**CNP 4750 Counseling Psychology Beginning Practicum (3 Credits)**

Supervised practice in counseling for master's students. Prerequisite: CNP 4740, and be a counseling psychology student.

**CNP 4751 M.A. Internship (1-5 Credits)**

Yearlong, 600-hour supervised field practice for second-year master's students with weekly seminar. Prerequisites: CNP 4750 and be a counseling psychology master's students.

**CNP 4752 Counseling Psychology Advanced Practicum I (3 Credits)**

Supervised practice in counseling for doctoral students. Prerequisites: CNP 4750 or prior practicum, and be a counseling psychology student.

**CNP 4753 Counseling Psychology Advanced Practicum II (1 Credit)**

Group supervised practice in counseling for second-year doctoral students with emphasis on process and countertransference issues. Prerequisite: CNP 4752.

**CNP 4754 Couns Psych: PhD Internship (1 Credit)**

Meets 12-month internship requirement in counseling psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CNP 4755 MA Clinic (1,5 Credit)**

MA clinic is a required course for all students in the 90-credit Clinical Mental Health Counseling Concentration.

**CNP 4756 PhD Counseling Clinic (1 Credit)**

On-campus, advanced-experience counseling of clients from the community with close supervision and observation. Prerequisite: Doctoral student in counseling psychology.

**CNP 4758 PhD Field Experience (8 Credits)**

Required 12-month, 40-hour-per-week internship for doctoral students in Counseling Psychology. Registration for this course indicates full-time enrollment. This course is not graded. Prerequisites: completion of comprehensive examination and dissertation proposal. Department approval is required for registration. Fall quarter enrollment must be done in conjunction with CNP 4754.

**CNP 4760 School Counseling Practicum (1-4 Credits)**

A minimum of 100 hours supervised practice in School Counseling for Master's students in the School Counseling Concentration. Students must be supervised by a licensed school counselor. Enforced Prerequisites: CNP 4740 with a minimum grade of C.

**CNP 4761 School Counseling Internship I (1-4 Credits)**

100-hour supervised field practice in a school setting for Master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4762 School Counseling Internship II (1 Credit)**

A minimum of 600-hour supervised field practice in a school setting for master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4768 Counseling Psychology: Social Psychology (3 Credits)**

Social Psychology is designed to provide students a broad and general understanding of social psychology. The course will cover aspects of self, cultural dynamics, group processes, emotional/cognitive aspects of social behavior.

**CNP 4769 Cognitive Behavioral Therapy (4 Credits)**

Cognitive Behavior Therapy (CBT) is a treatment approach that incorporates a multitude of evidence-based strategies to construct an individualized and comprehensive treatment plan for a wide variety of mental/behavioral disorders. CBT has been extensively investigated in both research and applied setting. CBT offers foundational knowledge and skills to provide an active, client involved approach to resolving individual and family challenges. CBT is structured, goal-directed, and focuses directly on client problem areas. Students will practice and develop the skills necessary to implement CBT techniques and strategies.

**CNP 4770 Counseling Psychology Seminar: Research (3 Credits)**

Review of current process and outcome research in counseling and psychotherapy; substantive issues, including client and therapist variables as well as methodological issues and experimental designs. Prerequisite: doctoral student.

**CNP 4772 Diversity Seminar: Psycho-Social Issues (1-5 Credits)**

Series of courses to analyze social and psychological impacts of oppression related to minority status, socioeconomic status, gender and family configurations; taught using an awareness and knowledge approach; implications for counseling; series includes general seminar and series of 1 credit follow-up seminars on particular topics, e.g., American Indian mental health, African- American mental health and women's mental health. Prerequisites: CNP 4773 and students must take the 3-credit general seminar prior to the individual seminars.

**CNP 4773 Diversity: Multicultural Counseling Psychosocial Issues (5 Credits)**

The purpose of this course is to provide an overview of multicultural and social justice issues in the United States. While this is not a skills training course, implications for multicultural counseling skills will also be discussed. Issues and concepts related to gender, race, ethnicity, sexual orientation, gender identity, and social class will be examined within a framework of privilege and oppression. This course is designed to present a general introduction to multicultural and social justice issues as well as culturally responsive counseling. Due to the extensive amount of material in this area, only some selected issues and topics will be presented. Students interested in gaining more specific, or in-depth knowledge of topics covered in this class may pursue the one-credit Counseling Psychology diversity seminars offered in the Counseling Psychology program. Significant emphasis will also be placed on experiential learning and the application of students' awareness and knowledge accrued throughout the quarter.

**CNP 4775 Counseling Psychology: Cognitive & Affective Basis of Behavior (3 Credits)**

The seminar is intended to enhance students' understanding of the fundamental psychological concepts in cognitive and affective sciences and of the relevance of these theories and concepts to clinical practitioners. This seminar will provide weekly lectures to engage students in core issues surrounding the scientific study of affective and cognitive processes involved in human behavior. Academic inquiry and dialogue will also be fostered through group presentations and discussions of peer-reviewed journal articles and book chapters.

**CNP 4776 Family Counseling (3 Credits)**

Introduction to family counseling, including survey of major theories and research, and in-class demonstrations of techniques. Prerequisite: advanced master's or doctoral student.

**CNP 4778 Health Psychology (3 Credits)**

Overview of rapidly expanding field of health psychology; wide variety of topics dealing with role of psychological processes in health and health care; includes impact of stress on physical health, and psychological factors that determine health-related behavior, psychological aspects of delivery of health care, and assessment issues in health psychology.

**CNP 4780 Counseling Psychology Seminar: Supervision (3 Credits)**

Introduces literature and research on counseling supervision, including awareness of individual differences; provides experience supervising master's level counselors. Prerequisites: doctoral student and CNP 4752.

**CNP 4781 Counseling Psychology: Introduction to Psychodynamic Theory (4 Credits)**

This class will explore psychodynamic theory, with an emphasis on creating case formulations and practicing an analytic position in the treatment process. We will be focusing primarily on individual treatment with adults in outpatient settings using a developmental lens. You will be encouraged to develop and deepen your capacities for curiosity and self-reflection, in part as they relate to the exploration of countertransference reactions and meaning making. You will be learning both professionally and personally, as they mutually influence one another, what it means to be a psychodynamic clinician.

**CNP 4783 Counseling Psychology: Eating Disorders (3 Credits)**

This class will offer the opportunity to learn about the diagnosis, assessment, theory, and treatment of eating, weight and shape disorders. While working with clients with eating disorders (EDs) can present unique challenges, we will explore the perception/stigma that these clients are notoriously difficult to treat. We will focus on the importance of integrative treatments, and the role of behavioral, symptom focused techniques in addition to psychodynamic approaches that explore underlying characterological and developmental issues. This class will also consider the impact of culture and media on body image, and the effects of these messages on personal beliefs, attitudes and behaviors.

**CNP 4784 Psychopathology (5 Credits)**

This course is designed to provide students with a thorough understanding of assessment, diagnosis and classification of psychological abnormalities. Psychopathology is typically characterized by deviance from cultural norms, personal distress, danger to oneself or others, or an inability to function in daily life. We will explore the empirical basis for understanding psychopathology as defined in the DSM 5, as well as, the inherent limitations of the current diagnostic system. Interactions of biological, social, psychological, cultural, political, and environmental factors will be stressed, particularly as they contribute to the development and maintenance of mental disorders. Cultural perspectives on each disorder will be addressed every week to attend to issues of social justice and multiculturalism related to diagnosis.

**CNP 4787 Motivational Interviewing (4 Credits)**

Motivational Interviewing is a client-centered collaborative style of therapeutic relationship designed to strengthen a person's motivation for and commitment to change. This class will facilitate skill development in managing client ambivalence, eliciting change-talk and honoring the client's autonomy regarding taking steps toward a commonly agreed upon goal.

**CNP 4788 Physiological Psychology (3 Credits)**

Physiological Psychology is designed to expose students to the field of physiology and highlights its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g., substance abuse, mental illness, and biological rhythms). Given the limited time devoted to each area, more in-depth coverage should be pursued by interested persons.

**CNP 4789 Pharmacology of Addictive Behavior I and II (4 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors.

**CNP 4790 Counseling Psychology Seminar: Ethics (3 Credits)**

Professional ethics in practice and research in counseling psychology, including informed consent, confidentiality, clients' rights, psychologists' obligations, etc.; basic APA documents. Prerequisite: doctoral student.

**CNP 4791 Counseling Psychology Seminar: Counseling Couples (3 Credits)**

Introduction to couples counseling, including survey of major theories and research.

**CNP 4792 Pro-Seminar in Counseling Psychology (1 Credit)**

Introduction to field of counseling psychology required for all first-quarter doctoral students. Prerequisite: counseling psychology doctoral students.

**CNP 4794 Counseling Psychology Seminar: Special Topics (1-15 Credits)**

Variety of special topics on research and practice in counseling psychology; readings, lectures and projects to provide an in-depth understanding of topics, which vary from to year and cover areas such as counseling women, counseling in business and industry, advanced group therapy, time-limit counseling, vocational counseling, etc.

**CNP 4795 Master of Arts Counseling: Legal and Ethical Issues (5 Credits)**

Introduction to ethical and legal issues in school and agency counseling for master's students. Prerequisite: Master's student in Counseling Psychology.

**CNP 4797 Counseling Addictive Behavior (4 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and nonchemical addictive behaviors. Requirements include abstinence from a "compulsive" behavior; journaling about one's cognitive, emotional and behavioral reactions during the abstinence period; attending 12-step meetings; participating in a quasi-12-step in class meeting; critiquing a film depicting dynamics of an alcoholic family.

**CNP 4799 Infectious Diseases in Addictive Behaviors (2 Credits)**

Drug and alcohol abuse and infectious diseases go hand in hand. This class explores the high risk for contracting and spreading infectious diseases among drug abusers. This class helps prepare students to identify such diseases, determine client risk for infection, and educate students about disease prevention and treatment options.

**CNP 4800 Consultation (1 Credit)**

This course is designed to teach the basic theories of psychological consultation that can be used to guide practice in a variety of settings. Students learn to differentiate process, collaborative and expert consultation. The class format includes presentations from practitioners working in school, medical, forensic, and business settings. In addition, students also learn about the ethical principles that guide their practice and to also become sensitive to how their work with diverse cultural backgrounds may be perceived. Prerequisite: must be enrolled in the Counseling Psychology doctoral program.

**CNP 4991 MA Independent Study (1-10 Credits)****CNP 4995 Independent Research (1-10 Credits)****CNP 5771 Counseling Psychology: Doctoral Research Seminar (3 Credits)**

The purpose of this course is to guide students in completing the Dissertation. This is not a research methods course but a course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**CNP 5991 PhD Independent Study (1-10 Credits)**

**CNP 5995 Independent Research (1-20 Credits)**

## **School Counseling Courses**

**COUN 4001 School Counseling Immersion (0 Credits)**

This on-campus experience is for students in the SchoolCounseling@Denver online program.

**COUN 4600 Orientation to Professional Counseling & Ethical Practice (4 Credits)**

This course provides an introduction to the counseling profession, including an overview of legal, ethical, and structural issues.

**COUN 4610 Counseling Techniques (4 Credits)**

Foundations and application of counseling and interviewing skills. This course emphasizes building and maintaining counseling relationships, facilitating client self-exploration and expression, and skills including, but not limited to, empathy, reflection, and challenging.

**COUN 4620 Counseling Theory (4 Credits)**

This course introduces students to basic counseling and psychological theories and philosophical principles as a foundation for professional training including history, concepts, techniques, and trends. Students gain an understanding of the theories and research related to helping relationships and develop the skills to apply their knowledge in therapeutic relationships through experiential activities. Students also develop and refine their own counseling orientation.

**COUN 4630 Research Methods (4 Credits)**

This course provides an introduction and overview of quantitative, qualitative, and mixed-methods research in counseling and education, including the development of program evaluations and assessments.

**COUN 4700 Social & Cultural Diversity (4 Credits)**

Overview of multicultural and social justice issues in the United States and their relationship with and implications for counseling. Content includes but is not limited to examination of concepts related to race, ethnicity, religion, socioeconomic status, gender, sexuality, and neurodiversity within a framework of privilege, oppression, and intersectionality. Prerequisites: COUN 4600 & COUN 4610.

**COUN 4710 Group Counseling (4 Credits)**

This course provides an introduction to group counseling theory, process, leadership, and techniques. It includes participation as a group member in a small group activity, as articulated within the course. Prerequisites: COUN 4600, COUN 4610, and COUN 4620.

**COUN 4720 Assessment & Appraisal (5 Credits)**

This course is designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course provides students with exposure to basic objective tests, projective tests, personality tests, and other diagnostic techniques. Prerequisite: COUN 4600 & COUN 4630.

**COUN 4730 Lifespan Development (4 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development. Prerequisites: COUN 4600.

**COUN 4740 Roles & Responsibilities of the School Counselor (4 Credits)**

This course provides an in-depth study into the roles and responsibilities of a school counselor including counselor, consultant, coordinator, and educational leader. Strategies for increasing collaboration among interested parties, attendance among students, and involvement among caregivers are included. Students will understand the role of the school counselor as an educational leader and advocate for social justice in the school setting.

**COUN 4750 Exceptionalities (2 Credits)**

Survey of research and theory related to learners with exceptionalities. This includes but is not limited to differences (e.g., cognitive, behavioral, physical) which warrant additional services toward meeting the needs of the individual. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4800 Career Counseling (4 Credits)**

This course facilitates development of knowledge, skills and competencies to engage in counseling clients with career issues, utilize occupational/career resources including technology-based resources and assessments, examine theories of career development and decision-making, develop the ability to evaluate and implement appropriate assessments, collaborate with clients in identifying personal and career goals, and organize and implement program planning and techniques in a diversity of work settings. Prerequisite: COUN 4630.

**COUN 4801 Developmental Application (2 Credits)**

Application of developmentally informed counseling skills and theories. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4805 Gender & Sexuality (4 Credits)**

This course provides students with an understanding of human sexuality and gender identities/expressions throughout the lifespan. It highlights awareness, knowledge, and skills in working with affectionally-, sexually-, and gender-diverse students in schools. The course explores impacts of our dynamic, intersecting identities on sex, sexuality, gender, intimacy, and diverse relationship structures. Prerequisites: COUN 4700 and COUN 4730.

**COUN 4810 Comprehensive School Counseling Programs (4 Credits)**

This course provides a framework for developing a comprehensive school counseling program in order to meet the development needs of students in the domains of academic, career, and social/emotional development. Students become familiar with the American School Counselor Association's National Model, the use of data to inform programmatic decision making, and factors related to school attendance and safety. The course is designed to provide students with practical experience in needs assessment, and program development, implementation, and evaluation. Prerequisites: COUN 4600.

**COUN 4815 Program Evaluation (2 Credits)**

This course facilitates familiarity with application and implementation of program evaluation concepts, including evaluation design, statistical methods, and ethical and cultural considerations. Prerequisites: COUN 4630, COUN 4730, and COUN 4740.

**COUN 4820 Counseling Youth & Families (4 Credits)**

Introduction to counseling children and adolescents, with considerations related to counseling within the family system. Includes integration of developmental, psychological, counseling, and family theories, and application of evidence-based interventions. Prerequisites: COUN 4730.

**COUN 4825 Activity-Based Counseling (3 Credits)**

This course explores activity-based counseling theory and interventions. Emphasis is placed on the ways children and youth use play, fantasy, art, and other activities to communicate. Students learn developmentally appropriate play and activity-based therapy techniques, theory, and practical application. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4830 Diagnosis in Counseling (4 Credits)**

This course covers the identification and treatment of psychological disorders and substance use and abuse across the lifespan. Special emphasis is placed on risks, signs, and symptoms of mental health and substance use disorders from a school counseling perspective, including common treatments and both school- and community-based resources and supports. Prerequisites: COUN 4720 and COUN 4730.

**COUN 4835 Counseling for Trauma, Crisis, & Grief (4 Credits)**

Through combination of lecture, role plays, and case conceptualization, this course provides students with foundational knowledge of theories, models, and best practices for trauma, grief, and crisis across the lifespan. Emphasis will be placed on learning how to differentiate between trauma, grief, and crisis when assessing, conceptualizing, and providing services to P-12 students. This course will also address the individual and systemic impact of trauma, crisis, and grief on students, families, and communities. Prerequisite: COUN 4700 & COUN 4730.

**COUN 4840 Educational Strategies and Policies (4 Credits)**

This course provides an overview of the history and current issues in legislation and government policy relevant to school counseling. It provides training in advocacy, leveraging community resources, differentiated instruction, multilingual learners, and classroom management to prepare students for engaging with a diverse P-12 student population. Prerequisites: COUN 4740.

**COUN 4850 School Counselor Interventions (4 Credits)**

This course focuses on developmentally appropriate evidence-based interventions used in a school setting for prevention and intervention to support and promote academic achievement and post-secondary success. The course explores interventions to address common social emotional, academic, and career-related issues faced by students in schools, including culturally competent peer-, community-, and family-based approaches. Prerequisites: COUN 4810.

**COUN 4900 Practicum (4 Credits)**

A minimum of 100-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4740.

**COUN 4901 School Counseling Field Supervision (1 Credit)**

This course provides group supervision for students completing supervised field experience in roles and settings with clients relevant to their specialty area. Prerequisite: COUN 4900. This prerequisite may be taken concurrently with COUN 4901.

**COUN 4910 Internship I (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4900.

**COUN 4920 Internship II (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4910.

## Educational Leadership and Policy Studies

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### Educational Leadership and Policy Studies

The Educational Leadership and Policy Studies (ELPS) department prepares courageous, visionary, and transformative leaders in educational settings at all levels of the education system. To achieve this, the program offers intensive, integrated academic and field-based experiences and competency-

based learning to support students as they develop effective leadership competencies. National partnerships and memberships with the Carnegie Project on the Education Doctorate (CPED), Alliance to Reform Educational Leadership (AREL), University Council of Educational Administration (UCEA), Wallace Foundation, Carnegie Foundation, New York City Leadership Academy, Teach For America, Colorado Association of School Executives (CASE), and local school district partnerships help the program to continuously improve. The ELPS department is a CDE-approved provider of School Turnaround Leadership (<http://www2.ed.gov/programs/turnaroundschldr/?exp=0>). Students within the department focus on leadership, policy studies, and research that are relevant and appropriate for meeting today's and tomorrow's educational challenges.

All of the degree programs in ELPS engage students in rigorous content, collaborative inquiry, and reflective practice within a tightly-connected cohort structure that intentionally builds learning communities and professional networks. Faculty members partner with individuals, schools, districts, and organizations to build leadership capacity and improve all educational contexts. All components of ELPS programs incorporate the following practices to prepare students to generate new knowledge and expand career choices within the field of education.

- Leading change and demonstrating impact in K-12 education
- Learning through integrated academic and school-based experiences and projects
- Grounding all work in social justice, problems of practice, and authentic contexts
- Creating learning communities that foster academic achievement and optimal growth and development for each learner
- Engaging in leadership, policy and research that are relevant and appropriate for meeting today's and tomorrow's educational challenges in complex and ever-changing educational contexts

## Doctor of Philosophy (PhD) in Educational Leadership & Policy Studies

The **90-quarter-credit hour-program** beyond a master's degree is a degree with coursework that includes a strong focus on quantitative and qualitative research methods, educational leadership, organizational theory, systems theory, and policy analysis. These areas are studied in an effort to expand and enhance research skills and add to the knowledge base needed for effective schools. The ELPS PhD prepares individuals for successful careers in research, academia, educational leadership, and policy.

The program consists of two years of foundational doctoral coursework (two courses/quarter) and a third year of coursework of research methodology and a specialized focus of study. The coursework in the initial two years of the program is offered in a doctoral cohort format alongside ELPS EdD students. This cohort structure builds a learning community of fellow educational leaders and scholars who support each other through coursework and research. PhD students complete a traditional five-chapter dissertation. In addition to the requirements for the degree, students have the option of completing a 300-hour administrative internship (requirement for Administrator License, Special Education Director License, and Gifted Education Director License). Applicants must hold a master's degree or a juris doctor.

### Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates who have completed the Administrative Internship may apply for Colorado Initial Administrator License (<http://www.cde.state.co.us/cdeprof/checklist-initialadministratordirectorofspcial/>) through the CDE.

## Doctor of Education (EdD) in Educational Leadership & Policy Studies

This **65-credit-hour degree program** beyond a master's degree builds on prior leadership experience and preparation and prepares students to be transformative leaders in a variety of educational settings. The program consists of two years of foundational doctoral coursework (two courses per quarter). The coursework in the initial two years of the program is offered in a doctoral cohort format with ELPS PhD students. This cohort structure builds a learning community of fellow educational leaders and scholars who support each other through coursework and research. After the initial two years of coursework, EdD students continue to develop and complete their Dissertation in Practice. The Dissertation in Practice is independent research regarding a persistent, complex problem of practice with a supportive structure of quarterly research seminars. In addition to the requirements for the degree, students have the option of completing a 300-hour administrative internship (requirement for Administrator License, Special Education Director License, and Gifted Education Director License). Applicants must hold a master's degree or a juris doctorate and have completed a principal or teacher-leadership program, or have other school leadership-related work experience.

### Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates who have completed the Administrative Internship may apply for Colorado Initial Administrator License (<http://www.cde.state.co.us/cdeprof/checklist-initialadministratordirectorofspcial/>) through the CDE.

## Master of Arts (MA) in Educational Leadership & Policy Studies with a Concentration in Principal Licensure

The Master of Arts in Educational Leadership and Policy Studies with a concentration in Principal Licensure is designed to be completed the year following the Certificate in Educational Leadership and Policy Studies (see below). The MA offers extended study of transformative and turnaround leadership, covering issues of culture, diversity, poverty, special needs, business design, entrepreneurship, and data-driven leadership. The MA consists of a total of 45 credit hours, which includes the Certificate in Educational Leadership and Policy Studies with a concentration in Principal Licensure program (30 credits) and four additional courses (15 credits). The completion of the MA culminates with the design and execution of an action research or school design project.

This program can be completed in a hybrid in-person format with evening or weekend campus classes or in fully online format with evening or weekend synchronous Zoom classes.

### Program Accreditation

Colorado Department of Education (CDE) approved Educator Preparation Program and Turnaround Leader Program. Graduates may apply for Colorado Initial Principal License (<http://www.cde.state.co.us/cdeprof/checklist-initialprincipal/>) through the CDE.

## Certificate in Educational Leadership & Policy Studies with a Concentration in Principal Licensure

The 30-credit Certificate in Educational Leadership and Policy Studies leads to recommendation for Colorado Principal Certification. The program offers competency-based learning that is individualized to the leadership needs of the aspiring leader and the needs of the school in which the student is interning. It focuses not only on developing the skills and abilities necessary for success as a school leader, but also on developing a strong commitment to core values essential for ethical and responsible leadership.

The Certificate consists of four quarters of coursework and requires a minimum of 300 internship hours that are integrated into coursework. During the first quarter of the program (usually Summer), students engage in a leadership retreat that builds community and provides an experiential learning experience to practice the leadership theories and concepts that serve as the foundation of the program. The Certificate can be combined with additional coursework for a master's degree (see above).

The cohort structure promotes the development of a rich learning community for collaboration and challenge with many different opportunities for interaction and analysis. Each quarter incorporates face-to-face sessions with cohort and faculty, inquiry projects, self-assessments, various online learning activities including discussion boards and reflection journals, as well as readings to guide instruction and learning.

This program can be completed in a hybrid in-person format with evening or weekend campus classes or in fully online format with evening or weekend synchronous Zoom classes.

### Program Accreditation

Colorado Department of Education (CDE) Approved Educator Preparation Program. Graduates may apply for Colorado Initial Principal License (<http://www.cde.state.co.us/cdeprof/checklist-initialprincipal/>) through the CDE.

## Doctor of Philosophy in Educational Leadership & Policy Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctor of Education in Educational Leadership & Policy Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **Prerequisites**

- Applicants must have completed principal, teacher-leadership or other leadership preparation or served in a leadership position.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Master of Arts in Educational Leadership & Policy Studies with a Concentration in Principal Licensure**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Certificate in Educational Leadership and Policy Studies**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115



English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Educational Leadership and Policy Studies

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Year 1 and 2 - Foundation Requirements</b>		
RMS 4940	Structural Foundations of Research in Social Sciences <sup>1</sup>	3
ADMN 4827	Foundations of Educational History and Philosophy	4
RMS 4910	Introductory Statistics <sup>1</sup>	4
ADMN 4819	Organization Theory & Behavior	4
RMS 4941	Introduction to Qualitative Research <sup>1</sup>	4
ADMN 4823	Equitable and Socially Just Educational Policy Making in the United States	4
ADMN 4900	Advanced Inquiry and Analysis	4
ADMN 4821	Leading Design Improvement for Equity <sup>2</sup>	4
ADMN 4820	Educational Program Evaluation <sup>2</sup>	4
ADMN 4835	Leading Teaching and Learning	4
ADMN 4812	Perspectives in District Leadership <sup>2</sup>	4
ADMN 4844	Critical Policy Analysis for Educational Systems	4
ADMN 4836	Improving Organizational Culture	4
ADMN 4822	Action Research and Systems Leadership	4
<b>Subtotal:</b>		<b>55</b>
<b>Third Year of Study - Student Designs with Advisor (See list below for potential options)</b>		
RMS 4911	Correlation and Regression	4
RMS 4912	Analysis of Variance (ANOVA)	5
RMS 4913		
RMS 4914	Structural Equation Modeling	4
RMS 4915	Hierarchical Linear Modeling	4
<b>Recommended Options, Measurement Focus</b>		
RMS 4921	Psychometric Theory	3
RMS 4922	Item Response Theory	3
RMS 4913		
<b>Recommended Options, Qualitative Fous</b>		
RMS 4945	Community-Based Research	4
RMS 4947	Arts-Based Research	3
RMS 4946	Advanced Qualitative Research	4
<b>Other Recommended Research Options</b>		
RMS 4949	Topics in Qualitative Research	1-5
RMS 4939	Topics in Quantitative Research Methods	1-5
RMS 4919	Topics in Statistics	1-5
RMS 4932	Meta-Analysis Social Science Research	3
RMS 4951	Mixed Method Research Design	4
<b>REQUIRED: Cognate Area Courses (DU Leader Prep Programs MAY be counted in some circumstances)</b>		
Total Additional Cognate Hours:		
Total Hours, Year Three (Additional Research + Additional Cognate Hours):		25
<b>Doctoral Research</b>		<b>10</b>
		<b>MIN.</b>
Students are required to register for at least 1 credit hour each quarter (Fall, Winter, Spring) following all other coursework.		
ADMN 4700	Special Topics in K-12 Administration	1
ADMN 5900	Research Planning and Design	3
ADMN 5993	Doctoral Research Seminar	4-5
ADMN 5995	Independent Research	1-2

**Optional Internship**

Needed ONLY if seeking district level (Superintendency) Administrative License.

ADMN 4817	Administrative Internship (1-6 credits any quarter)	0-6
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> Indicates Research Courses which a student may have waived or test out.

<sup>2</sup> Recommended

\* *In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.*

A minimum of 90 credit hours is required beyond the earned master's degree. Up to 15 credits may be transferred in for the PhD; however, no credit hours from the earned master's degree used for admissions can be transferred into the PhD.

**PhD in Educational Leadership - Summary of Requirements**

- Program Area Requirements (24 credit hours)
- Introductory Research Areas (31 credit hours)
- Intermediate/Advanced Research Areas + Additional Cognate Hours (25 credit hours)
- Doctoral Research Hours (ADMN 4700, ADMN 5900, ADMN 5993, ADMN 5995) (10 MIN. credit hours)
- Total: 90 credit hours
- OPTIONAL: Internship Hours (6 needed if Superintendent/Administrator license is sought) (6 credit hours)

**Doctor of Education in Educational Leadership and Policy Studies****Degree Requirements****Coursework Requirements**

Code	Title	Credits
<b>Educational Leadership Coursework Requirement</b>		
RMS 4940	Structural Foundations of Research in Social Sciences	3
ADMN 4827	Foundations of Educational History and Philosophy	4
RMS 4910	Introductory Statistics <sup>1</sup>	4
ADMN 4819	Organization Theory & Behavior	4
RMS 4941	Introduction to Qualitative Research <sup>1</sup>	4
ADMN 4823	Equitable and Socially Just Educational Policy Making in the United States	4
ADMN 4900	Advanced Inquiry and Analysis	4
ADMN 4821	Leading Design Improvement for Equity	4
ADMN 4820	Educational Program Evaluation	4
ADMN 4835	Leading Teaching and Learning	4
ADMN 4812	Perspectives in District Leadership	4
ADMN 4844	Critical Policy Analysis for Educational Systems	4
ADMN 4836	Improving Organizational Culture	4
ADMN 4822	Action Research and Systems Leadership	4
<b>Doctoral Research Hours <sup>2</sup></b>		
ADMN 4700	Special Topics in K-12 Administration	1
ADMN 5900	Research Planning and Design	3
ADMN 5993	Doctoral Research Seminar	6
<b>Optional Internship</b>		
ONLY needed if seeking district level Administrator license		
ADMN 4817	Administrative Internship (300 field hours. 50 clock hours/credit for a total of 6 credits.)	0-6
<b>Total Credits</b>		<b>65</b>

<sup>1</sup> Indicates Research Courses which a student may have waived or test out.

<sup>2</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

<sup>3</sup> Minimum of 6 credits. Students are required to register for at least 1 credit hour each quarter (Fall, Winter, Spring) following all other coursework. ADMN 5993 is taken in three, 2-credit courses.

A minimum of 65 credit hours is required beyond the earned master's degree.

#### EdD Summary of Course Requirements

- Program Area Requirements (24 credit hours)
- Research Requirements (31 credit hours)
- Doctoral Research Hours (ADMN 4700, ADMN 5900 and ADMN 5993) (10 MIN. credit hours)
- **Total:** 65 credit hours
- Optional - Internship Hours (6 needed if Administrator license sought) (6 credit hours)

## Master's Program

### Master of Arts in Educational Leadership and Policy Studies with a Concentration in Principal Licensure

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Morgridge College of Education Requirements</b>		
Principal Licensure Concentration Requirements (Completed in year 1)		
ADMN 4840	Strategic and Transformative School Leadership	9
ADMN 4841	Instructional Leadership for Equitable Schools	5
ADMN 4842	Human Resource Leadership	5
ADMN 4843	Strategic Resource Management for School Leadership	5
Internship Requirements (6 credits)		
ADMN 4860	Principal Internship	2
ADMN 4860	Principal Internship	2
ADMN 4860	Principal Internship	2
Foundation Requirements (Completed in year 2)		
RMS 4900	Education Research and Measurement	4
ADMN 4834	Culturally Responsive School Leadership	3
Program Requirements (Completed in year 2)		
ADMN 4848	Liberatory Design for School Improvement	4
ADMN 4849	Action Research for School Leaders	4
<b>Total Credits</b>		<b>45</b>

Minimum number of credits required for degree: 45 credit hours

#### Summary of Requirements

- Principal Licensure Concentration Requirements (24 credit hours)
- Internship Requirements (6 credit hours)
- Foundation Requirements (7 credit hours)
- Program Requirements (8 credit hours)
- Action Research Capstone paper/project (form submitted to the department)

## Certificate Program

### Certificate in Educational Leadership and Policy Studies with a Concentration in Principal Licensure

#### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
ADMN 4840	Strategic and Transformative School Leadership	9
ADMN 4841	Instructional Leadership for Equitable Schools	5
ADMN 4842	Human Resource Leadership	5
ADMN 4843	Strategic Resource Management for School Leadership	5

ADMN 4860	Principal Internship	2
ADMN 4860	Principal Internship	2
ADMN 4860	Principal Internship	2
<b>Total Credits</b>		<b>30</b>

The program consists of four quarters of coursework and requires a minimum of 300 internship hours that are aligned with coursework.

Credits required for certificate: 30 credit hours

#### **ADMN 4330 Culturally Responsive Leadership, Mentoring & Supervision (3 Credits)**

The course is designed to assist mentors and instructional leaders in the development and application of skills and to bring these to day-to-day leadership in the current role of supporting a pre-service teacher. Students will analyze their leadership styles and apply their learning to leadership scenarios to refine their school leadership skills. Students will explore the mentor's role as an educational leader to enhance the existing educational experience for their pre-service teacher and classroom students. This course reviews adult learning theory, communication strategies, and problem-solving approaches for continuous school improvement and pre-service teacher supervision and feedback. This course includes studying and applying a variety of approaches for supporting, supervising, and evaluating educator effectiveness, including approaches to classroom observation; mentoring and peer support systems; and tenets of change theory related to school improvement initiatives.

#### **ADMN 4700 Special Topics in K-12 Administration (1-5 Credits)**

##### **ADMN 4810 School Administration: Case Studies (3 Credits)**

Focus on current critical aspects of work of effective superintendents and other administrators in key decision-making roles; includes reading, discussions and guest presenters who are practicing administrators; problem scenarios presented for resolution.

##### **ADMN 4812 Perspectives in District Leadership (4 Credits)**

District leaders must focus their actions on the common goal of improving student learning and school systems must be organized to make this the fundamental priority. The purpose of this course is to examine district-level leadership, policies, and practices that support a school community committed to and focused on achievement of all students. The district role is emphasized in supporting school improvement, closing achievement gaps, providing resources, monitoring and using accountability data, and working with the community and school board leadership. Responsible administration of human and fiscal resources is necessary to accomplish systemic instructional improvement at the district level. The goal is to prepare leaders who will lead school districts that are culturally responsive and promote equity and excellence. This course includes an experiential learning component.

##### **ADMN 4817 Administrative Internship (0-6 Credits)**

Opportunity to be supervised in on-the-job experience to better prepare school administration students for district administration careers.

##### **ADMN 4819 Organization Theory & Behavior (4 Credits)**

Educational institutions are complex, political organizations with a wide variety of constituents and many layers of sometimes competing cultures, systems, and explicit and implicit goals. Leaders who work with these systems must find ways to make meaning of the organization and the context in which work occurs. This course will look at organizational behavior from several points of view, with the goal of understanding major theories that have been developed and learning to apply these theories in the management and study of organizations. The roles and responsibilities of various members of the organizations will be examined as well as the governance and control issues surrounding education. Organizational analysis will be viewed through the lens of structural, political, human resource and symbolic frames. Students will critically learn and apply various organizational theories to expand your own beliefs about leadership and learning. This course includes an experiential learning component.

##### **ADMN 4820 Educational Program Evaluation (4 Credits)**

The purpose of this course is to review theories of program evaluation, evaluation designs and analysis, and current trends in evaluation. Program evaluation aims to determine whether a program, regulation, or policy is achieving its objectives by ascertaining whether it had the desired effect on intended outcomes. The evaluation process may include evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself. The course equips students with basic evaluation tools and understandings necessary to be thoughtful consumers and effective users of program evaluations in improving policy outcomes and designing more effective programs and policies. It is designed to provide students with the meaning and methods of program and policy instrument evaluation in education with the intent to contribute to informed decision making and enlightened change. Students analyze evaluations of the effectiveness of a variety of programs through discussion, field work, and case studies. This course includes an experiential learning component.

##### **ADMN 4821 Leading Design Improvement for Equity (4 Credits)**

The course focuses on school reform and improvement through improvement science. Improvement science is an emerging concept which focuses on exploring how to undertake continuous quality improvement. The aim of this class is to explore strategies of improvement science to develop educators' knowledge and skills to uncover and use data that exist in classrooms and schools for the purpose of promoting educational change and improvement. The participants in this course will create and conduct an improvement science project. This course includes an experiential learning component.

**ADMN 4822 Action Research and Systems Leadership (4 Credits)**

This course will prepare students, as scholarly practitioners and academic researchers, to use action research methodology and systems leadership to solve equity related educational problems of practice. Action research, which was developed in education in 1940's by Kurt Lewin, is practitioner-based research, based in traditional research designs. It is focused on improvement, connects theory to practice, encourages empowerment, and advocates for social justice.

**ADMN 4823 Equitable & Socially Just Educational Policy Making in the United States (4 Credits)**

This course focuses on the educational policy system, the policy process, and current educational reforms. In addition to an overview of the basic governmental structure, this course addresses the micropolitics of education, including how to implement and advocate for more equitable, socially just, and anti-racist policies to improve the quality and effectiveness of learning for children and families. Course activities facilitate the development of skills for addressing policies and practices that affect the success of all students and schools, learning how to identify and unpack current critical issues, and identifying where and how to act to influence policy decisions. This course includes an experiential learning component.

**ADMN 4827 Foundations of Educational History and Philosophy (4 Credits)**

This foundational course examines the various theoretical, ethical, historical and philosophical perspectives that will inform educational leaders as policy and change strategies are formulated. This course includes an experiential learning component.

**ADMN 4828 Leadership for the 21st Century: Using Creativity to Build Effective Schools (3 Credits)**

Designed to assist leaders, at the district or building level, in the implementation of standards-based education to improve student learning and achievement. Primary emphasis is given to applying strategies for addressing critical issues in sustaining the equitable access to learning in a standards-based educational organization.

**ADMN 4834 Culturally Responsive School Leadership (3 Credits)**

Extends understanding of complex systems' operations and responses by examining multicultural issues in the historical and social context and complexity of schools and school districts. Opportunities will be provided for students to develop an understanding of issues of diversity and the relationship of these issues to the roles and work of school/district administrators. The exploration of multicultural issues will occur through the examination of various themes relative to school/district administration such as curriculum, administration, human resources, policy and reform. Particular emphasis will be given to the exploration of the historical and future purposes of schooling in a democratic/pluralistic society in an effort to help students to develop critical knowledge and skills essential for providing leadership in 21st century schools.

**ADMN 4835 Leading Teaching and Learning (4 Credits)**

In this course, students will examine what it means to be a district-level leader focused on and supportive of learning by considering the roles and responsibilities of leaders related to teaching and learning, and by examining the challenges and opportunities inherent in that role. Topics of study relevant to instructional leadership include developing (a) coherent systems of teaching and learning, (b) professional community, (c) professional capacity, and (d) an equitable, student-centered learning climate. Students will gain practical and theoretical tools to improve curriculum development, instruction, and student achievement district wide. Students will meld theory and practice by using empirical thinking and evidence-based change to address social justice concerns within instructional programs in schools and school districts. We will look at how curriculum both reproduces and transforms society and how society both reproduces and transforms curriculum in schools. This course includes an experiential learning component.

**ADMN 4836 Improving Organizational Culture (4 Credits)**

The purpose of this course is to understand organizational culture as a complex and challenging issue to shape and lead. The complex culture of schools or other educational organizations means many things including climate, organizational members' engagement, culturally competent practices and the quality of human relationships in the organizational environment. This course will enable leaders to analyze the components of an educational organization's culture and develop specific plans to create a culture that supports improved learning outcomes for every student, using high-quality, best instructional practices. Following the collection and analysis of data, students will be prepared to serve as Equity Oriented Change Agents (EOCA), leading the improvement of school culture focused on equitable access to high-quality instruction and services for every student. This course includes an experiential learning component.

**ADMN 4840 Strategic and Transformative School Leadership (9 Credits)**

Effective school administration is guided by research and best practices which inform governance, vision, leadership, and implementation processes. Effective principals base their work on commitment to moral principles, core values, and the many dimensions of effective theory and practice. Understanding personal values, developing leadership skills and building a strong knowledge base regarding research and best practice are a key focus of the course. In addition, this course also examines strategies for visioning, mission building and branding; defining and assessing value and quality; developing competitive strategy; building networks and partnerships; assessing risk and gauging opportunity; building systems and sustainability; recruiting and developing staff, boards and stakeholders; engaging communities; and acquiring sources of funding. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4841 Instructional Leadership for Equitable Schools (5 Credits)**

This course serves aspiring principals in the development and application of skills and knowledge associated with standards-based instructional practices, curriculum planning and development, assessment, and program evaluation. Students are assisted in developing and understanding issues of diversity and multiculturalism and their influence on the development and supervision of the instructional program. Although the major focus is on local aspects of standards-based education, some attention is given to the national role in this area. School leaders need to apply quantitative and qualitative research skills in a variety of ways to understand and improve the work of schools. This course reviews methods, applications, and data sources, including assessments and large-scale datasets, for continuous school improvement and program evaluation. In addition to the issues of instructional leadership, considerable attention is given to the examination of the needs of the individual student in the learning environment as well as research on learning styles, learning theories and models of teaching. Primary focus areas are supports for special education students, English Language learners, gifted students, and students in poverty. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4842 Human Resource Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation are discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Form and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4843 Strategic Resource Management for School Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation will be discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4844 Critical Policy Analysis for Educational Systems (4 Credits)**

Welcome to Policy Analysis for Educational Systems! Students in this experiential course will develop policy knowledge and skills to analyze P-12 educational policies and legislations with a more critical, equity-oriented lens. Students will also build their knowledge and skills to engage in critical discourse that depolarizes communities, fosters mutual understanding, and a shared vision of equity with groups that hold opposing viewpoints. Students will walk away from this course with a trained eye and skillset to critically analyze policy through a social justice lens and draw out implications for P-12 educational leadership, policy, and praxis.

**ADMN 4848 Liberatory Design for School Improvement (4 Credits)**

A school district is a large and complex business organization. By design, the course has a broad focus ranging from legislative issues, to manners and matters of local governance, to school finance, capital planning and budgeting concerns to more directed school and district support services. The course demands practitioners become aware of and demonstrate critical thinking as to what constitutes an effective and equitable use of people, time, technology and money in order to ensure achievement for all students. Being able to think differently, create a culture of innovation, and lead a systematic approach to implementing new ways of doing things is one of the most critical aspects of being a school leader. This course will be enhanced with a design thinking framework that takes a human-centered design approach to helping organizations innovate and grow.

**ADMN 4849 Action Research for School Leaders (4 Credits)**

This course emphasizes the use of research methods which are linked to research needed in schools. Students will learn to identify, analyze and solve problems. Some of the action research methods include focus groups, interviews, observations, school records and surveys. Capstone project will relate directly to the improvement of school policy and practice.

**ADMN 4859 Action Research Capstone (1 Credit)**

Provides support for students as they develop their action research project into the Capstone for the Masters in Educational Leadership and Policy Studies.

**ADMN 4860 Principal Internship (2 Credits)**

The purpose of a formal internship with a principal is to participate in supervised practical training in many of the aspects of school building administration. It is imperative that an applicant have as many first hand experiences as possible in all phases of building administration which focus upon the standards set for principals in Colorado. Must be accepted into an ELPS certificate or MA program.

**ADMN 4900 Advanced Inquiry and Analysis (4 Credits)**

This course is part two of a two-part course series. In part one of this series, Introductory Qualitative Research (RMS 4941), you learned about the foundations of qualitative research including philosophical perspectives, theoretical underpinnings, key characteristics, and common approaches to inquiry and research design: case studies, ethnography, narrative (testimonios), grounded theory, phenomenology, and action research. You ended the course with a design of a qualitative study proposal informed by the extant literature and your personal, practical, and intellectual goals. You completed the course with the design of a qualitative research study. ADMN [xxxx], Advanced Inquiry and Analysis, is the counterpart where you will go in the field to execute your qualitative study designed in your Introductory Qualitative Course. This intermediate level qualitative course builds on the content of other qualitative research courses at the University of Denver. In this course, you will continue to learn the skills and competencies needed to gather, analyze, and report high quality data. You will leave the course well-grounded in the application of the IRB process, data collection, data analysis, data interpretation, handling concerns about reliability, validity, and ethics; and writing the final report. The final product for this course will be the execution of a rigorous qualitative research design with preliminary findings that could be presented at a professional conference and with further development for manuscript publication.

**ADMN 4991 MA Independent Study (1-10 Credits)****ADMN 4995 Independent Research (1-10 Credits)****ADMN 5900 Research Planning and Design (3 Credits)**

This course is designed to support doctoral students to design research and successfully defend a research proposal for their culminating project/dissertation.

**ADMN 5910 Dissertation Seminar for Educational Leadership and Policy Studies (2 Credits)**

This course is designed as a workshop to support students in the ongoing development of the EdD Dissertation in Practice (DiP) or their PhD dissertation, to work collaboratively to finalize the literature review, research plan, and/or data analysis. Our work together will be highly interactive. Students are expected to work closely with their chairs /dissertation directors/advisors and other committee members throughout the process. Feedback from the instructor will in no way supersede the judgment of the chair/dissertation director or committee members. The purpose of this course is to guide students in completing the DiP or the dissertation. This is not a research methods course, but a doctoral dissertation course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**ADMN 5991 PhD Independent Study (1-10 Credits)**

Special projects in the field of education, taken by arrangement of Educational Administration faculty.

**ADMN 5993 Doctoral Research Seminar (1-5 Credits)**

The Doctoral Research Seminar is designed to prepare students to undertake the completion of doctoral research or a dissertation. The research process can often be confusing and overwhelming, especially for students coming from a cohort-based program. This course assists students in turning a research idea into the EDD doctoral research project or a polished dissertation proposal and provides students strategies for making the process manageable and enjoyable.

**ADMN 5995 Independent Research (1-10 Credits)****Courses****ADMN 4330 Culturally Responsive Leadership, Mentoring & Supervision (3 Credits)**

The course is designed to assist mentors and instructional leaders in the development and application of skills and to bring these to day-to-day leadership in the current role of supporting a pre-service teacher. Students will analyze their leadership styles and apply their learning to leadership scenarios to refine their school leadership skills. Students will explore the mentor's role as an educational leader to enhance the existing educational experience for their pre-service teacher and classroom students. This course reviews adult learning theory, communication strategies, and problem-solving approaches for continuous school improvement and pre-service teacher supervision and feedback. This course includes studying and applying a variety of approaches for supporting, supervising, and evaluating educator effectiveness, including approaches to classroom observation; mentoring and peer support systems; and tenets of change theory related to school improvement initiatives.

**ADMN 4700 Special Topics in K-12 Administration (1-5 Credits)****ADMN 4810 School Administration: Case Studies (3 Credits)**

Focus on current critical aspects of work of effective superintendents and other administrators in key decision-making roles; includes reading, discussions and guest presenters who are practicing administrators; problem scenarios presented for resolution.

**ADMN 4812 Perspectives in District Leadership (4 Credits)**

District leaders must focus their actions on the common goal of improving student learning and school systems must be organized to make this the fundamental priority. The purpose of this course is to examine district-level leadership, policies, and practices that support a school community committed to and focused on achievement of all students. The district role is emphasized in supporting school improvement, closing achievement gaps, providing resources, monitoring and using accountability data, and working with the community and school board leadership. Responsible administration of human and fiscal resources is necessary to accomplish systemic instructional improvement at the district level. The goal is to prepare leaders who will lead school districts that are culturally responsive and promote equity and excellence. This course includes an experiential learning component.

**ADMN 4817 Administrative Internship (0-6 Credits)**

Opportunity to be supervised in on-the-job experience to better prepare school administration students for district administration careers.

**ADMN 4819 Organization Theory & Behavior (4 Credits)**

Educational institutions are complex, political organizations with a wide variety of constituents and many layers of sometimes competing cultures, systems, and explicit and implicit goals. Leaders who work with these systems must find ways to make meaning of the organization and the context in which work occurs. This course will look at organizational behavior from several points of view, with the goal of understanding major theories that have been developed and learning to apply these theories in the management and study of organizations. The roles and responsibilities of various members of the organizations will be examined as well as the governance and control issues surrounding education. Organizational analysis will be viewed through the lens of structural, political, human resource and symbolic frames. Students will critically learn and apply various organizational theories to expand your own beliefs about leadership and learning. This course includes an experiential learning component.

**ADMN 4820 Educational Program Evaluation (4 Credits)**

The purpose of this course is to review theories of program evaluation, evaluation designs and analysis, and current trends in evaluation. Program evaluation aims to determine whether a program, regulation, or policy is achieving its objectives by ascertaining whether it had the desired effect on intended outcomes. The evaluation process may include evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself. The course equips students with basic evaluation tools and understandings necessary to be thoughtful consumers and effective users of program evaluations in improving policy outcomes and designing more effective programs and policies. It is designed to provide students with the meaning and methods of program and policy instrument evaluation in education with the intent to contribute to informed decision making and enlightened change. Students analyze evaluations of the effectiveness of a variety of programs through discussion, field work, and case studies. This course includes an experiential learning component.

**ADMN 4821 Leading Design Improvement for Equity (4 Credits)**

The course focuses on school reform and improvement through improvement science. Improvement science is an emerging concept which focuses on exploring how to undertake continuous quality improvement. The aim of this class is to explore strategies of improvement science to develop educators' knowledge and skills to uncover and use data that exist in classrooms and schools for the purpose of promoting educational change and improvement. The participants in this course will create and conduct an improvement science project. This course includes an experiential learning component.

**ADMN 4822 Action Research and Systems Leadership (4 Credits)**

This course will prepare students, as scholarly practitioners and academic researchers, to use action research methodology and systems leadership to solve equity related educational problems of practice. Action research, which was developed in education in 1940's by Kurt Lewin, is practitioner-based research, based in traditional research designs. It is focused on improvement, connects theory to practice, encourages empowerment, and advocates for social justice.

**ADMN 4823 Equitable & Socially Just Educational Policy Making in the United States (4 Credits)**

This course focuses on the educational policy system, the policy process, and current educational reforms. In addition to an overview of the basic governmental structure, this course addresses the micropolitics of education, including how to implement and advocate for more equitable, socially just, and anti-racist policies to improve the quality and effectiveness of learning for children and families. Course activities facilitate the development of skills for addressing policies and practices that affect the success of all students and schools, learning how to identify and unpack current critical issues, and identifying where and how to act to influence policy decisions. This course includes an experiential learning component.

**ADMN 4827 Foundations of Educational History and Philosophy (4 Credits)**

This foundational course examines the various theoretical, ethical, historical and philosophical perspectives that will inform educational leaders as policy and change strategies are formulated. This course includes an experiential learning component.

**ADMN 4828 Leadership for the 21st Century: Using Creativity to Build Effective Schools (3 Credits)**

Designed to assist leaders, at the district or building level, in the implementation of standards-based education to improve student learning and achievement. Primary emphasis is given to applying strategies for addressing critical issues in sustaining the equitable access to learning in a standards-based educational organization.

**ADMN 4834 Culturally Responsive School Leadership (3 Credits)**

Extends understanding of complex systems' operations and responses by examining multicultural issues in the historical and social context and complexity of schools and school districts. Opportunities will be provided for students to develop an understanding of issues of diversity and the relationship of these issues to the roles and work of school/district administrators. The exploration of multicultural issues will occur through the examination of various themes relative to school/district administration such as curriculum, administration, human resources, policy and reform. Particular emphasis will be given to the exploration of the historical and future purposes of schooling in a democratic/pluralistic society in an effort to help students to develop critical knowledge and skills essential for providing leadership in 21st century schools.

**ADMN 4835 Leading Teaching and Learning (4 Credits)**

In this course, students will examine what it means to be a district-level leader focused on and supportive of learning by considering the roles and responsibilities of leaders related to teaching and learning, and by examining the challenges and opportunities inherent in that role. Topics of study relevant to instructional leadership include developing (a) coherent systems of teaching and learning, (b) professional community, (c) professional capacity, and (d) an equitable, student-centered learning climate. Students will gain practical and theoretical tools to improve curriculum development, instruction, and student achievement district wide. Students will meld theory and practice by using empirical thinking and evidence-based change to address social justice concerns within instructional programs in schools and school districts. We will look at how curriculum both reproduces and transforms society and how society both reproduces and transforms curriculum in schools. This course includes an experiential learning component.



**ADMN 4836 Improving Organizational Culture (4 Credits)**

The purpose of this course is to understand organizational culture as a complex and challenging issue to shape and lead. The complex culture of schools or other educational organizations means many things including climate, organizational members' engagement, culturally competent practices and the quality of human relationships in the organizational environment. This course will enable leaders to analyze the components of an educational organization's culture and develop specific plans to create a culture that supports improved learning outcomes for every student, using high-quality, best instructional practices. Following the collection and analysis of data, students will be prepared to serve as Equity Oriented Change Agents (EOCA), leading the improvement of school culture focused on equitable access to high-quality instruction and services for every student. This course includes an experiential learning component.

**ADMN 4840 Strategic and Transformative School Leadership (9 Credits)**

Effective school administration is guided by research and best practices which inform governance, vision, leadership, and implementation processes. Effective principals base their work on commitment to moral principles, core values, and the many dimensions of effective theory and practice. Understanding personal values, developing leadership skills and building a strong knowledge base regarding research and best practice are a key focus of the course. In addition, this course also examines strategies for visioning, mission building and branding; defining and assessing value and quality; developing competitive strategy; building networks and partnerships; assessing risk and gauging opportunity; building systems and sustainability; recruiting and developing staff, boards and stakeholders; engaging communities; and acquiring sources of funding. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4841 Instructional Leadership for Equitable Schools (5 Credits)**

This course serves aspiring principals in the development and application of skills and knowledge associated with standards-based instructional practices, curriculum planning and development, assessment, and program evaluation. Students are assisted in developing and understanding issues of diversity and multiculturalism and their influence on the development and supervision of the instructional program. Although the major focus is on local aspects of standards-based education, some attention is given to the national role in this area. School leaders need to apply quantitative and qualitative research skills in a variety of ways to understand and improve the work of schools. This course reviews methods, applications, and data sources, including assessments and large-scale datasets, for continuous school improvement and program evaluation. In addition to the issues of instructional leadership, considerable attention is given to the examination of the needs of the individual student in the learning environment as well as research on learning styles, learning theories and models of teaching. Primary focus areas are supports for special education students, English Language learners, gifted students, and students in poverty. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4842 Human Resource Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation are discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Form and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4843 Strategic Resource Management for School Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation will be discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4844 Critical Policy Analysis for Educational Systems (4 Credits)**

Welcome to Policy Analysis for Educational Systems! Students in this experiential course will develop policy knowledge and skills to analyze P-12 educational policies and legislations with a more critical, equity-oriented lens. Students will also build their knowledge and skills to engage in critical discourse that depolarizes communities, fosters mutual understanding, and a shared vision of equity with groups that hold opposing viewpoints. Students will walk away from this course with a trained eye and skillset to critically analyze policy through a social justice lens and draw out implications for P-12 educational leadership, policy, and praxis.

**ADMN 4848 Liberatory Design for School Improvement (4 Credits)**

A school district is a large and complex business organization. By design, the course has a broad focus ranging from legislative issues, to manners and matters of local governance, to school finance, capital planning and budgeting concerns to more directed school and district support services. The course demands practitioners become aware of and demonstrate critical thinking as to what constitutes an effective and equitable use of people, time, technology and money in order to ensure achievement for all students. Being able to think differently, create a culture of innovation, and lead a systematic approach to implementing new ways of doing things is one of the most critical aspects of being a school leader. This course will be enhanced with a design thinking framework that takes a human-centered design approach to helping organizations innovate and grow.

**ADMN 4849 Action Research for School Leaders (4 Credits)**

This course emphasizes the use of research methods which are linked to research needed in schools. Students will learn to identify, analyze and solve problems. Some of the action research methods include focus groups, interviews, observations, school records and surveys. Capstone project will relate directly to the improvement of school policy and practice.

**ADMN 4859 Action Research Capstone (1 Credit)**

Provides support for students as they develop their action research project into the Capstone for the Masters in Educational Leadership and Policy Studies.

**ADMN 4860 Principal Internship (2 Credits)**

The purpose of a formal internship with a principal is to participate in supervised practical training in many of the aspects of school building administration. It is imperative that an applicant have as many first hand experiences as possible in all phases of building administration which focus upon the standards set for principals in Colorado. Must be accepted into an ELPS certificate or MA program.

**ADMN 4900 Advanced Inquiry and Analysis (4 Credits)**

This course is part two of a two-part course series. In part one of this series, Introductory Qualitative Research (RMS 4941), you learned about the foundations of qualitative research including philosophical perspectives, theoretical underpinnings, key characteristics, and common approaches to inquiry and research design: case studies, ethnography, narrative (testimonios), grounded theory, phenomenology, and action research. You ended the course with a design of a qualitative study proposal informed by the extant literature and your personal, practical, and intellectual goals. You completed the course with the design of a qualitative research study. ADMN [xxxx], Advanced Inquiry and Analysis, is the counterpart where you will go in the field to execute your qualitative study designed in your Introductory Qualitative Course. This intermediate level qualitative course builds on the content of other qualitative research courses at the University of Denver. In this course, you will continue to learn the skills and competencies needed to gather, analyze, and report high quality data. You will leave the course well-grounded in the application of the IRB process, data collection, data analysis, data interpretation, handling concerns about reliability, validity, and ethics; and writing the final report. The final product for this course will be the execution of a rigorous qualitative research design with preliminary findings that could be presented at a professional conference and with further development for manuscript publication.

**ADMN 4991 MA Independent Study (1-10 Credits)****ADMN 4995 Independent Research (1-10 Credits)****ADMN 5900 Research Planning and Design (3 Credits)**

This course is designed to support doctoral students to design research and successfully defend a research proposal for their culminating project/dissertation.

**ADMN 5910 Dissertation Seminar for Educational Leadership and Policy Studies (2 Credits)**

This course is designed as a workshop to support students in the ongoing development of the EdD Dissertation in Practice (DiP) or their PhD dissertation, to work collaboratively to finalize the literature review, research plan, and/or data analysis. Our work together will be highly interactive. Students are expected to work closely with their chairs /dissertation directors/advisors and other committee members throughout the process. Feedback from the instructor will in no way supersede the judgment of the chair/dissertation director or committee members. The purpose of this course is to guide students in completing the DiP or the dissertation. This is not a research methods course, but a doctoral dissertation course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**ADMN 5991 PhD Independent Study (1-10 Credits)**

Special projects in the field of education, taken by arrangement of Educational Administration faculty.

**ADMN 5993 Doctoral Research Seminar (1-5 Credits)**

The Doctoral Research Seminar is designed to prepare students to undertake the completion of doctoral research or a dissertation. The research process can often be confusing and overwhelming, especially for students coming from a cohort-based program. This course assists students in turning a research idea into the EDD doctoral research project or a polished dissertation proposal and provides students strategies for making the process manageable and enjoyable.

**ADMN 5995 Independent Research (1-10 Credits)**

## Higher Education

Office: Morgridge Office of Admissions

Mail Code: 1999 E. Evans Avenue, Denver, CO 80208

Phone: 303-871-2509

Email: [edinfo@du.edu](mailto:edinfo@du.edu)

Web Site: [morgridge.du.edu/programs/higher-education/](http://morgridge.du.edu/programs/higher-education/) (<http://morgridge.du.edu/programs/higher-education/>)

The University of Denver's Higher Education Department (DUHigherEd) engages in collective learning about the foundations of postsecondary institutions, structures, and systems across diverse educational pathways. Our scholarship is grounded in theory, praxis, and community engagement to address persistent and emergent postsecondary phenomena at the institutional, local, regional, tribal, state, and national levels.

The DUHigherEd community is committed to:

- Teaching and mentoring educators and professionals who seek careers related to postsecondary contexts, such as administration, policy, teaching, and research, as well public and private agencies of higher education.
- Uplifting and celebrating the diverse knowledge bases held by communities historically and contemporarily excluded from higher education.
- Centering and generating consequential research, scholarship, and creative activities that addresses interlocking systems of oppression that perpetuate inequities and injustices influencing the ecology of higher education by informing policy, practice, and theory.
- Fostering a sense of accountability to build liberatory practices needed to disrupt and dismantle oppressive higher education policies.
- Engaging in critical self-reflexivity as part of an intergenerational, collective, and life-long (un)learning process.
- Serving and partnering with communities to build knowledge and enact policy and practice that dismantles systems of oppression.

As a policy-aware and globally conscious department, we recognize that U.S.-based institutions of higher education are founded on ideologies of stolen land, bodies, and labor. We align our commitments to uplift critical scholars who name the ableism, genderism, genocide, heterosexism, homophobia, nativism, racism, settler colonialism, sexism, transphobia, and xenophobia continuously informing the operations of education.

As a community of learners, we traverse the boundaries of valuing education as a human right, while understanding the complicated and problematic relationship higher education has with communities that continue to be systemically marginalized. DUHigherEd welcomes learners who seek to actualize a critical praxis for making meaningful contributions that shift the landscape of higher education.

### Doctor of Philosophy in Higher Education

Students in the 90-credit Doctor of Philosophy degree program gain knowledge and demonstrate competence through coursework designed to provide a strong foundation in the field of higher education and research methods. In addition, students broaden their scope of study through a wide range of elective possibilities. Students are required to complete a teaching competency during the time of their study, and successfully complete and defend the doctoral comprehensive exam (also known as the *preliminary* oral examination) near the end of coursework. The culminating requirement for the degree is a dissertation, defended in a *final* oral defense.

### Doctor of Education in Higher Education

Students in the 65-credit Doctor of Education degree program gain knowledge through coursework and research experience. Competence is demonstrated by the successful completion and oral defense of a doctoral comprehensive exam, and the successful oral defense of the dissertation in practice (DiP). It is expected that the DiP will be a publication quality dissertation that investigates a key issue or problem important to the field of higher education. Upon completing the DiP, students will be able to translate what they have learned into real-world applications, and offer practical and policy related recommendations.

### Master of Arts in Higher Education

The 50-credit Higher Education master's degree is designed to prepare professionals for administrative, leadership, student-centered, and/or policy-focused careers in post-secondary institutions, private and public agencies of higher education, and other educational settings. This generalist program enables students to explore the academic and practitioner-oriented issues related to post-secondary settings and to expand their experiential awareness through practical activities in administration, policy, and research. Elective coursework allows students to complete an optional emphasis in one of three areas: College Student Affairs, Diversity and Higher Learning, or Public Policy & Organizational Change. An internship experience is required, and the final degree requirement is the successful completion of an e-portfolio.

### Doctor of Philosophy in Higher Education

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

#### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Doctor of Education in Higher Education

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

Applicants must have at least 2-3 years of post-master's professional experience in postsecondary education, or a related field, prior to beginning graduate coursework at DU within the Higher Education EdD program. Applicants can demonstrate proof of professional experience via resume submission and a letter of recommendation from a former or current supervisor. Applicants who have not met the preferred years of professional experience may be considered for the program on a case-by-case basis, or encouraged to apply at a later date.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Higher Education

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Higher Education

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Research Requirements</b>		
Research Foundation		
RMS 4910	Introductory Statistics	4
RMS 4940	Structural Foundations of Research in Social Sciences	3
RMS 4941	Introduction to Qualitative Research	4
Intermediate/Advanced Methods Courses		11
Students will complete a minimum of 11 credits (3 or 4 courses) in Research Methods and Statistics.		
HED Research Experience		
HED 5991	PhD Independent Study (Students may take up to 6 credits in HED 5991.)	6
HED 4216	HED Research Processes	4
Dissertation Research Credits		6
HED 5995	Independent Research <sup>1</sup>	
<b>HED Required Courses</b>		
HED 4210	Critical Higher Education	4
HED 4211	Current Issues in Higher Ed	4
HED 4220	Organizational Theory in Higher Education	4
HED 4294	Seminar in Higher Education	4
HED 4294	Seminar in Higher Education	4
HED 4294	Seminar in Higher Education	4
HED 4215	Curriculum Development and Teaching Strategies in Higher Education	4
or HED 4297	Internship in College Teaching	
<b>HED Electives</b>		12
Students will complete a minimum of 12 credits (3 Higher Education courses) to complete the elective requirement.		
<b>Cognate Courses</b>		12
Students may design a 12 credit (3 or 4 courses) cognate, with advisor approval, or they may complete the coursework included in the following cognates: College Teaching, Public Policy, or Research Methods & Methodologies. <sup>2</sup>		
<b>Total Credits</b>		90

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all required coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

<sup>2</sup> Cognate course specifics are found in the student handbook.

A minimum of 90 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the PhD.

#### Non-coursework Requirements

- Comprehensive Exam
- Oral Defense of Comprehensive Exam
- Dissertation
- Oral Defense of Dissertation

## Doctor of Education in Higher Education

### Degree Requirements Coursework Requirements

Code	Title	Credits
<b>Research Requirement</b>		
Foundations Courses		
RMS 4910	Introductory Statistics	4
RMS 4940	Structural Foundations of Research in Social Sciences	3
RMS 4941	Introduction to Qualitative Research	4
Higher Education Research Course		
HED 4242 or HED 4202	Educational Policy Analysis Program Evaluation in Higher Education	4
Dissertation in Practice Design		
HED 4216	HED Research Processes (Students will register for HED 4216 twice, each for 4 credits.)	8
Doctoral Research Credits		
HED 5993	Doctoral Research - EdD <sup>1</sup>	6
<b>HED Required Courses</b>		
Credit requirement will be met by completing a minimum of 24 credits (6 courses).		
HED 4210	Critical Higher Education	4
HED 4211	Current Issues in Higher Ed	4
HED 4220	Organizational Theory in Higher Education	4
HED 4226	The Community College	4
HED 4294	Seminar in Higher Education	4
HED 4294	Seminar in Higher Education	4
<b>Higher Education Electives</b>		
Credit requirement will be met by completing a minimum of 12 credits (3 courses in Higher Ed) <sup>2</sup>		
<b>Total Credits</b>		<b>65</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all required coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

<sup>2</sup> Student designed cognate is not an option in the EdD.

A minimum of 65 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the EdD.

### Non-coursework Requirements

- Comprehensive Exam
- Oral Defense of Comprehensive Exam
- The Dissertation in Practice
- Oral Defense of Dissertation in Practice

## Master's Programs

### Master of Arts in Higher Education

#### Degree Requirements Coursework Requirements

Code	Title	Credits
<b>Research Requirement</b>		
RMS 4900	Education Research and Measurement	4
<b>HED Required Courses</b>		
HED 4213 or HED 4235	Leadership and Supervision Organizational Change	4
HED 4218	Organization and Governance in Higher Education	4

HED 4219	Introduction to Higher Education	4
HED 4246	Issues of Access & Opportunity	4
HED 4247	Retention, Persistence, and Student Success in Postsecondary Settings	4
HED 4270	Internship in Student Affairs	0
or HED 4295	Internship in College and University Administration	
or HED 4296	Internship in Public Policy	
or HED 4297	Internship in College Teaching	
HED 4230	Reflective ePortfolio	2
<b>HED Electives (Mix and match across HED course offerings or choose one of these optional emphasis areas: College Student Affairs, Diversity &amp; Higher Learning, Public Policy &amp; Organizational Change)</b>		<b>24</b>
<b>College Student Affairs Emphasis</b>		
HED 4201	Assessment in Higher Education	
HED 4217	Student Affairs Administration	
HED 4229	Student Support in College	
HED 4260	Students and College Environments	
HED 4261	College Student Development Theory	
HED 4294	Seminar in Higher Education (as appropriate)	
<b>Diversity &amp; Higher Learning Emphasis</b>		
HED 4281	Inclusive Excellence Programming and Development	
HED 4284	Inclusive Excellence in Organizations	
HED 4287	Critical Race Theory and Education	
HED 4288	Gender & Sexuality in Higher Education	
HED 4289	Race and Racism in Higher Education	
HED 4294	Seminar in Higher Education (as appropriate)	
<b>Public Policy &amp; Organizational Change Emphasis</b>		
HED 4212	Introduction to Public Policy and Higher Education	
HED 4221	Financing Higher Education	
HED 4222	Legal Issues in Higher Education	
HED 4242	Educational Policy Analysis	
HED 4294	Seminar in Higher Education (as appropriate)	
<b>Total Credits</b>		<b>50</b>

**Non-coursework requirement**

- Successful completion of an ePortfolio

**HED 4201 Assessment in Higher Education (4 Credits)**

This course is designed to give students a broad understanding of assessment in higher education. This course will improve students' familiarity with existing assessment instruments for students, services, programs, and facilities as well as provide an understanding of the importance of maintaining high standards of ethics and integrity in assessment of higher education and student affairs.

**HED 4202 Program Evaluation in Higher Education (4 Credits)**

This course is an overview of the craft of program evaluation, "...the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy" (Weiss, 1998, p. 4). Program evaluation, simply put, is the craft of applying research methods in a thoughtful way to the task of finding out what and/or how interventions work in the context of the programs or policies in which they operate. This is accomplished by systematically investigating the effectiveness of program processes and outcomes within their political and organizational context. The goal is to inform social action and, by extension, improve conditions for program recipients and participants. Students in this course will explore program evaluation within the context of higher education. The purpose of this course is threefold: (1) Develop an understanding of existing evaluation theory and practice; (2) Apply evaluation theory and approaches to the context of education evaluation; and (3) Develop an experiential base upon which to engage in evaluation in educational practice, including doctoral research projects.

**HED 4210 Critical Higher Education (4 Credits)**

This course examines the social and political context of U.S. education and provides an analysis of schooling, cultural politics, and global influences that inform current practices and structures of the higher education system. Central to this course is the development of a critical understanding of topics related to meritocracy, stratification, diversity, and decentralization in higher education. Prerequisite: Ph.D. student in higher education or permission of instructor.

**HED 4211 Current Issues in Higher Ed (4 Credits)**

This course is a study of contemporary higher education as a specialized field of inquiry and as a professional area in which to work. It explores institutional missions as well as entities such as administration, faculty, curriculum, and students, in relationship to current issues.

**HED 4212 Introduction to Public Policy and Higher Education (4 Credits)**

This is an introductory course that gives students an overview of federal and state public policy, current issues, research methods, and practical skills required for the policy formation process. This is the introductory seminar to the Public Policy, Leadership and Organizational Change emphasis area for the master's program.

**HED 4213 Leadership and Supervision (4 Credits)**

General leadership theory and its implications for higher education; specific focus on leadership skills, such as conflict resolution, problem solving, use of teams and change advocacy.

**HED 4214 History American Higher Ed (4 Credits)**

The purpose of this course is to trace the history of higher education in the United States from the system's pre-colonial beginnings through the present day. Readings will focus on the original purposes of higher education within the US, the forces leading to system massification and the subsequent competing visions and goals that have led to its becoming one of the most highly contested social institutions within the public arena. Higher education in many ways serves as a mirror to US national and state-level priorities. Understanding this relationship between higher education as a system, and higher education as a national, state and individual level asset helps us understand how we've arrived at our current historical moment: a decentralized system in which education represents a spectrum of institutional types, constituencies and local concerns. One could therefore argue the history of higher education gives us an opportunity to view the US postsecondary educational system as a dynamic reflection of our country's past, present, and future.

**HED 4215 Curriculum Development and Teaching Strategies in Higher Education (4 Credits)**

The goal of this course is to prepare those who will serve in higher education with the knowledge, skills, and dispositions necessary to design curriculum and pedagogical strategies that produce effective and equitable learning outcomes for all students and adults in postsecondary settings. This course pushes students to think about curriculum and instruction as a decision-making process that requires articulated goals, strategic alignment, and thoughtful planning in order to realize a more effective and inclusive pedagogy. Throughout the course, students will come to understand the complexities of curriculum and teaching design but also have the process clarified with a framework for choosing among different ways of teaching that result in significant and transformative learning experiences for their future students.

**HED 4216 HED Research Processes (4 Credits)**

The course enables students to explore current research and theories associated with their scholarly interests and resources for doing research as well as to address problems in conducting original inquiry and investigations in postsecondary education. Attention is directed to the investigation of a research problem of each student's interest. Prerequisites: RMS 4940 and RMS 4910 and RMS 4941 and (HED 4202 OR HED 4242).

**HED 4217 Student Affairs Administration (4 Credits)**

This course provides a review of student services with emphasis on programmatic content and its relationship to student development; organization of student service programs; and national trends. Further, this course describes the historical development of student affairs work including significant persons and activities and begins the development of students' own professional identities as reflective practitioners and understanding of their responsibilities for integrating assistantships/internships/work experiences to theory and new knowledge.

**HED 4218 Organization and Governance in Higher Education (4 Credits)**

Students enrolled in this course will acquire a nuanced understanding of how colleges and universities are governed in the United States. Questions guiding this course will be: Who has the power to make decisions on college campuses? What roles do various constituents, such as board members, presidents, deans, faculty, staff, chief diversity officers, student affairs professionals, and students play, and how reflective are these individuals of the broad diversity of U.S. higher education? How does the larger social/political context in the U.S. affect how institutions are governed? What does academic governance reveal about power, privilege and oppression? We will explore how organizational characteristics (the culture, history and structure), positionalities and identities, and policies (for example, tenure and promotion, shared governance, and academic freedom) influence the ability of institutions to dismantle systemic oppression, promote opportunity for all stakeholders, and strengthen democratic life. We will use normative and critical theories to examine the organization and governance of higher education.

**HED 4219 Introduction to Higher Education (4 Credits)**

This course is designed to provide students an overview of higher education as a field of study and practice. The topics covered attempt to equip students with working knowledge of the structures, functions, challenges, concerns, and opportunities within higher education as a social institution. Grounded in values and principles of inclusive excellence, the course take equity and diversity as departure points from which any and all productive understandings of higher education must engage.

**HED 4220 Organizational Theory in Higher Education (4 Credits)**

This course is focused on the study of theoretical perspectives and empirical research drawn from the social sciences related to higher education organizations and governance with an emphasis on the application of theory and practice.

**HED 4221 Financing Higher Education (4 Credits)**

This course focuses on the financing of public and private institutions of higher learning. Specifically, students will consider sources of income, budgeting procedures, funding and control, and use simulated exercises to illustrate principles.



**HED 4222 Legal Issues in Higher Education (4 Credits)**

This course provides a review of a broad range of administrative problems with legal dimensions; the process for analyzing case law on issues of access, student rights, employment, collective bargaining, church-state relations, private sector, and liability. Students will gain practical experience in analyzing and applying legal concepts to higher education subjects.

**HED 4226 The Community College (4 Credits)**

This course covers general issues related to community colleges, such as their history, mission, characteristics, students, curricula, teaching, and student services.

**HED 4229 Student Support in College (4 Credits)**

This class will introduce students to basic interpersonal helping skills required in Higher Education settings, including relationship building, listening, giving feedback, problem-solving, and resolving conflicts. Students will become familiar with crisis intervention models and techniques; signs and symptoms of distress and mental illness; strategies for making appropriate referrals to mental health providers; and considerations about self and other when engaged in helping relationships, particularly those with cultural differences. Central to the course will be discussion of the appropriate role Higher Education professionals have in helping students while recognizing their limitations.

**HED 4230 Reflective ePortfolio (2 Credits)**

The purpose of this course is to assist students by facilitating their transition into professional positions in higher education. An electronic learning portfolio is a required component for completion of the Master of Arts (M.A.) degree in Higher Education through which students demonstrate significant learning about the field of higher education and themselves. Pre-requisite: Completion of a minimum of 32 credits (out of 50) of coursework toward completion of the Master of Arts in Higher Education. Registration requires Departmental Approval.

**HED 4235 Organizational Change (4 Credits)**

This course will focus on designing, implementing, and evaluating effective change in higher education through an equity-minded lens. The course is intended to assist students in developing a set of understandings in how to plan and implement change in higher education organizations, institutions, and as an industry. The course will introduce "equity-minded change" in higher education and will focus on how institutions can change to achieve equity, while addressing the importance of managing organizational development on a macro and micro level in higher education institutions and organizations. Students will acquire tools to manage and understand change through structural, political, human resource, and symbolic perspectives to understand the systemic interrelationships among these factors to effectively meet the changing socio/economic/political environments within higher education as they impact student success.

**HED 4242 Educational Policy Analysis (4 Credits)**

Students in this experiential course will develop critical policy analysis and praxis skills that have relevance for the implementation of public policy and finance strategies for higher education. Students will employ critical thinking skills to analyze, evaluate and interpret public policy and finance with the goal of advancing the field of higher education's understanding of effective public policy and finance, as well as the unintended consequences that may arise with various policy solutions and funding strategies. Specifically, students will learn how to evaluate whether public policy and finance hinders or assists post-secondary institutions and their leaders in dismantling systemic oppression while promoting educational equity and opportunity and strengthening the public purposes of higher education. Students will interact directly with public policymakers, post-secondary administrators, policy researchers, and policy analysts while assisting with a quarter-long experiential policy analysis project with an intermediary public policy organization. Students will also develop a policy analysis paper.

**HED 4246 Issues of Access & Opportunity (4 Credits)**

This course addresses theories and research on a variety of issues related to college preparation, school structures, and inequalities in college access. The course will cover different levels of analyses: theoretical, individual levels (i.e., race, ethnicity, and social class), organizational levels (family, geography, high school context, and outreach), and field levels (i.e., policy, testing, rankings, media, and policy). Special attention will be paid to the sociocultural context influencing issues of college access and opportunity for students.

**HED 4247 Retention, Persistence, and Student Success in Postsecondary Settings (4 Credits)**

This course introduces students to relevant research, theory, and practice related to college student retention and persistence. Students explore cultural, institutional, and individual factors that may impact college student persistence and critically examine theories attempting to explain why students leave college. In addition, students also closely explore the dynamics of oppression at the individual, institutional, and socio-cultural levels and the resulting impact on student retention. Effective retention practices, programs, and assessment procedures are also identified and examined.

**HED 4260 Students and College Environments (4 Credits)**

This course will serve as an introduction to college environments and the complexity of campus and culture. The purpose of this course is to familiarize you with today's higher education settings and provide you with strategies to maximize learning and development, for all students. In line with inclusive excellence, attention will be paid to the impact of campus environments on diverse student populations. Theoretical concepts will help explain, describe, and examine the college environments as a system and its impact on students, faculty, and staff.

**HED 4261 College Student Development Theory (4 Credits)**

This course is an overview of human development theories relevant to college students, of traditional and non-traditional ages. The application of theories covered in this course will enhance the ability of students in their roles as student affairs professionals to maximize the affective and cognitive development of students within the college setting.

**HED 4270 Internship in Student Affairs (0-6 Credits)**

Supervised experience in postsecondary institutions with a focus on student affairs practice.

**HED 4281 Inclusive Excellence Programming and Development (4 Credits)**

This course provides an overview of the development and implementation of cultural programming and cultural centers over time. Specifically, it will focus attention on the role of student activism in creating change on college campuses in the form of cultural programming and centers, diversity curricula, and inclusive excellence initiatives. The course will also address the challenges and competencies associated with inclusive excellence programming and development.

**HED 4284 Inclusive Excellence in Organizations (4 Credits)**

In recent years, major demographic and economic changes in this country and worldwide have contributed to the diversification of the workplace. As a result, the need for understanding how to enhance cultural diversity in organizations has taken on a greater importance. Accordingly, framed through the concept of Inclusive Excellence, this course focuses on the changing demographics of our society, especially related to race and culture, gender, age, physical ability, sexual orientation, and socio-economic status, emphasizing the implications these factors have for leadership and management in a variety of organizational settings.

**HED 4287 Critical Race Theory and Education (4 Credits)**

The purpose of this course is to provide students with an in-depth exposure to Critical Race Theory (CRT) as it pertains to education. Critical Race Theory is an analytical framework that provides race-based epistemological, methodological, and pedagogical approaches to the study of everyday inequalities in P-20 education. Together, we will work through the historical development continuing on to the contemporary nuances of CRT. In addition, we will work to expose the ideological construction of race and education in the U.S. As such, we will also work through the oppressive nature of education and boldly confront notions of colorblindness. Throughout this course, we will struggle with the challenges surrounding the inclusion of multiple voices and multiple perspectives in the complex intersections among race, ethnicity, gender, class, and sexual orientation. Specifically, we will critique the strengths and limitations of CRT as a framework for addressing educational inequalities.

**HED 4288 Gender & Sexuality in Higher Education (4 Credits)**

This course examines how gender, sexuality, and their inhabitants have been constructed, confined, and disciplined in U.S. higher education. Although neither a history nor philosophy course, we will engage both history and philosophy of sexuality and gender within and beyond higher education studies. Also, while neither a policy nor an administrative practices course, we will also engage issues of policy and practice in colleges and universities. The considerations, complications, and implications that course participants will engage will have direct import for postsecondary education, yet are transferable to other educational, community, and social contexts.

**HED 4289 Race and Racism in Higher Education (4 Credits)**

This course explores connections between race, racialization, and racism in American higher education. It draws on historical, political, economic, and cultural explanations of racial inequity in educational outcomes and processes. The course uses institutional and systemic levels of analysis to examine racial equity in higher education.

**HED 4293 Special Topics in Higher Education Studies (1-4 Credits)**

This flexible special topics course in higher education studies will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as comparative higher education, intercollegiate athletics, student support, and other emergent issues of theory, policy, and/or practice.

**HED 4294 Seminar in Higher Education (4 Credits)**

Advanced seminar to examine timely topics, issues, and problems. The course description is developed each time the course is offered to describe the topics to be investigated.

**HED 4295 Internship in College and University Administration (0-6 Credits)**

Supervised experience in administration at college or university level.

**HED 4296 Internship in Public Policy (0-6 Credits)**

Supervised experience in postsecondary public policy analysis or research, usually at a state or national compact or agency in the Denver-Boulder area.

**HED 4297 Internship in College Teaching (0-2 Credits)**

Supervised experience in teaching at college level.

**HED 4991 MA Independent Study (1-10 Credits)****HED 4995 Independent Research (1-10 Credits)****HED 5991 PhD Independent Study (1-10 Credits)****HED 5993 Doctoral Research - EdD (1-20 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in HED; must have completed at least 80% of coursework; cannot complete more than five credit hours of HED 5993 prior to passing the comprehensive exam.

**HED 5995 Independent Research (1-20 Credits)**

## Courses

**HED 4201 Assessment in Higher Education (4 Credits)**

This course is designed to give students a broad understanding of assessment in higher education. This course will improve students' familiarity with existing assessment instruments for students, services, programs, and facilities as well as provide an understanding of the importance of maintaining high standards of ethics and integrity in assessment of higher education and student affairs.

**HED 4202 Program Evaluation in Higher Education (4 Credits)**

This course is an overview of the craft of program evaluation, "...the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy" (Weiss, 1998, p. 4). Program evaluation, simply put, is the craft of applying research methods in a thoughtful way to the task of finding out what and/or how interventions work in the context of the programs or policies in which they operate. This is accomplished by systematically investigating the effectiveness of program processes and outcomes within their political and organizational context. The goal is to inform social action and, by extension, improve conditions for program recipients and participants. Students in this course will explore program evaluation within the context of higher education. The purpose of this course is threefold: (1) Develop an understanding of existing evaluation theory and practice; (2) Apply evaluation theory and approaches to the context of education evaluation; and (3) Develop an experiential base upon which to engage in evaluation in educational practice, including doctoral research projects.

**HED 4210 Critical Higher Education (4 Credits)**

This course examines the social and political context of U.S. education and provides an analysis of schooling, cultural politics, and global influences that inform current practices and structures of the higher education system. Central to this course is the development of a critical understanding of topics related to meritocracy, stratification, diversity, and decentralization in higher education. Prerequisite: Ph.D. student in higher education or permission of instructor.

**HED 4211 Current Issues in Higher Ed (4 Credits)**

This course is a study of contemporary higher education as a specialized field of inquiry and as a professional area in which to work. It explores institutional missions as well as entities such as administration, faculty, curriculum, and students, in relationship to current issues.

**HED 4212 Introduction to Public Policy and Higher Education (4 Credits)**

This is an introductory course that gives students an overview of federal and state public policy, current issues, research methods, and practical skills required for the policy formation process. This is the introductory seminar to the Public Policy, Leadership and Organizational Change emphasis area for the master's program.

**HED 4213 Leadership and Supervision (4 Credits)**

General leadership theory and its implications for higher education; specific focus on leadership skills, such as conflict resolution, problem solving, use of teams and change advocacy.

**HED 4214 History American Higher Ed (4 Credits)**

The purpose of this course is to trace the history of higher education in the United States from the system's pre-colonial beginnings through the present day. Readings will focus on the original purposes of higher education within the US, the forces leading to system massification and the subsequent competing visions and goals that have led to its becoming one of the most highly contested social institutions within the public arena. Higher education in many ways serves as a mirror to US national and state-level priorities. Understanding this relationship between higher education as a system, and higher education as a national, state and individual level asset helps us understand how we've arrived at our current historical moment: a decentralized system in which education represents a spectrum of institutional types, constituencies and local concerns. One could therefore argue the history of higher education gives us an opportunity to view the US postsecondary educational system as a dynamic reflection of our country's past, present, and future.

**HED 4215 Curriculum Development and Teaching Strategies in Higher Education (4 Credits)**

The goal of this course is to prepare those who will serve in higher education with the knowledge, skills, and dispositions necessary to design curriculum and pedagogical strategies that produce effective and equitable learning outcomes for all students and adults in postsecondary settings. This course pushes students to think about curriculum and instruction as a decision-making process that requires articulated goals, strategic alignment, and thoughtful planning in order to realize a more effective and inclusive pedagogy. Throughout the course, students will come to understand the complexities of curriculum and teaching design but also have the process clarified with a framework for choosing among different ways of teaching that result in significant and transformative learning experiences for their future students.

**HED 4216 HED Research Processes (4 Credits)**

The course enables students to explore current research and theories associated with their scholarly interests and resources for doing research as well as to address problems in conducting original inquiry and investigations in postsecondary education. Attention is directed to the investigation of a research problem of each student's interest. Prerequisites: RMS 4940 and RMS 4910 and RMS 4941 and (HED 4202 OR HED 4242).

**HED 4217 Student Affairs Administration (4 Credits)**

This course provides a review of student services with emphasis on programmatic content and its relationship to student development; organization of student service programs; and national trends. Further, this course describes the historical development of student affairs work including significant persons and activities and begins the development of students' own professional identities as reflective practitioners and understanding of their responsibilities for integrating assistantships/internships/work experiences to theory and new knowledge.

**HED 4218 Organization and Governance in Higher Education (4 Credits)**

Students enrolled in this course will acquire a nuanced understanding of how colleges and universities are governed in the United States. Questions guiding this course will be: Who has the power to make decisions on college campuses? What roles do various constituents, such as board members, presidents, deans, faculty, staff, chief diversity officers, student affairs professionals, and students play, and how reflective are these individuals of the broad diversity of U.S. higher education? How does the larger social/political context in the U.S. affect how institutions are governed? What does academic governance reveal about power, privilege and oppression? We will explore how organizational characteristics (the culture, history and structure), positionalities and identities, and policies (for example, tenure and promotion, shared governance, and academic freedom) influence the ability of institutions to dismantle systemic oppression, promote opportunity for all stakeholders, and strengthen democratic life. We will use normative and critical theories to examine the organization and governance of higher education.

**HED 4219 Introduction to Higher Education (4 Credits)**

This course is designed to provide students an overview of higher education as a field of study and practice. The topics covered attempt to equip students with working knowledge of the structures, functions, challenges, concerns, and opportunities within higher education as a social institution. Grounded in values and principles of inclusive excellence, the course takes equity and diversity as departure points from which any and all productive understandings of higher education must engage.

**HED 4220 Organizational Theory in Higher Education (4 Credits)**

This course is focused on the study of theoretical perspectives and empirical research drawn from the social sciences related to higher education organizations and governance with an emphasis on the application of theory and practice.

**HED 4221 Financing Higher Education (4 Credits)**

This course focuses on the financing of public and private institutions of higher learning. Specifically, students will consider sources of income, budgeting procedures, funding and control, and use simulated exercises to illustrate principles.

**HED 4222 Legal Issues in Higher Education (4 Credits)**

This course provides a review of a broad range of administrative problems with legal dimensions; the process for analyzing case law on issues of access, student rights, employment, collective bargaining, church-state relations, private sector, and liability. Students will gain practical experience in analyzing and applying legal concepts to higher education subjects.

**HED 4226 The Community College (4 Credits)**

This course covers general issues related to community colleges, such as their history, mission, characteristics, students, curricula, teaching, and student services.

**HED 4229 Student Support in College (4 Credits)**

This class will introduce students to basic interpersonal helping skills required in Higher Education settings, including relationship building, listening, giving feedback, problem-solving, and resolving conflicts. Students will become familiar with crisis intervention models and techniques; signs and symptoms of distress and mental illness; strategies for making appropriate referrals to mental health providers; and considerations about self and other when engaged in helping relationships, particularly those with cultural differences. Central to the course will be discussion of the appropriate role Higher Education professionals have in helping students while recognizing their limitations.

**HED 4230 Reflective ePortfolio (2 Credits)**

The purpose of this course is to assist students by facilitating their transition into professional positions in higher education. An electronic learning portfolio is a required component for completion of the Master of Arts (M.A.) degree in Higher Education through which students demonstrate significant learning about the field of higher education and themselves. Pre-requisite: Completion of a minimum of 32 credits (out of 50) of coursework toward completion of the Master of Arts in Higher Education. Registration requires Departmental Approval.

**HED 4235 Organizational Change (4 Credits)**

This course will focus on designing, implementing, and evaluating effective change in higher education through an equity-minded lens. The course is intended to assist students in developing a set of understandings in how to plan and implement change in higher education organizations, institutions, and as an industry. The course will introduce "equity-minded change" in higher education and will focus on how institutions can change to achieve equity, while addressing the importance of managing organizational development on a macro and micro level in higher education institutions and organizations. Students will acquire tools to manage and understand change through structural, political, human resource, and symbolic perspectives to understand the systemic interrelationships among these factors to effectively meet the changing socio/economic/political environments within higher education as they impact student success.

**HED 4242 Educational Policy Analysis (4 Credits)**

Students in this experiential course will develop critical policy analysis and praxis skills that have relevance for the implementation of public policy and finance strategies for higher education. Students will employ critical thinking skills to analyze, evaluate and interpret public policy and finance with the goal of advancing the field of higher education's understanding of effective public policy and finance, as well as the unintended consequences that may arise with various policy solutions and funding strategies. Specifically, students will learn how to evaluate whether public policy and finance hinders or assists post-secondary institutions and their leaders in dismantling systemic oppression while promoting educational equity and opportunity and strengthening the public purposes of higher education. Students will interact directly with public policymakers, post-secondary administrators, policy researchers, and policy analysts while assisting with a quarter-long experiential policy analysis project with an intermediary public policy organization. Students will also develop a policy analysis paper.

**HED 4246 Issues of Access & Opportunity (4 Credits)**

This course addresses theories and research on a variety of issues related to college preparation, school structures, and inequalities in college access. The course will cover different levels of analyses: theoretical, individual levels (i.e., race, ethnicity, and social class), organizational levels (family, geography, high school context, and outreach), and field levels (i.e., policy, testing, rankings, media, and policy). Special attention will be paid to the sociocultural context influencing issues of college access and opportunity for students.

**HED 4247 Retention, Persistence, and Student Success in Postsecondary Settings (4 Credits)**

This course introduces students to relevant research, theory, and practice related to college student retention and persistence. Students explore cultural, institutional, and individual factors that may impact college student persistence and critically examine theories attempting to explain why students leave college. In addition, students also closely explore the dynamics of oppression at the individual, institutional, and socio-cultural levels and the resulting impact on student retention. Effective retention practices, programs, and assessment procedures are also identified and examined.

**HED 4260 Students and College Environments (4 Credits)**

This course will serve as an introduction to college environments and the complexity of campus and culture. The purpose of this course is to familiarize you with today's higher education settings and provide you with strategies to maximize learning and development, for all students. In line with inclusive excellence, attention will be paid to the impact of campus environments on diverse student populations. Theoretical concepts will help explain, describe, and examine the college environments as a system and its impact on students, faculty, and staff.

**HED 4261 College Student Development Theory (4 Credits)**

This course is an overview of human development theories relevant to college students, of traditional and non-traditional ages. The application of theories covered in this course will enhance the ability of students in their roles as student affairs professionals to maximize the affective and cognitive development of students within the college setting.

**HED 4270 Internship in Student Affairs (0-6 Credits)**

Supervised experience in postsecondary institutions with a focus on student affairs practice.

**HED 4281 Inclusive Excellence Programming and Development (4 Credits)**

This course provides an overview of the development and implementation of cultural programming and cultural centers over time. Specifically, it will focus attention on the role of student activism in creating change on college campuses in the form of cultural programming and centers, diversity curricula, and inclusive excellence initiatives. The course will also address the challenges and competencies associated with inclusive excellence programming and development.

**HED 4284 Inclusive Excellence in Organizations (4 Credits)**

In recent years, major demographic and economic changes in this country and worldwide have contributed to the diversification of the workplace. As a result, the need for understanding how to enhance cultural diversity in organizations has taken on a greater importance. Accordingly, framed through the concept of Inclusive Excellence, this course focuses on the changing demographics of our society, especially related to race and culture, gender, age, physical ability, sexual orientation, and socio-economic status, emphasizing the implications these factors have for leadership and management in a variety of organizational settings.

**HED 4287 Critical Race Theory and Education (4 Credits)**

The purpose of this course is to provide students with an in-depth exposure to Critical Race Theory (CRT) as it pertains to education. Critical Race Theory is an analytical framework that provides race-based epistemological, methodological, and pedagogical approaches to the study of everyday inequalities in P-20 education. Together, we will work through the historical development continuing on to the contemporary nuances of CRT. In addition, we will work to expose the ideological construction of race and education in the U.S. As such, we will also work through the oppressive nature of education and boldly confront notions of colorblindness. Throughout this course, we will struggle with the challenges surrounding the inclusion of multiple voices and multiple perspectives in the complex intersections among race, ethnicity, gender, class, and sexual orientation. Specifically, we will critique the strengths and limitations of CRT as a framework for addressing educational inequalities.

**HED 4288 Gender & Sexuality in Higher Education (4 Credits)**

This course examines how gender, sexuality, and their inhabitants have been constructed, confined, and disciplined in U.S. higher education. Although neither a history nor philosophy course, we will engage both history and philosophy of sexuality and gender within and beyond higher education studies. Also, while neither a policy nor an administrative practices course, we will also engage issues of policy and practice in colleges and universities. The considerations, complications, and implications that course participants will engage will have direct import for postsecondary education, yet are transferable to other educational, community, and social contexts.

**HED 4289 Race and Racism in Higher Education (4 Credits)**

This course explores connections between race, racialization, and racism in American higher education. It draws on historical, political, economic, and cultural explanations of racial inequity in educational outcomes and processes. The course uses institutional and systemic levels of analysis to examine racial equity in higher education.

**HED 4293 Special Topics in Higher Education Studies (1-4 Credits)**

This flexible special topics course in higher education studies will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as comparative higher education, intercollegiate athletics, student support, and other emergent issues of theory, policy, and/or practice.

**HED 4294 Seminar in Higher Education (4 Credits)**

Advanced seminar to examine timely topics, issues, and problems. The course description is developed each time the course is offered to describe the topics to be investigated.

**HED 4295 Internship in College and University Administration (0-6 Credits)**

Supervised experience in administration at college or university level.

**HED 4296 Internship in Public Policy (0-6 Credits)**

Supervised experience in postsecondary public policy analysis or research, usually at a state or national compact or agency in the Denver-Boulder area.

**HED 4297 Internship in College Teaching (0-2 Credits)**

Supervised experience in teaching at college level.

**HED 4991 MA Independent Study (1-10 Credits)****HED 4995 Independent Research (1-10 Credits)****HED 5991 PhD Independent Study (1-10 Credits)****HED 5993 Doctoral Research - EdD (1-20 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in HED; must have completed at least 80% of coursework; cannot complete more than five credit hours of HED 5993 prior to passing the comprehensive exam.

**HED 5995 Independent Research (1-20 Credits)**

## Research Methods and Information Science

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Mail Code: 1999 E. Evans Avenue, Denver, CO 80208

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Email: [edinfo@du.edu](mailto:edinfo@du.edu)

Web Site: <http://morgridge.du.edu/programs> (<http://morgridge.du.edu/programs/>)

### Doctor of Philosophy in Research Methods and Statistics

The goal of the Research Methods and Statistics (RMS) PhD is to prepare graduate students with the state-of-the-art skills needed to conduct research in education and the social and health sciences. The faculty members equip students with cutting#edge research skills, creative educational vision, social responsibility, and sufficient experience in the application of these skills and knowledge to achieve mastery. The faculty are committed to shaping a safe, sustainable, democratic, and just world and believe that high-quality research is one approach to achieving this goal.

The education and social and health sciences fields have a growing need for professionals with strong skills in research design, statistics, qualitative and mixed methods, and data analysis. The RMS PhD course plan provides the courses and experiences necessary to conduct and supervise effective social science research.

Graduates with RMS PhD degrees hold leadership positions in testing and program evaluation companies, universities, school districts, and state agencies, among others.

### Doctor of Philosophy in Research Methods and Statistics with a Concentration in Institutional Research

The RMS concentration in Institutional Research is targeted towards professionals with career goals in institutional research in applied settings including higher education, K-12 schools, non-profits, government settings, and business. Foundational coursework will equip Institutional Research students with strong quantitative, qualitative, and mixed research methods skills. Students will specialize in higher education or library and information science and take institutional research content knowledge courses in management, business intelligence, and public policy.

### Doctor of Philosophy in Research Methods and Statistics with a Concentration in Qualitative Research

The RMS concentration in Qualitative Research primarily focuses on preparing students with strong, versatile, qualitative research methods skills to be utilized in different fields.

### Master of Arts in Research Methods and Statistics

The goal of the Research Methods and Statistics (RMS) MA is to enhance student development and use of research in education and the social and health sciences with a specific focus on program evaluation. The faculty equip students with cutting#edge research skills, creative educational vision, social responsibility, and sufficient experience in application of your skills and knowledge to achieve mastery. RMS is committed to shaping a safe, sustainable, democratic and just world and believe that high-quality research is one approach to doing this.

The education and social and health sciences fields have a growing need for professionals with strong skills in research design, statistics, qualitative and mixed methods, and data analysis. The RMS MA degree requirements provide the courses and experiences necessary for graduates to conduct effective social science research.

Graduates with RMS MA degrees hold professional positions in program evaluation at non-profit organizations, service agencies, school districts, and state agencies, among others.

## (Online) Master of Arts in Research Methods and Statistics

Designed with working professionals in mind, our online M.A. option is self-paced and flexible. Whether you're looking to advance your career or simply have a passion for data science – you'll have the opportunity to learn on your terms and earn a degree from a Top 100 college. Applications are currently being accepted.

The program **learning outcomes** for the Master of Arts in Research Methods and Statistics are as follows:

- Students will design research projects with faculty members and community partners using knowledge of the strengths and limitations of diverse modes of inquiry.
- Students will create and evaluate quantitative and/or qualitative instruments/protocols.
- Students will communicate research design and methods in writing according to APA format and orally.
- Students will apply research ethics and adhere to an ethical code of conduct when engaging with professional and local communities.

## Master of Library and Information Science / MLIS@Denver

Library and Information Science (LIS) has developed a distinctive program of study to serve the rapidly changing needs of future librarians, archivists and information professionals in the Rocky Mountain region. There are a number of areas of focus including: Archives and Special Collections, Digital Libraries, Academic Libraries, Public Libraries, Special Libraries, and Web Services Librarianship.

With a dedicated faculty, we get to know our students very well through face-to-face interaction so that we can connect them to the highly regarded professional network in the region (and beyond). Practitioners speak highly of our students and are eager to have DU MLIS students as interns and employees.

### Program Accreditation

American Library Association

## Master of Library and Information Science with a Concentration in Research Data Management

Research Data Management responds to the emerging need for well-trained information professionals in the digital environment. The concentration prepares professionals to support the research data life-cycle in the areas of scholarly communication, open access, copyright advice, and research data management, providing bridging coursework in information science and research methods and statistics. It prepares information professionals to manage research data at academic libraries, research service centers, research centers, government agencies, and non-profit organizations.

## Certificate in Library and Information Science with a Concentration in Research Data Management

The knowledge students gain in our library information science certificate program can prepare them to provide support in many areas in research data management. Research data expertise can be invaluable in scholarly communication, open access, copyright advice and research data management. Students take part in rigorous coursework in information science, research methods and statistics, collaborating with classmates as part of this comprehensive 28-credit program.

Our students can learn how to manage research data at a variety of settings, including academic libraries, research service centers, scientific and research organizations, government agencies and non-profit organizations. Graduates can enter into fields with significant needs for well-trained information professionals who can manage, preserve and share data generated throughout the research process.

## Doctor of Philosophy in Research Methods & Statistics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Research Methods and Statistics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Library and Information Science in Library & Information Science, Library and Information Science@Denver

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Library and Information Science with a Concentration in Research Data Management

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the



baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Programs

### Doctor of Philosophy in Research Methods and Statistics

#### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>The Research Methods &amp; Statistics (RMS) Core</b>		
<b>A. Qualitative Methods</b>		
RMS 4941	Introduction to Qualitative Research	4
RMS 4942	Qualitative Data Collection and Analysis	4
<b>B. Quantitative Methods</b>		
RMS 4910	Introductory Statistics	4
RMS 4911	Correlation and Regression	4
RMS 4912	Analysis of Variance	4
RMS 4921	Psychometric Theory	3
RMS 4930	Quantitative Research Design	3
<b>C. Transdisciplinary Methods</b>		
RMS 4931	Survey and Design Analysis	3
RMS 4951	Mixed Method Research Design	4
RMS 4952	Research Ethics	3
RMS 4960	Introduction to Evaluation Research	3
<b>D. Practicum</b>		
RMS 4980	Practicum in Research	3
or RMS 4979	Qualitative Research Practicum	
or RMS 4981	Community-Based Research Practicum	
or RMS 4982	Practicum in Evaluation Research	
<b>E. Independent Research</b>		
RMS 5995	Independent Research	3
RMS 5771	RMS Dissertation Research Seminar	7
or RMS 5995	Independent Research	
<b>F. Specialization</b>		<b>38</b>
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested course work will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

Beyond the earned master's degree, a minimum of 90 credit hours are required. No credit hours from the earned master's degree can be transferred into the Ph.D.

**Non-coursework requirements**

- Doctoral comprehensive exam
- Dissertation and oral defense
- Alternative Dissertation Option - The Journal Article Format

**Specializations**

Code	Title	Credits
<b>Specialization in Qualitative Research Methods</b>		
RMS 4940	Structural Foundations of Research in Social Sciences	3
RMS 4946	Advanced Qualitative Research	4
RMS 4945	Community-Based Research	4
RMS 4947	Arts-Based Research	3
RMS 4948	Criticism and Connoisseurship: Qualitative research and the enhancement of practice	3
RMS 4914	Structural Equation Modeling	3
or RMS 4915	Hierarchical Linear Modeling	
or RMS 4916	Latent Growth Curve Modeling	
or RMS 4922	Item Response Theory	
or RMS 4924	Advanced Measurement	
or RMS 4963	Evaluation Research Practice I	
or RMS 4964	Evaluation Research Practice II	

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

Code	Title	Credits
<b>Specialization in Quantitative Research Methods</b>		
RMS 4914	Structural Equation Modeling	4
RMS 4915	Hierarchical Linear Modeling	4
RMS 4916	Latent Growth Curve Modeling	4
RMS 4922	Item Response Theory	3
RMS 4924	Advanced Measurement	4
RMS 4946	Advanced Qualitative Research	4
RMS 4945	Community-Based Research	4
RMS 4947	Arts-Based Research	3
RMS 4948	Criticism and Connoisseurship: Qualitative research and the enhancement of practice	3
RMS 4963	Evaluation Research Practice I	3
RMS 4964	Evaluation Research Practice II	3

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

Code	Title	Credits
<b>Specialization in Transdisciplinary Research Methods</b>		
Quantitative Methods		
RMS 4914	Structural Equation Modeling	4
RMS 4922	Item Response Theory	3
RMS 4924	Advanced Measurement	4
Qualitative Methods		
RMS 4945	Community-Based Research	4
RMS 4947	Arts-Based Research	3
RMS 4948	Criticism and Connoisseurship: Qualitative research and the enhancement of practice	3
Transdisciplinary Methods		
RMS 4963	Evaluation Research Practice I	3
RMS 4964	Evaluation Research Practice II	3

RMS 4969	Topics in Program Evaluation	3
RMS 4982	Practicum in Evaluation Research	3

Students will complete a research on evaluation (RoE) study in RMS 4982.

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

Code	Title	Credits
<b>Specialization in Institutional Research - Higher Education</b>		
<b>The Institutional Research (IR) Core</b>		
MGMT 4201	Fundamentals of Managing and Leading	4
or MGMT 4202	Leading Self	
or MGMT 4301	Organizational Behavior	
or MGMT 4303	Negotiating with Power	
or MGMT 4304	Project Management for Leaders	
RMS 4914	Structural Equation Modeling	4
RMS 4922	Item Response Theory	3
RMS 4924	Advanced Measurement	4

**Higher Education Courses**

HED 4211	Current Issues in Higher Ed	4
HED 4212	Introduction to Public Policy and Higher Education	4
HED 4214	History American Higher Ed	4
HED 4220	Organizational Theory in Higher Education	4

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

Code	Title	Credits
<b>Specialization in Institutional Research - Information Science</b>		
<b>The Institutional Research (IR) Core</b>		
MGMT 4201	Fundamentals of Managing and Leading	4
or MGMT 4202	Leading Self	
or MGMT 4301	Organizational Behavior	
or MGMT 4303	Negotiating with Power	
or MGMT 4304	Project Management for Leaders	
RMS 4914	Structural Equation Modeling	4
RMS 4922	Item Response Theory	3
RMS 4924	Advanced Measurement	4

**Information Science**

LIS 4010	Organization of Information	3
LIS 4206	Web Content Management	3
LIS 4404	Metadata Architectures	3
LIS 4702	Type of Library: Topics	1-3
LIS 4820	Digitization	3

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

Code	Title	Credits
<b>Specialization in Institutional Research - Disciplinary Methods (e.g., Business Analytics)</b>		
<b>The Institutional Research (IR) Core</b>		
MGMT 4201	Fundamentals of Managing and Leading	4
or MGMT 4202	Leading Self	
or MGMT 4301	Organizational Behavior	

or MGMT 4303	Negotiating with Power	
or MGMT 4304	Project Management for Leaders	
RMS 4914	Structural Equation Modeling	4
RMS 4921	Psychometric Theory	3
RMS 4924	Advanced Measurement	4

### Customized Specialization in Disciplinary Methods

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

For example, a specialization in business analytics might include INFO 4140 Business Databases, INFO 4240 Data Warehousing, INFO 4340 Predictive Analytics, INFO 4340 Data Mining and Visualization, INFO 4360 Complex Data, or INFO 4610 Business Statistics.

## Master's Degree Programs

### Research Methods and Statistics

#### Master of Arts in Research Methods and Statistics

##### Degree requirements

##### Coursework requirements

Code	Title	Credits
<b>The Research Methods &amp; Statistics Master's Degree (RMS-MA)</b>		
<b>A. Qualitative Methods</b>		
RMS 4941	Introduction to Qualitative Research	
<b>B. Quantitative Methods</b>		
RMS 4900	Education Research and Measurement	
RMS 4910	Introductory Statistics	
RMS 4911	Correlation and Regression	
RMS 4912	Analysis of Variance	
RMS 4921	Psychometric Theory	
<b>C. Transdisciplinary Methods</b>		
RMS 4931	Survey and Design Analysis	
RMS 4952	Research Ethics	
RMS 4960	Introduction to Evaluation Research	
RMS 4963	Evaluation Research Practice I	
RMS 4964	Evaluation Research Practice II	
<b>D. Practicum</b>		
RMS 4980	Practicum in Research	
or RMS 4982	Practicum in Evaluation Research	
<b>E. Independent Research</b>		
None. Students on this coursework plan do not complete independent research via thesis. Students interested in conducting independent research should formally change their program of study to the RMS MA with a Thesis.		
<b>Cognate: Any Graduate-Level Course to Meet the Credit Minimum</b>		
Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.		
<b>Total Credits</b>		<b>45</b>

Minimum number of credits required for degree: 45 credits

##### Non-coursework Requirements

- MA comprehensive exam

#### Master of Arts in Research Methods and Statistics with a Thesis

##### Degree requirements

##### Coursework requirements

Code	Title	Credits
<b>The Research Methods &amp; Statistics Master's Degree (RMS-MA +Thesis)</b>		
<b>A. Qualitative Methods</b>		
RMS 4941	Introduction to Qualitative Research	

**B. Quantitative Methods**

RMS 4900	Education Research and Measurement
RMS 4910	Introductory Statistics
RMS 4911	Correlation and Regression
RMS 4912	Analysis of Variance
RMS 4921	Psychometric Theory

**C. Transdisciplinary Methods**

RMS 4931	Survey and Design Analysis
RMS 4952	Research Ethics
RMS 4960	Introduction to Evaluation Research
RMS 4963	Evaluation Research Practice I
RMS 4964	Evaluation Research Practice II

**D. Practicum**

RMS 4980	Practicum in Research
or RMS 4982	Practicum in Evaluation Research

**E. Independent Research**

RMS 4995	Independent Research	5
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Students must complete a minimum of 5 credits of independent research via thesis. These credits can be completed in increments across multiple terms in collaboration with the thesis director.

**Cognate: Any Graduate-Level Course to Meet the Credit Minimum**

Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.

**Total Credits** **50**

Minimum number of credits required for degree: 50 credits

**Non-coursework Requirements**

- None

**Master of Arts in Research Methods and Statistics (Online)****Degree requirements****Coursework requirements**

Code	Title	Credits
<b>The Research Methods &amp; Statistics Master's Degree (RMS-MA Online)</b>		
<b>A. Qualitative Methods</b>		
RMS 4941	Introduction to Qualitative Research	
<b>B. Quantitative Methods</b>		
RMS 4900	Education Research and Measurement	
RMS 4910	Introductory Statistics	
RMS 4911	Correlation and Regression	
RMS 4921	Psychometric Theory	
<b>C. Transdisciplinary Methods</b>		
RMS 4931	Survey and Design Analysis	
RMS 4952	Research Ethics	
RMS 4960	Introduction to Evaluation Research	
<b>D. Practicum</b>		
RMS 4980	Practicum in Research	
or RMS 4982	Practicum in Evaluation Research	

**E. Independent Research**

None. Students on this coursework plan do not complete independent research via thesis. Students interested in conducting independent research should formally change their program of study to the RMS MA with a Thesis.

**F. Specialization**

Students select one specialization area from the following options.

**Total Credits** **45**

**Specializations:**

Code	Title	Credits
<b>Specialization in Applied Research (via Experiential Learning Courses)</b>		
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4963	Evaluation Research Practice I	3
RMS 4964	Evaluation Research Practice II	3
Cognate: Any Graduate-Level Course to Meet the Credit Minimum. Credits must be completed in graduate-level courses approved by an RMS coursework advisor for the cognate. All University College courses require pre-approval from the MCE Dean's Office.		
<b>Specialization in Quantitative Research Methods</b>		
RMS 4912	Analysis of Variance	4
RMS 4915	Hierarchical Linear Modeling	4
RMS 4924	Advanced Measurement	4
<b>Specialization in Information Science Methods</b>		
LIS 4210	Data Visualization	3
LIS 4220	Data Curation	3
LIS 4230	Database Management Systems	3
LIS 4700	Topics in LIS	3

Minimum number of credits required for degree: 45 credits

**Non-coursework Requirements**

- MA comprehensive exam

**Library and Information Science****Master of Library and Information Science in Library and Information Science: MLIS@Denver****Degree Requirements****Coursework Requirements**

Code	Title	Credits
<b>LIS CORE and REQUIRED COURSES</b>		
LIS 4000	Libraries, Information and Society	3
LIS 4010	Organization of Information	3
LIS 4015	User and Access Services	3
LIS 4040	Management of Information Organizations	3
LIS 4050	Library and Information Technologies	3
RMS 4900	Education Research and Measurement	4
LIS 4910	Culminating Internship	3
or LIS 4901	Capstone Course	
<b>Elective requirements</b>		<b>36</b>
<b>Total Credits</b>		<b>58</b>

**Non-coursework Requirements**

- Portfolio

**Master of Library and Information Science****Degree Requirements****Coursework Requirements**

Code	Title	Credits
<b>LIS CORE and REQUIRED COURSES</b>		
LIS 4000	Libraries, Information and Society	3
LIS 4010	Organization of Information	3
LIS 4015	User and Access Services	3
LIS 4040	Management of Information Organizations	3
LIS 4050	Library and Information Technologies	3
RMS 4900	Education Research and Measurement	4

LIS 4910 or LIS 4901	Culminating Internship Capstone Course	3
<b>Elective requirements</b>		<b>36</b>
Total Credits		58

**Non-coursework Requirements**

- Portfolio

**Master of Library and Information Science with a Concentration in Research Data Management****Degree Requirements****Coursework Requirements**

Code	Title	Credits
LIS Core and Required Courses		
LIS 4000	Libraries, Information and Society	3
LIS 4010	Organization of Information	3
LIS 4015	User and Access Services	3
LIS 4040	Management of Information Organizations	3
LIS 4050	Library and Information Technologies	3
LIS 4910 or LIS 4901	Culminating Internship Capstone Course	3
Concentration Requirements		
LIS 4210	Data Visualization	3
LIS 4220	Data Curation	3
LIS 4135	Scholarly Communication	3
LIS 4230	Database Management Systems	3
LIS 4235	Scripting for Large Databases	4
RMS 4910	Introductory Statistics	4
RMS 4930	Quantitative Research Design	3
RMS 4931	Survey and Design Analysis	3
RMS 4941	Introduction to Qualitative Research	4
Elective Requirements		5
<b>Total Credits</b>		<b>53</b>

**Non-coursework Requirements**

- Portfolio

**Certificate Programs****Certificate in Library and Information Science with a Concentration in Research Data Management****Coursework Requirements**

Code	Title	Credits
<b>RDM Post-Master' Certificate</b>		
LIS 4135	Scholarly Communication	3
LIS 4210	Data Visualization	3
LIS 4220	Data Curation	3
LIS 4230	Database Management Systems	3
LIS 4235	Scripting for Large Databases	4
RMS 4910	Introductory Statistics	4
RMS 4930	Quantitative Research Design	3
RMS 4941	Introduction to Qualitative Research	4
Elective		1
<b>Total Credits</b>		<b>28</b>

## Library & Information Science (LIS)

### LIS 4000 Libraries, Information and Society (3 Credits)

An overview of the theoretical and conceptual foundations of library, archival, and information sciences and an introduction to the information professions, including principles, values, professional organizations, publications, current and future challenges.

### LIS 4001 Immersion (0 Credits)

This on-campus experience is for students in the MLIS@Denver online program.

### LIS 4005 Privilege & Equity (3 Credits)

This course is a reflection and discussion-guided exploration of various societal privileges and how they affect equity in library, archives, and other information professions. The topics of race, ethnicity, gender, socio-economic status, and education will be considered.

### LIS 4010 Organization of Information (3 Credits)

This course introduces basic concepts in the theoretical, practical, and technological aspects of information organization. It provides an overview of the methodologies for organizing and representing information resources in the library, archives, and museum settings.

### LIS 4011 Information Access & Retrieval (3 Credits)

Information retrieval is defined as the process of searching for (and retrieving) relevant information within a document collection. The document collection could be textual (bibliographic records), structured and unstructured data, library databases, web based information resources, multimedia resources, and numerical data. This course introduces students to important access and retrieval tools and technologies used to retrieve information that are relevant to a user's information need. In addition to the underlying principles and processes revolving around access and retrieval such as text operations, indexing, query languages, and searching, the course covers relevant topics such as library discovery systems, web based information retrieval technologies, and enterprise search systems.

### LIS 4015 User and Access Services (3 Credits)

Overview of human information processing and user services in the changing information environment and different communities of practice. This course introduces the concepts of user information needs, seeking, and processing as a foundation for understanding users and designing user-centered information services. The course examines both traditional reference and current/emerging information services in different settings and populations. Course also introduces the concepts of information literacy, user education, and assessment of information services.

### LIS 4040 Management of Information Organizations (3 Credits)

An introduction to current theory and practice of management in information organizations through the study of organizations, communications, decision making, planning, leadership, human resources and budgeting. Prerequisite: LIS 4000 or instructor approval.

### LIS 4043 Advocacy and Marketing in LIS (3 Credits)

An overview of advocacy and marketing foundations as they relate to libraries. The course examines practical tools and applications of both marketing and advocacy. It helps to distinguish the difference between the two disciplines and when the two should be used together.

### LIS 4050 Library and Information Technologies (3 Credits)

A foundation course on the applications of information and communications technology in libraries and information agencies. Integrated library systems and the acquisition, evaluation, and implementation of library automation solutions, including electronic resource management systems are explored. The course further introduces database design, Internet technology, web services, cloud computing, computer networks, telecommunications, and computer security. Hardware, software, and other productivity tools and utilities from organizations such as OCLC, Amazon, and Google are discussed.

### LIS 4060 Reference (3 Credits)

Information resources include a number of different kinds of reference materials in a wide variety of formats. These include guidebooks, encyclopedias and dictionaries, indexes and abstracts, handbooks, bibliographies, biographical finding tools and biographies, data sets and much more. Many of these resources are available on-line, as well as in print and other digital formats. This course will help students identify and evaluate the most likely resources for information queries in particular settings. It will also provide the opportunity to find answers to real research questions. The course will cover the primary resources for the broad disciplines of business, humanities, sciences, social sciences and government publications in print and electronic formats. Class exercises will reflect the multidisciplinary and multicultural interests and characteristics of library users. Prerequisite: LIS 4015. Recommended prerequisites: LIS 4000 and LIS 4011.

### LIS 4070 Cataloging & Classification (3 Credits)

Theory and practice of bibliographic control including the study of representative cataloging using Anglo American Cataloging Rules, 2d ed., rev. with amendments and Library of Congress Rule Interpretations, machine-based representation using the USMARC formats and other standards, and subject analysis and classification using Library of Congress Subject Headings, Dewey Decimal Classification, and Library of Congress Classification, with principle focus on monographs, major media, sound recordings, and serials. Prerequisite: LIS 4010 or instructor approval.

### LIS 4135 Scholarly Communication (3 Credits)

This course will provide a broad understanding of scholarly communication systems regarding the creation, dissemination, and evaluation of scientific information. The concept of scholarly communication refers to the ways researchers publish and disseminate their research findings in the digital environment and encompasses formal and informal channels of communication among scholars. Traditionally, scholarly dissemination systems have involved conference presentations and publication of books and articles in subscription-based journals. Digital technology has transformed scholarly communication by introducing open access publishing models and alternative ways of measuring scholarly impact. This course will explore the changing nature of scholarship and will examine the topics of scholarly publishing, peer review, intellectual property, the open access movement, digital repositories, bibliometrics, and altmetrics.



**LIS 4206 Web Content Management (3 Credits)**

This course will include instruction in web page creation, selection, and evaluation of web content as well as web site management. Selection of web page content will be discussed in the context of organizational knowledge management and competitive intelligence needs. Differences in information needs for provision of public information and competitive intelligence on Internet pages versus the organizational information needs of Intranets in knowledge management will be explored. This course also will address human-computer interface design to allow web page designers to create effective web pages according to established principles of design.

**LIS 4208 Usability (3 Credits)**

This course provides an overview of usability analysis and user experience research and introduces students to practical methods and techniques in conducting usability evaluation. The focus of the course will be on the selection of appropriate evaluation methods, as well as planning, designing, and conducting usability evaluations of information services. In addition, the course will discuss the methods and tools of user-experience research, the theoretical underpinnings of usability, and the role of usability in iterative design and the development of information systems.

**LIS 4209 Information Architecture (3 Credits)**

The web is a complex information environment consisting of billions of web pages, users, and clicks and interaction every single day. This course introduces students to the fundamentals of web information architecture (IA) - a discipline that aims to understand the information needs and activities of web visitors and create design elements to help users find their way around in the complex information environment with ease. The course will cover various strategies and skills, in which information architects structure, organize, label, navigate, and search for information on large websites. A service learning component is built into this course so that students can transfer their IA knowledge and skills to a real-world project. The course is designed following a project management approach and students will be exposed to different activities from start to finish.

**LIS 4210 Data Visualization (3 Credits)**

This course provides a practical introduction to the principles, theories, and applications of information visualization in the research data context. This course contextualizes modern practices in information visualization by examining historical approaches to visualization with an eye on theories that inform contemporary visualization best practices. Using a hands-on component, students will get real-world experience in visualizing datasets, and building visualization dashboards that integrate multiple visualizations.

**LIS 4220 Data Curation (3 Credits)**

Across the academic domains, digital data are becoming more visible as critical products of scholarly work. Digital technologies, such as sensor networks in the environmental sciences, social networking tools in the social sciences, and the digitization of cultural artifacts in the humanities, allow researchers to produce far greater volumes and complexities of digital data than were possible in the past. Digital technologies, and the data that they produce, offer tremendous opportunity for researchers in every academic discipline to ask questions that were previously impossible to study. Some digital technologies enable researchers to study very local phenomena in great detail. Others enable the integration of many diverse data streams in order to conduct synthesis and longitudinal studies. But while the possibilities of digital data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse user communities, and how to store and preserve data over the long term.

**LIS 4230 Database Management Systems (3 Credits)**

This is a foundation course on the principles of database design and the use of database management systems for information professionals. The course covers database systems, data modeling, relational models, relational algebra, SQL, emerging NoSQL systems, data storage and querying, query languages, query optimization, OLAP, transaction management, data warehousing, and data mining. In addition, fundamentals on systems analysis and the database application lifecycle will be reviewed.

**LIS 4235 Scripting for Large Databases (4 Credits)**

This course will introduce students to the basics of data storage and acquisition as part of a multi-step data gathering, processing, analysis and visualization effort. The logic and structure of relational databases will be reviewed, exploring the more common databases like SQL Server and Postgres, along with exploration of JSON and NoSQL based data stores. Techniques and methods for automation and scalable data processing will be introduced under the Python programming language with a focus on using Pandas and other libraries to simplify data tasks. These skills will be integrated and applied by the student through the use of prepared data sources, along with use of APIs and web scraping technique to acquire data through internet sources.

**LIS 4320 Outreach (3 Credits)**

Outreach as a library service is evolving at a rapid pace. This course will examine the history, current practice, and future promise of outreach across all kinds of library organizational settings. Topics addressed in this course will include competencies for outreach librarianship; practices in outreach services; definition and scope; planning, designing and budgeting for services; environmental scanning, key performance indicators, and barriers; developing and maintaining partnerships.

**LIS 4321 Collection Management (3 Credits)**

Topics addressed in this course include collection development and access policies, selection methods and practices, collection assessment, preservation and conservation, de-selection, treatment of rare material, manuscripts and archives, U.S. government publications, non-book and digital formats management, juvenile, and other special materials.

**LIS 4330 Information Literacy Instruction (3 Credits)**

This course provides an introduction to the principles of library instruction and information literacy including a historical overview of their place within the profession. Emphasis is on instruction within an academic setting, but students will learn important educational theories that can be applied to a variety of settings. ACRL and AASL standards will be examined as well as types of instruction, instructional design, collaboration with faculty, various competencies, assessment, and lifelong learning. The class has a strong emphasis on public speaking, communication skills, and the practical application of educational theory.

**LIS 4355 The Reading Experience in LIS (3 Credits)**

Working with readers has always been a cornerstone of library practice. Traditionally referred to as readers' advisory, reading work has expanded beyond book displays, individual requests for a good read, and book clubs. It has become a foundation of extensive library programming, meaningful leisure, and personal enjoyment, and an instrument of building healthy and engaged communities; it has turned from monolingual to multilingual; and it has claimed its place in the virtual library environment. No longer limited to public libraries, reading work comprises a growing area of interest in academic and special libraries, book publishing, and book trade. This course will introduce students to the selected theories of reading behaviors; practical skills of engaging readers, developing reader services, programming, and advocacy; the major genres and sub-genres of fiction and nonfiction materials; a wide array of print and electronic tools facilitating this practice; electronic reading and online reading communities; and foundations of bibliotherapy. This course is focused on adult readers. For other audiences, see LIS 4510 Children's Materials & Services & LIS 4520 Young Adult Materials & Services.

**LIS 4370 Database Searching (2 Credits)**

Nearly all historic, traditional search and retrieval tools such as library catalogs, indexes, microform guides, and archival findings aids have migrated to web-based systems. This course explores the complexities of searching for materials in an online environment. Topics to be covered include database and field structures; controlled vocabularies and indexing schema; search syntaxes, reference linking; data exploring and manipulation; non-textual database searching including numerical, image, and multimedia data; metasearch and web-scale discovery technologies.

**LIS 4404 Metadata Architectures (3 Credits)**

Provides an overview of the principles and theories of metadata development in the digital environment. Focuses on the design and application of metadata schemas for distinct domains and information communities, issues in metadata interoperability, vocabulary control, quality control and evaluation. Examines international standards, activities and projects. Prerequisite: LIS 4010.

**LIS 4510 Children's Materials and Services (3 Credits)**

This course is designed to prepare librarians to work with children (ages birth to 12 years) in school and public libraries. Topics covered include children's development, reading interests and needs, materials selection, collection development (including print and non-print materials), discussions of specific genres, reading motivation skills, designing a children's area, and developing various programming ideas. Students read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks and stories, become familiar with review sources, and design a one-year plan for youth services in a school or public library.

**LIS 4520 Young Adult Materials & Services (3 Credits)**

This course prepares librarians to work with young adults (ages 12-18) in school and public libraries. Topics covered include young adult development, reading interests and needs, materials selection, collection development (including print and non-print materials), and discussions of specific genres, reading motivation skills, designing a YA area, programming, and intellectual freedom issues. Participants will read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks, become familiar with review sources, and design a one-year plan for a YA department in a small school or public library.

**LIS 4535 School Libraries (2 Credits)**

This course is a study of school libraries and the characteristics that make them different from other types of libraries. There is an emphasis on information literacy and educational technology standards as they apply to school libraries, the collaborative instructional process, and standards-based instruction including summative and formative assessment revision techniques. Collaborative planning and curriculum development through the school library program is addressed, as well as an understanding of networks and instructional delivery systems. Various strategies to improve students' reading will be addressed, as well as a variety of methods for promoting children's and teen literature through collaboration with classroom teachers. Administration of the school library is addressed in a review of mission statements, goals and objectives, strategic planning, policies and procedures, and communication with school administration. The discussions will create an awareness of the importance of leadership and professionalism through educational and professional organizations, lifelong learning, educational research, and mentoring. Most of the concepts in this class will have been introduced in other classes. This class will specifically tie the concepts to the school library setting.

**LIS 4610 Career Development (3 Credits)**

This course addresses issues in career planning and professional development. Key skills that graduate professional students build are: using self-assessment and reflection to understand existing skills and expertise; identifying the expectations of the LAIS profession; acquiring skills related to finding a professional position; and, developing a career plan.

**LIS 4700 Topics in LIS (1-5 Credits)**

This flexible library and information science course will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as emerging technologies, new methodologies, specific reader services, standards and practices, and social and economic trends in the profession. Prerequisite courses may be recommended or required as determined by the content of the specified course.

**LIS 4701 Reference Topics (1 Credit)**

This course provides the student with an opportunity to explore information resources in specific subject materials. Lecture, readings, class discussions, and exercises will address all formats of materials including print, electronic, and web resources.

**LIS 4702 Type of Library: Topics (1-3 Credits)**

This course is a study of specific types of libraries, such as public libraries, academic libraries, and special libraries, and the characteristics that make them different from other types of libraries. Specific topics covered will depend on the type of library, but may include collections, management, budgets and funding, as well as professional competencies.

**LIS 4800 Introduction to Archives (3 Credits)**

This course provides an introduction to the objectives and methods of the archival and records management professions including an overview of terminology, issues, and common practices. The systematic control of records throughout their life cycle from creation through processing, distribution, organization, retrieval and archival disposition will be covered. Prerequisites: LIS 4000 and LIS 4010; or instructor permission.

**LIS 4805 Records Management (3 Credits)**

This course covers the establishment of information maintenance plans, evaluations and audits of records and information management Programs, the records and information survey, retention policies and legal requirements, and techniques for integrating automation to records and information management.

**LIS 4806 Advanced Archives (3 Credits)**

In this course, students will be given the opportunity to put into practice basic archival principles and functions. Students will perform the actions of appraisal, accessioning, arrangement, description, and access solution review for both analog and digital archival collections. Additionally, students will be given the task of providing solutions for new paradigms in archival processing such as creating a web archive, processing email collections, and capturing social media content. The course will be a combination of lecture, demonstration, lab time, discussion, and projects.

**LIS 4810 Digital Libraries (3 Credits)**

This course provides a theoretical foundation for the study of digital libraries and discusses the technological, organizational, social, and legal issues associated with the development and use of digital libraries. Through this course students develop an understanding of digital library components and explore theoretical and practical approaches to constructing, maintaining, and evaluating digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries, information access in the digital library environment, digital library users and user services, data repositories, digital curation, digital preservation, digital library evaluation, and digital librarianship.

**LIS 4820 Digitization (3 Credits)**

The course offers an introduction to issues and trends in planning, developing and managing digitization projects at libraries, archives, and museums. The focus of the course is on the conversion process of analog materials into the digital format, online delivery, and preservation of master files. The course discusses collection development policy for digital projects, copyright, digital imaging technology, digitization standards and best practices for text, images, audio, and video, metadata for cultural heritage collections, delivery platforms, preservation, project management, sustainability, documentation, promotion, and evaluation of digital projects.

**LIS 4850 Digital Preservation (3 Credits)**

Students will learn the principles and practices of preserving access to information encoded in digital form. They will learn how to assess digital preservation needs within an institution, write digital preservation policies, and how to collect and present data to make a case for acquiring funds for digital preservation activities. Students will learn the basics of digital information encoding as it applies to the technological aspects of digital preservation, and will learn about current tools and practices used to preserve access to digitally encoded information over time. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

**LIS 4901 Capstone Course (3 Credits)**

Students in this course will design and complete a project to demonstrate the ability to integrate and synthesize their master's course work and apply their knowledge to a topic. The class meets with an instructor regularly over the nine-week summer quarter. The instructor monitors and guides the students to ensure that they complete the phases of the project in accordance with the proposed timeline and goals. Evaluation will be based on individual performance, with respect to the quality and professionalism of the research, the management of the project, and analytical and writing skills. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

**LIS 4902 Internship (1-4 Credits)**

This course will offer up to 4 credits for an internship position in libraries and archives. Students are encouraged to gain practical experience.

**LIS 4910 Culminating Internship (3 Credits)**

This course is designed to supplement the classroom experience by giving students practical experience working in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include fields of medicine, law, art, public, and academic libraries. It is the student's responsibility to select a practicum site and a field supervisor, who must be approved by LIS faculty. Seventy-five hours of service over a 10-week quarter are required. The student, faculty, and field supervisor will determine specific requirements for the final paper or report. Students must notify the LIS academic advisor one quarter before enrolling in Culminating Internship. Prerequisites: Completion of a minimum of 38 quarter hours of graduate LIS coursework, including all core courses.

**LIS 4911 Elementary School Culminating Internship (2 Credits)**

This course is designed to provide elementary school practical experience for teacher-librarians by working a minimum of 80 hours in an elementary school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4912 Secondary School Culminating Internship (2 Credits)**

This course is designed to provide secondary school practical experience for teacher-librarians by working a minimum of 80 hours in middle or high school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4920 Service Learning in LIS (1-4 Credits)**

This course is designed to supplement the classroom experience by giving students an opportunity to participate in a service learning project. Students will propose an independent study component highlighting the learning aspects of the project. The experience should provide practical work in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include many areas related to the information needs of an underserved population. It is the students responsibility to select a site and a field supervisor. The student, faculty coordinator, and field supervisor will work together to establish the goals and objectives of the experience. A minimum of 40 hours of service is required for two quarter hours of credit.

**LIS 4991 MA Independent Study (1-10 Credits)**

Independent study projects allow students more in-depth investigation of the many facets of library and information science. Students must work with an approved faculty advisor and submit a proposal outlining the objectives, scope, outcomes, and evaluation criteria. The faculty advisor and the department director must approve proposals. Prerequisites: Completion of a minimum of 30 quarter hours of graduate LIS coursework, including all core courses and a minimum GPA of 3.0.

**LIS 4995 Independent Research (1-10 Credits)**

## Research Methods and Statistics (RMS)

**RMS 4900 Education Research and Measurement (4 Credits)**

This course is intended for Master's degree students in the College of Education. Quantitative research designs, empirical methods of data collection and interpretation, and measurement issues in research are examined.

**RMS 4910 Introductory Statistics (4 Credits)**

This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Cross listed with SOWK 5930.

**RMS 4911 Correlation and Regression (4 Credits)**

This course focuses on the study of correlation and multiple regression research designs and their application to educational and social science programs. Cross listed with SOWK 5202. Prerequisite: RMS 4910.

**RMS 4912 Analysis of Variance (4 Credits)**

Conceptual and applied analyses of one-way through factorial nested analysis of variance designs and multivariate analysis of variance are presented. Prerequisite: RMS 4910.

**RMS 4914 Structural Equation Modeling (4 Credits)**

This course covers major applications of and issues related to covariance structure modeling, specifically confirmatory factor analysis and latent variable path modeling; types of research applications for which covariance structure modeling analyses are appropriate. Prerequisite: RMS 4921.

**RMS 4915 Hierarchical Linear Modeling (4 Credits)**

This course introduces models that extend multiple regression to analysis of nested data structures common in education and other social sciences. Application of those methods to various forms of multilevel data, including repeated measure (growth trajectory) data is emphasized. Prerequisite: RMS 4911.

**RMS 4916 Latent Growth Curve Modeling (4 Credits)**

This course covers advanced issues in longitudinal data analysis using structural equation modeling and hierarchical linear modeling with latent variables. It involves both conceptual development and practical implementation of longitudinal data analysis. This course is intended to be a hands-on approach to working with data and addressing research questions that can be best answered by longitudinal data. Prerequisite: RMS 4914.

**RMS 4918 Propensity Score Analysis (3 Credits)**

Propensity score analysis provides a conceptual understanding of the rationale and importance of controlling for biases that might emerge during the selection process in experimental research. The common procedures of fitting a propensity score model and estimating the effect of the treatment after correction for biases are demonstrated.

**RMS 4919 Topics in Statistics (1-5 Credits)**

Topics vary by quarter but may include log-linear analysis, factor analysis, or missing data analysis.

**RMS 4920 Educational Measurement (3 Credits)**

This course examines the meaning, characteristics, and processes of educational measurement and evaluation. Development and interpretation of both standardized and informal tests are considered.

**RMS 4921 Psychometric Theory (3 Credits)**

This course examines major psychometric theories (e.g., classical, item response) as related to reliability, generalizability, validity, and item analysis methods. Prerequisite: RMS 4910.

**RMS 4922 Item Response Theory (3 Credits)**

Theory and methods for the educational and psychological measurement of latent variables using item response theory are covered in this course. Prerequisite: RMS 4910, RMS 4921.

**RMS 4924 Advanced Measurement (4 Credits)**

This course instructs students in advanced measurement models and techniques are employed in the social sciences. Prerequisites: RMS 4921 & RMS 4911.

**RMS 4929 Topics in Psychometrics (1-3 Credits)**

Topics vary, but include: large scale testing, computer applications of item response theory, affective measure construction, generalizability theory, additive conjoint measurement, and standing testing. Prerequisite: RMS 4921 or instructor permission.

**RMS 4930 Quantitative Research Design (3 Credits)**

This course provides in depth study of empirical research methods involved in experimental, quasi-experimental, single-subject, and non-experimental quantitative research designs.

**RMS 4931 Survey and Design Analysis (3 Credits)**

Survey techniques, needs assessment, item construction, sampling, maximizing response rates and data analysis; survey construction and data analysis are required. Prerequisite: RMS 4910.

**RMS 4932 Meta-Analysis Social Science Research (3 Credits)**

This course examines meta analytic techniques in the social sciences. Included are discussions of review of critical data bases, coverage of all major methods of data collection and analysis, and coverage of how best to present meta analytic findings for publication. Prerequisite: RMS 4911, RMS 4930, and preferred RMS 4912.

**RMS 4939 Topics in Quantitative Research Methods (1-5 Credits)**

Topics vary, but include minimization as an alternative to randomization, propensity score modeling as an alternative to experimental control, and analysis of data from single-subject designs. Prerequisites: RMS 4930 or instructor permission.

**RMS 4940 Structural Foundations of Research in Social Sciences (3 Credits)**

This introductory course on epistemology and research includes discussion of identification and development of problems for research; introduction to basic quantitative and qualitative methods of conducting research in social science settings, ethnographic, and criticism methods.

**RMS 4941 Introduction to Qualitative Research (4 Credits)**

This course is designed to provide students with more in-depth understanding of naturalistic, qualitative research methods. It is assumed that students enrolling in this course have already completed an introductory research methods course in either education or another discipline. Purposes and questions posed in their course include: Why should a researcher choose to conduct a qualitative study? How are data collection strategies carried out in a qualitative research design? What are some of the ethical concerns that impact qualitative research?

**RMS 4942 Qualitative Data Collection and Analysis (4 Credits)**

In this intermediate level qualitative research course students learn about design, purposeful sampling, field work, observational approaches, and interviews, with special attention directed to the skills and competencies needed to gather and analyze high quality data. Prerequisite: RMS 4941 or instructor permission.

**RMS 4945 Community-Based Research (4 Credits)**

This class introduces the emerging philosophical and methodological issues that arise when university faculty students collaborate on research with community-based organizations. Prerequisites: RMS 4942 and RMS 4930 or instructor permission.

**RMS 4946 Advanced Qualitative Research (4 Credits)**

This course introduces exemplary qualitative studies and consideration of implications for education and the social sciences, and considers the types of questions asked by qualitative researchers and methods they use, particularly observation and interviewing. Students undertake their own qualitative study to consider application of theory, techniques, and practice to their dissertation research. Prerequisite: RMS 4941 and RMS 4942 or instructor permission.

**RMS 4947 Arts-Based Research (3 Credits)**

In this course students explore the ground upon which arts-based research is built and become acquainted with salient issues regarding this kind of research. We practice interviewing, observations and a few arts-based practices. Prerequisites: RMS 4941 or instructor permission.

**RMS 4948 Criticism and Connoisseurship: Qualitative research and the enhancement of practice (3 Credits)**

Qualitative inquiry in educational settings takes many forms: ethnography, grounded theory, case-study research, and more. What these methods have in common is a framework built upon social science. Criticism and connoisseurship, however, draws its conceptual underpinnings from the arts and humanities. What does it mean to have a conceptual framework dependent upon the arts? How are the methods of educational criticism different from other research methods? This class teaches students how to conduct research using this method and it provides responses to these types of questions in order that students can defend this type of research as well as others that depend on the arts and humanities as their basis. Prerequisite: RMS 4941.

**RMS 4949 Topics in Qualitative Research (1-5 Credits)**

This seminar builds on the content of other qualitative research courses offered in the RMS program and meets the students where they are on their dissertation journey; thus learning opportunities are tailored to individual needs as far as possible. Assignments focus on the issues pertinent to the design of dissertation proposals and writing, including ethical issues and IRB preparation, theoretical/conceptual framework, literature review, methodology, data collection and analysis strategies, and various forms of representation. Prerequisite: RMS 4941.

**RMS 4950 Qualitative Research Methodologies (3 Credits)**

Each year this course examines three qualitative research methods. The methods that might be covered in any given year include: phenomenology, grounded theory, narrative, case study, and ethnography. For each method, the following is addressed: philosophical and historical foundations, various ways the method has been utilized, and practical recommendations for conducting research utilizing this method. Prerequisite: RMS 4941.

**RMS 4951 Mixed Method Research Design (4 Credits)**

This course is designed as a fundamental exploration of mixed model and mixed method approaches. Students design mixed model and mixed method research studies with a particular emphasis on multi-site and longitudinal designs that are especially suited to educational issues. Students learn analysis approaches that incorporate previously learned quantitative and qualitative skills, and apply these in practice problem examples. Prerequisites: RMS 4910, RMS 4930 and RMS 4941, and one of the following: RMS 4947, or RMS 4948, or instructor permission.

**RMS 4952 Research Ethics (3 Credits)**

This course introduces ethical theory and a selection of current issues in research ethics.

**RMS 4953 Topics in Data Management (1-3 Credits)**

This is a preparatory course emphasizing the manipulation and analysis of data in electronic form.

**RMS 4959 Topics in Research Design (1-5 Credits)**

Topics vary, but include single subject design issues, minimization as an alternative to randomization, advances in quasi-experimental design. Prerequisite: RMS 4930.

**RMS 4960 Introduction to Evaluation Research (3,4 Credits)**

This course provides an introduction to frameworks for designing evaluation research studies.

**RMS 4963 Evaluation Research Practice I (3 Credits)**

This service learning course provides part 1 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4963 must take RMS 4964 in the following quarter. The course is not a traditional lecture course; it is a course-embedded experiential learning course.

**RMS 4964 Evaluation Research Practice II (3 Credits)**

This service learning course provides part 2 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4964 must have taken RMS 4963 in the preceding quarter.

**RMS 4969 Topics in Program Evaluation (1-5 Credits)**

Topics vary, but include advocacy and policy change, assessment in higher education, multi-level evaluation, cost effectiveness analysis, data visualization and reporting, assessment in distance education, and evaluation in the arts and culture. Prerequisite: RMS 4960.

**RMS 4978 Practicum in Qualitative Research (1-4 Credits)**

Students may complete the Practicum in Qualitative Research with an individual professor or with a community partner. The goal of this practicum is to provide further experiences in thinking about, conceptualizing, designing, conducting, and/or presenting qualitative research. Prerequisites: RMS 4941, RMS 4942, and at least two of the following classes RMS 4945, RMS 4946, RMS 4947, RMS 4948.

**RMS 4980 Practicum in Research (1-5 Credits)**

This course provides a supervised experience in design and implementation of an empirical research or evaluation study. Organization of research proposals, completion of human subjects applications, collection, and analysis of data are emphasized. Students are expected to prepare a written report of their project which is suitable for professional presentation or publication.

**RMS 4981 Community-Based Research Practicum (1-5 Credits)**

Students provide community-based research assistance to a community partner (non-profit, school, community based organization, etc). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's research expertise with the real needs of community partners. Prerequisite: RMS 4945.

**RMS 4982 Practicum in Evaluation Research (1-6 Credits)**

Students provide evaluation assistance to a university or community partner (non-profit, school, community-based organization, etc.). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's evaluation and research expertise with the real needs of university or community partners. Prerequisite: RMS 4960.

**RMS 4991 Independent Study (1-10 Credits)**

This course allows Masters students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 4995 Independent Research (1-10 Credits)**

This course is for Masters students in RMS whose program requires completion of a Master's thesis.

**RMS 5771 RMS Dissertation Research Seminar (1-3 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

**RMS 5991 Independent Study (1-10 Credits)**

This course allows Ph.D. students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 5995 Independent Research (1-18 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

**Library Information Science Courses****LIS 4000 Libraries, Information and Society (3 Credits)**

An overview of the theoretical and conceptual foundations of library, archival, and information sciences and an introduction to the information professions, including principles, values, professional organizations, publications, current and future challenges.

**LIS 4001 Immersion (0 Credits)**

This on-campus experience is for students in the MLIS@Denver online program.

**LIS 4005 Privilege & Equity (3 Credits)**

This course is a reflection and discussion-guided exploration of various societal privileges and how they affect equity in library, archives, and other information professions. The topics of race, ethnicity, gender, socio-economic status, and education will be considered.

**LIS 4010 Organization of Information (3 Credits)**

This course introduces basic concepts in the theoretical, practical, and technological aspects of information organization. It provides an overview of the methodologies for organizing and representing information resources in the library, archives, and museum settings.

**LIS 4011 Information Access & Retrieval (3 Credits)**

Information retrieval is defined as the process of searching for (and retrieving) relevant information within a document collection. The document collection could be textual (bibliographic records), structured and unstructured data, library databases, web based information resources, multimedia resources, and numerical data. This course introduces students to important access and retrieval tools and technologies used to retrieve information that are relevant to a user's information need. In addition to the underlying principles and processes revolving around access and retrieval such as text operations, indexing, query languages, and searching, the course covers relevant topics such as library discovery systems, web based information retrieval technologies, and enterprise search systems.

**LIS 4015 User and Access Services (3 Credits)**

Overview of human information processing and user services in the changing information environment and different communities of practice. This course introduces the concepts of user information needs, seeking, and processing as a foundation for understanding users and designing user-centered information services. The course examines both traditional reference and current/emerging information services in different settings and populations. Course also introduces the concepts of information literacy, user education, and assessment of information services.

**LIS 4040 Management of Information Organizations (3 Credits)**

An introduction to current theory and practice of management in information organizations through the study of organizations, communications, decision making, planning, leadership, human resources and budgeting. Prerequisite: LIS 4000 or instructor approval.

**LIS 4043 Advocacy and Marketing in LIS (3 Credits)**

An overview of advocacy and marketing foundations as they relate to libraries. The course examines practical tools and applications of both marketing and advocacy. It helps to distinguish the difference between the two disciplines and when the two should be used together.

**LIS 4050 Library and Information Technologies (3 Credits)**

A foundation course on the applications of information and communications technology in libraries and information agencies. Integrated library systems and the acquisition, evaluation, and implementation of library automation solutions, including electronic resource management systems are explored. The course further introduces database design, Internet technology, web services, cloud computing, computer networks, telecommunications, and computer security. Hardware, software, and other productivity tools and utilities from organizations such as OCLC, Amazon, and Google are discussed.

**LIS 4060 Reference (3 Credits)**

Information resources include a number of different kinds of reference materials in a wide variety of formats. These include guidebooks, encyclopedias and dictionaries, indexes and abstracts, handbooks, bibliographies, biographical finding tools and biographies, data sets and much more. Many of these resources are available on-line, as well as in print and other digital formats. This course will help students identify and evaluate the most likely resources for information queries in particular settings. It will also provide the opportunity to find answers to real research questions. The course will cover the primary resources for the broad disciplines of business, humanities, sciences, social sciences and government publications in print and electronic formats. Class exercises will reflect the multidisciplinary and multicultural interests and characteristics of library users. Prerequisite: LIS 4015. Recommended prerequisites: LIS 4000 and LIS 4011.

**LIS 4070 Cataloging & Classification (3 Credits)**

Theory and practice of bibliographic control including the study of representative cataloging using Anglo American Cataloging Rules, 2d ed., rev. with amendments and Library of Congress Rule Interpretations, machine-based representation using the USMARC formats and other standards, and subject analysis and classification using Library of Congress Subject Headings, Dewey Decimal Classification, and Library of Congress Classification, with principle focus on monographs, major media, sound recordings, and serials. Prerequisite: LIS 4010 or instructor approval.

**LIS 4135 Scholarly Communication (3 Credits)**

This course will provide a broad understanding of scholarly communication systems regarding the creation, dissemination, and evaluation of scientific information. The concept of scholarly communication refers to the ways researchers publish and disseminate their research findings in the digital environment and encompasses formal and informal channels of communication among scholars. Traditionally, scholarly dissemination systems have involved conference presentations and publication of books and articles in subscription-based journals. Digital technology has transformed scholarly communication by introducing open access publishing models and alternative ways of measuring scholarly impact. This course will explore the changing nature of scholarship and will examine the topics of scholarly publishing, peer review, intellectual property, the open access movement, digital repositories, bibliometrics, and altmetrics.

**LIS 4206 Web Content Management (3 Credits)**

This course will include instruction in web page creation, selection, and evaluation of web content as well as web site management. Selection of web page content will be discussed in the context of organizational knowledge management and competitive intelligence needs. Differences in information needs for provision of public information and competitive intelligence on Internet pages versus the organizational information needs of Intranets in knowledge management will be explored. This course also will address human-computer interface design to allow web page designers to create effective web pages according to established principles of design.

**LIS 4208 Usability (3 Credits)**

This course provides an overview of usability analysis and user experience research and introduces students to practical methods and techniques in conducting usability evaluation. The focus of the course will be on the selection of appropriate evaluation methods, as well as planning, designing, and conducting usability evaluations of information services. In addition, the course will discuss the methods and tools of user-experience research, the theoretical underpinnings of usability, and the role of usability in iterative design and the development of information systems.

**LIS 4209 Information Architecture (3 Credits)**

The web is a complex information environment consisting of billions of web pages, users, and clicks and interaction every single day. This course introduces students to the fundamentals of web information architecture (IA) - a discipline that aims to understand the information needs and activities of web visitors and create design elements to help users find their way around in the complex information environment with ease. The course will cover various strategies and skills, in which information architects structure, organize, label, navigate, and search for information on large websites. A service learning component is built into this course so that students can transfer their IA knowledge and skills to a real-world project. The course is designed following a project management approach and students will be exposed to different activities from start to finish.

**LIS 4210 Data Visualization (3 Credits)**

This course provides a practical introduction to the principles, theories, and applications of information visualization in the research data context. This course contextualizes modern practices in information visualization by examining historical approaches to visualization with an eye on theories that inform contemporary visualization best practices. Using a hands-on component, students will get real-world experience in visualizing datasets, and building visualization dashboards that integrate multiple visualizations.

**LIS 4220 Data Curation (3 Credits)**

Across the academic domains, digital data are becoming more visible as critical products of scholarly work. Digital technologies, such as sensor networks in the environmental sciences, social networking tools in the social sciences, and the digitization of cultural artifacts in the humanities, allow researchers to produce far greater volumes and complexities of digital data than were possible in the past. Digital technologies, and the data that they produce, offer tremendous opportunity for researchers in every academic discipline to ask questions that were previously impossible to study. Some digital technologies enable researchers to study very local phenomena in great detail. Others enable the integration of many diverse data streams in order to conduct synthesis and longitudinal studies. But while the possibilities of digital data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse user communities, and how to store and preserve data over the long term.

**LIS 4230 Database Management Systems (3 Credits)**

This is a foundation course on the principles of database design and the use of database management systems for information professionals. The course covers database systems, data modeling, relational models, relational algebra, SQL, emerging NoSQL systems, data storage and querying, query languages, query optimization, OLAP, transaction management, data warehousing, and data mining. In addition, fundamentals on systems analysis and the database application lifecycle will be reviewed.

**LIS 4235 Scripting for Large Databases (4 Credits)**

This course will introduce students to the basics of data storage and acquisition as part of a multi-step data gathering, processing, analysis and visualization effort. The logic and structure of relational databases will be reviewed, exploring the more common databases like SQL Server and Postgres, along with exploration of JSON and NoSQL based data stores. Techniques and methods for automation and scalable data processing will be introduced under the Python programming language with a focus on using Pandas and other libraries to simplify data tasks. These skills will be integrated and applied by the student through the use of prepared data sources, along with use of APIs and web scraping technique to acquire data through internet sources.

**LIS 4320 Outreach (3 Credits)**

Outreach as a library service is evolving at a rapid pace. This course will examine the history, current practice, and future promise of outreach across all kinds of library organizational settings. Topics addressed in this course will include competencies for outreach librarianship; practices in outreach services; definition and scope; planning, designing and budgeting for services; environmental scanning, key performance indicators, and barriers; developing and maintaining partnerships.



**LIS 4321 Collection Management (3 Credits)**

Topics addressed in this course include collection development and access policies, selection methods and practices, collection assessment, preservation and conservation, de-selection, treatment of rare material, manuscripts and archives, U.S. government publications, non-book and digital formats management, juvenile, and other special materials.

**LIS 4330 Information Literacy Instruction (3 Credits)**

This course provides an introduction to the principles of library instruction and information literacy including a historical overview of their place within the profession. Emphasis is on instruction within an academic setting, but students will learn important educational theories that can be applied to a variety of settings. ACRL and AASL standards will be examined as well as types of instruction, instructional design, collaboration with faculty, various competencies, assessment, and lifelong learning. The class has a strong emphasis on public speaking, communication skills, and the practical application of educational theory.

**LIS 4355 The Reading Experience in LIS (3 Credits)**

Working with readers has always been a cornerstone of library practice. Traditionally referred to as readers' advisory, reading work has expanded beyond book displays, individual requests for a good read, and book clubs. It has become a foundation of extensive library programming, meaningful leisure, and personal enjoyment, and an instrument of building healthy and engaged communities; it has turned from monolingual to multilingual; and it has claimed its place in the virtual library environment. No longer limited to public libraries, reading work comprises a growing area of interest in academic and special libraries, book publishing, and book trade. This course will introduce students to the selected theories of reading behaviors; practical skills of engaging readers, developing reader services, programming, and advocacy; the major genres and sub-genres of fiction and nonfiction materials; a wide array of print and electronic tools facilitating this practice; electronic reading and online reading communities; and foundations of bibliotherapy. This course is focused on adult readers. For other audiences, see LIS 4510 Children's Materials & Services & LIS 4520 Young Adult Materials & Services.

**LIS 4370 Database Searching (2 Credits)**

Nearly all historic, traditional search and retrieval tools such as library catalogs, indexes, microform guides, and archival findings aids have migrated to web-based systems. This course explores the complexities of searching for materials in an online environment. Topics to be covered include database and field structures; controlled vocabularies and indexing schema; search syntaxes, reference linking; data exploring and manipulation; non-textual database searching including numerical, image, and multimedia data; metasearch and web-scale discovery technologies.

**LIS 4404 Metadata Architectures (3 Credits)**

Provides an overview of the principles and theories of metadata development in the digital environment. Focuses on the design and application of metadata schemas for distinct domains and information communities, issues in metadata interoperability, vocabulary control, quality control and evaluation. Examines international standards, activities and projects. Prerequisite: LIS 4010.

**LIS 4510 Children's Materials and Services (3 Credits)**

This course is designed to prepare librarians to work with children (ages birth to 12 years) in school and public libraries. Topics covered include children's development, reading interests and needs, materials selection, collection development (including print and non-print materials), discussions of specific genres, reading motivation skills, designing a children's area, and developing various programming ideas. Students read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks and stories, become familiar with review sources, and design a one-year plan for youth services in a school or public library.

**LIS 4520 Young Adult Materials & Services (3 Credits)**

This course prepares librarians to work with young adults (ages 12-18) in school and public libraries. Topics covered include young adult development, reading interests and needs, materials selection, collection development (including print and non-print materials), and discussions of specific genres, reading motivation skills, designing a YA area, programming, and intellectual freedom issues. Participants will read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks, become familiar with review sources, and design a one-year plan for a YA department in a small school or public library.

**LIS 4535 School Libraries (2 Credits)**

This course is a study of school libraries and the characteristics that make them different from other types of libraries. There is an emphasis on information literacy and educational technology standards as they apply to school libraries, the collaborative instructional process, and standards-based instruction including summative and formative assessment revision techniques. Collaborative planning and curriculum development through the school library program is addressed, as well as an understanding of networks and instructional delivery systems. Various strategies to improve students' reading will be addressed, as well as a variety of methods for promoting children's and teen literature through collaboration with classroom teachers. Administration of the school library is addressed in a review of mission statements, goals and objectives, strategic planning, policies and procedures, and communication with school administration. The discussions will create an awareness of the importance of leadership and professionalism through educational and professional organizations, lifelong learning, educational research, and mentoring. Most of the concepts in this class will have been introduced in other classes. This class will specifically tie the concepts to the school library setting.

**LIS 4610 Career Development (3 Credits)**

This course addresses issues in career planning and professional development. Key skills that graduate professional students build are: using self-assessment and reflection to understand existing skills and expertise; identifying the expectations of the LAIS profession; acquiring skills related to finding a professional position; and, developing a career plan.

**LIS 4700 Topics in LIS (1-5 Credits)**

This flexible library and information science course will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as emerging technologies, new methodologies, specific reader services, standards and practices, and social and economic trends in the profession. Prerequisite courses may be recommended or required as determined by the content of the specified course.

**LIS 4701 Reference Topics (1 Credit)**

This course provides the student with an opportunity to explore information resources in specific subject materials. Lecture, readings, class discussions, and exercises will address all formats of materials including print, electronic, and web resources.

**LIS 4702 Type of Library: Topics (1-3 Credits)**

This course is a study of specific types of libraries, such as public libraries, academic libraries, and special libraries, and the characteristics that make them different from other types of libraries. Specific topics covered will depend on the type of library, but may include collections, management, budgets and funding, as well as professional competencies.

**LIS 4800 Introduction to Archives (3 Credits)**

This course provides an introduction to the objectives and methods of the archival and records management professions including an overview of terminology, issues, and common practices. The systematic control of records throughout their life cycle from creation through processing, distribution, organization, retrieval and archival disposition will be covered. Prerequisites: LIS 4000 and LIS 4010; or instructor permission.

**LIS 4805 Records Management (3 Credits)**

This course covers the establishment of information maintenance plans, evaluations and audits of records and information management Programs, the records and information survey, retention policies and legal requirements, and techniques for integrating automation to records and information management.

**LIS 4806 Advanced Archives (3 Credits)**

In this course, students will be given the opportunity to put into practice basic archival principles and functions. Students will perform the actions of appraisal, accessioning, arrangement, description, and access solution review for both analog and digital archival collections. Additionally, students will be given the task of providing solutions for new paradigms in archival processing such as creating a web archive, processing email collections, and capturing social media content. The course will be a combination of lecture, demonstration, lab time, discussion, and projects.

**LIS 4810 Digital Libraries (3 Credits)**

This course provides a theoretical foundation for the study of digital libraries and discusses the technological, organizational, social, and legal issues associated with the development and use of digital libraries. Through this course students develop an understanding of digital library components and explore theoretical and practical approaches to constructing, maintaining, and evaluating digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries, information access in the digital library environment, digital library users and user services, data repositories, digital curation, digital preservation, digital library evaluation, and digital librarianship.

**LIS 4820 Digitization (3 Credits)**

The course offers an introduction to issues and trends in planning, developing and managing digitization projects at libraries, archives, and museums. The focus of the course is on the conversion process of analog materials into the digital format, online delivery, and preservation of master files. The course discusses collection development policy for digital projects, copyright, digital imaging technology, digitization standards and best practices for text, images, audio, and video, metadata for cultural heritage collections, delivery platforms, preservation, project management, sustainability, documentation, promotion, and evaluation of digital projects.

**LIS 4850 Digital Preservation (3 Credits)**

Students will learn the principles and practices of preserving access to information encoded in digital form. They will learn how to assess digital preservation needs: within an institution, write digital preservation policies, and how to collect and present data to make a case for acquiring funds for digital preservation activities. Students will learn the basics of digital information encoding as it applies to the technological aspects of digital preservation, and will learn about current tools and practices used to preserve access to digitally encoded information over time. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

**LIS 4901 Capstone Course (3 Credits)**

Students in this course will design and complete a project to demonstrate the ability to integrate and synthesize their master's course work and apply their knowledge to a topic. The class meets with an instructor regularly over the nine-week summer quarter. The instructor monitors and guides the students to ensure that they complete the phases of the project in accordance with the proposed timeline and goals. Evaluation will be based on individual performance, with respect to the quality and professionalism of the research, the management of the project, and analytical and writing skills. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

**LIS 4902 Internship (1-4 Credits)**

This course will offer up to 4 credits for an internship position in libraries and archives. Students are encouraged to gain practical experience.

**LIS 4910 Culminating Internship (3 Credits)**

This course is designed to supplement the classroom experience by giving students practical experience working in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include fields of medicine, law, art, public, and academic libraries. It is the student's responsibility to select a practicum site and a field supervisor, who must be approved by LIS faculty. Seventy-five hours of service over a 10-week quarter are required. The student, faculty, and field supervisor will determine specific requirements for the final paper or report. Students must notify the LIS academic advisor one quarter before enrolling in Culminating Internship. Prerequisites: Completion of a minimum of 38 quarter hours of graduate LIS coursework, including all core courses.

**LIS 4911 Elementary School Culminating Internship (2 Credits)**

This course is designed to provide elementary school practical experience for teacher-librarians by working a minimum of 80 hours in an elementary school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4912 Secondary School Culminating Internship (2 Credits)**

This course is designed to provide secondary school practical experience for teacher-librarians by working a minimum of 80 hours in middle or high school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4920 Service Learning in LIS (1-4 Credits)**

This course is designed to supplement the classroom experience by giving students an opportunity to participate in a service learning project. Students will propose an independent study component highlighting the learning aspects of the project. The experience should provide practical work in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include many areas related to the information needs of an underserved population. It is the students responsibility to select a site and a field supervisor. The student, faculty coordinator, and field supervisor will work together to establish the goals and objectives of the experience. A minimum of 40 hours of service is required for two quarter hours of credit.

**LIS 4991 MA Independent Study (1-10 Credits)**

Independent study projects allow students more in-depth investigation of the many facets of library and information science. Students must work with an approved faculty advisor and submit a proposal outlining the objectives, scope, outcomes, and evaluation criteria. The faculty advisor and the department director must approve proposals. Prerequisites: Completion of a minimum of 30 quarter hours of graduate LIS coursework, including all core courses and a minimum GPA of 3.0.

**LIS 4995 Independent Research (1-10 Credits)****Research Methods and Stats Courses****RMS 4900 Education Research and Measurement (4 Credits)**

This course is intended for Master's degree students in the College of Education. Quantitative research designs, empirical methods of data collection and interpretation, and measurement issues in research are examined.

**RMS 4910 Introductory Statistics (4 Credits)**

This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Cross listed with SOWK 5930.

**RMS 4911 Correlation and Regression (4 Credits)**

This course focuses on the study of correlation and multiple regression research designs and their application to educational and social science programs. Cross listed with SOWK 5202. Prerequisite: RMS 4910.

**RMS 4912 Analysis of Variance (4 Credits)**

Conceptual and applied analyses of one-way through factorial nested analysis of variance designs and multivariate analysis of variance are presented. Prerequisite: RMS 4910.

**RMS 4914 Structural Equation Modeling (4 Credits)**

This course covers major applications of and issues related to covariance structure modeling, specifically confirmatory factor analysis and latent variable path modeling; types of research applications for which covariance structure modeling analyses are appropriate. Prerequisite: RMS 4921.

**RMS 4915 Hierarchical Linear Modeling (4 Credits)**

This course introduces models that extend multiple regression to analysis of nested data structures common in education and other social sciences. Application of those methods to various forms of multilevel data, including repeated measure (growth trajectory) data is emphasized. Prerequisite: RMS 4911.

**RMS 4916 Latent Growth Curve Modeling (4 Credits)**

This course covers advanced issues in longitudinal data analysis using structural equation modeling and hierarchical linear modeling with latent variables. It involves both conceptual development and practical implementation of longitudinal data analysis. This course is intended to be a hands-on approach to working with data and addressing research questions that can be best answered by longitudinal data. Prerequisite: RMS 4914.

**RMS 4918 Propensity Score Analysis (3 Credits)**

Propensity score analysis provides a conceptual understanding of the rationale and importance of controlling for biases that might emerge during the selection process in experimental research. The common procedures of fitting a propensity score model and estimating the effect of the treatment after correction for biases are demonstrated.

**RMS 4919 Topics in Statistics (1-5 Credits)**

Topics vary by quarter but may include log-linear analysis, factor analysis, or missing data analysis.

**RMS 4920 Educational Measurement (3 Credits)**

This course examines the meaning, characteristics, and processes of educational measurement and evaluation. Development and interpretation of both standardized and informal tests are considered.

**RMS 4921 Psychometric Theory (3 Credits)**

This course examines major psychometric theories (e.g., classical, item response) as related to reliability, generalizability, validity, and item analysis methods. Prerequisite: RMS 4910.

**RMS 4922 Item Response Theory (3 Credits)**

Theory and methods for the educational and psychological measurement of latent variables using item response theory are covered in this course. Prerequisite: RMS 4910, RMS 4921.

**RMS 4924 Advanced Measurement (4 Credits)**

This course instructs students in advanced measurement models and techniques are employed in the social sciences. Prerequisites: RMS 4921 & RMS 4911.

**RMS 4929 Topics in Psychometrics (1-3 Credits)**

Topics vary, but include: large scale testing, computer applications of item response theory, affective measure construction, generalizability theory, additive conjoint measurement, and standing testing. Prerequisite: RMS 4921 or instructor permission.

**RMS 4930 Quantitative Research Design (3 Credits)**

This course provides in depth study of empirical research methods involved in experimental, quasi-experimental, single-subject, and non-experimental quantitative research designs.

**RMS 4931 Survey and Design Analysis (3 Credits)**

Survey techniques, needs assessment, item construction, sampling, maximizing response rates and data analysis; survey construction and data analysis are required. Prerequisite: RMS 4910.

**RMS 4932 Meta-Analysis Social Science Research (3 Credits)**

This course examines meta analytic techniques in the social sciences. Included are discussions of review of critical data bases, coverage of all major methods of data collection and analysis, and coverage of how best to present meta analytic findings for publication. Prerequisite: RMS 4911, RMS 4930, and preferred RMS 4912.

**RMS 4939 Topics in Quantitative Research Methods (1-5 Credits)**

Topics vary, but include minimization as an alternative to randomization, propensity score modeling as an alternative to experimental control, and analysis of data from single-subject designs. Prerequisites: RMS 4930 or instructor permission.

**RMS 4940 Structural Foundations of Research in Social Sciences (3 Credits)**

This introductory course on epistemology and research Includes discussion of identification and development of problems for research; introduction to basic quantitative and qualitative methods of conducting research in social science settings, ethnographic, and criticism methods.

**RMS 4941 Introduction to Qualitative Research (4 Credits)**

This course is designed to provide students with more in-depth understanding of naturalistic, qualitative research methods. It is assumed that students enrolling in this course have already completed an introductory research methods course in either education or another discipline. Purposes and questions posed in their course include: Why should a researcher choose to conduct a qualitative study? How are data collection strategies carried out in a qualitative research design? What are some of the ethical concerns that impact qualitative research?

**RMS 4942 Qualitative Data Collection and Analysis (4 Credits)**

In this intermediate level qualitative research course students learn about design, purposeful sampling, field work, observational approaches, and interviews, with special attention directed to the skills and competencies needed to gather and analyze high quality data. Prerequisite: RMS 4941 or instructor permission.

**RMS 4945 Community-Based Research (4 Credits)**

This class introduces the emerging philosophical and methodological issues that arise when university faculty students collaborate on research with community-based organizations. Prerequisites: RMS 4942 and RMS 4930 or instructor permission.

**RMS 4946 Advanced Qualitative Research (4 Credits)**

This course introduces exemplary qualitative studies and consideration of implications for education and the social sciences, and considers the types of questions asked by qualitative researchers and methods they use, particularly observation and interviewing. Students undertake their own qualitative study to consider application of theory, techniques, and practice to their dissertation research. Prerequisite: RMS 4941 and RMS 4942 or instructor permission.

**RMS 4947 Arts-Based Research (3 Credits)**

In this course students explore the ground upon which arts-based research is built and become acquainted with salient issues regarding this kind of research. We practice interviewing, observations and a few arts-based practices. Prerequisites: RMS 4941 or instructor permission.

**RMS 4948 Criticism and Connoisseurship: Qualitative research and the enhancement of practice (3 Credits)**

Qualitative inquiry in educational settings takes many forms: ethnography, grounded theory, case-study research, and more. What these methods have in common is a framework built upon social science. Criticism and connoisseurship, however, draws its conceptual underpinnings from the arts and humanities. What does it mean to have a conceptual framework dependent upon the arts? How are the methods of educational criticism different from other research methods? This class teaches students how to conduct research using this method and it provides responses to these types of questions in order that students can defend this type of research as well as others that depend on the arts and humanities as their basis. Prerequisite: RMS 4941.

**RMS 4949 Topics in Qualitative Research (1-5 Credits)**

This seminar builds on the content of other qualitative research courses offered in the RMS program and meets the students where they are on their dissertation journey; thus learning opportunities are tailored to individual needs as far as possible. Assignments focus on the issues pertinent to the design of dissertation proposals and writing, including ethical issues and IRB preparation, theoretical/conceptual framework, literature review, methodology, data collection and analysis strategies, and various forms of representation. Prerequisite: RMS 4941.

**RMS 4950 Qualitative Research Methodologies (3 Credits)**

Each year this course examines three qualitative research methods. The methods that might be covered in any given year include: phenomenology, grounded theory, narrative, case study, and ethnography. For each method, the following is addressed: philosophical and historical foundations, various ways the method has been utilized, and practical recommendations for conducting research utilizing this method. Prerequisite: RMS 4941.

**RMS 4951 Mixed Method Research Design (4 Credits)**

This course is designed as a fundamental exploration of mixed model and mixed method approaches. Students design mixed model and mixed method research studies with a particular emphasis on multi-site and longitudinal designs that are especially suited to educational issues. Students learn analysis approaches that incorporate previously learned quantitative and qualitative skills, and apply these in practice problem examples. Prerequisites: RMS 4910, RMS 4930 and RMS 4941, and one of the following: RMS 4947, or RMS 4948, or instructor permission.

**RMS 4952 Research Ethics (3 Credits)**

This course introduces ethical theory and a selection of current issues in research ethics.

**RMS 4953 Topics in Data Management (1-3 Credits)**

This is a preparatory course emphasizing the manipulation and analysis of data in electronic form.

**RMS 4959 Topics in Research Design (1-5 Credits)**

Topics vary, but include single subject design issues, minimization as an alternative to randomization, advances in quasi-experimental design. Prerequisite: RMS 4930.

**RMS 4960 Introduction to Evaluation Research (3,4 Credits)**

This course provides an introduction to frameworks for designing evaluation research studies.

**RMS 4963 Evaluation Research Practice I (3 Credits)**

This service learning course provides part 1 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4963 must take RMS 4964 in the following quarter. The course is not a traditional lecture course; it is a course-embedded experiential learning course.

**RMS 4964 Evaluation Research Practice II (3 Credits)**

This service learning course provides part 2 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4964 must have take RMS 4963 in the preceding quarter.

**RMS 4969 Topics in Program Evaluation (1-5 Credits)**

Topics vary, but include advocacy and policy change, assessment in higher education, multi-level evaluation, cost effectiveness analysis, data visualization and reporting, assessment in distance education, and evaluation in the arts and culture. Prerequisite: RMS 4960.

**RMS 4978 Practicum in Qualitative Research (1-4 Credits)**

Students may complete the Practicum in Qualitative Research with an individual professor or with a community partner. The goal of this practicum is to provide further experiences in thinking about, conceptualizing, designing, conducting, and/or presenting qualitative research. Prerequisites: RMS 4941, RMS 4942, and at least two of the following classes RMS 4945, RMS 4946, RMS 4947, RMS 4948.

**RMS 4980 Practicum in Research (1-5 Credits)**

This course provides a supervised experience in design and implementation of an empirical research or evaluation study. Organization of research proposals, completion of human subjects applications, collection, and analysis of data are emphasized. Students are expected to prepare a written report of their project which is suitable for professional presentation or publication.

**RMS 4981 Community-Based Research Practicum (1-5 Credits)**

Students provide community-based research assistance to a community partner (non-profit, school, community based organization, etc). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's research expertise with the real needs of community partners. Prerequisite: RMS 4945.

**RMS 4982 Practicum in Evaluation Research (1-6 Credits)**

Students provide evaluation assistance to a university or community partner (non-profit, school, community-based organization, etc.). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's evaluation and research expertise with the real needs of university or community partners. Prerequisite: RMS 4960.

**RMS 4991 Independent Study (1-10 Credits)**

This course allows Masters students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 4995 Independent Research (1-10 Credits)**

This course is for Masters students in RMS whose program requires completion of a Master's thesis.

**RMS 5771 RMS Dissertation Research Seminar (1-3 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

**RMS 5991 Independent Study (1-10 Credits)**

This course allows Ph.D. students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 5995 Independent Research (1-18 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

## Teaching and Learning Sciences

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The Department of Teaching and Learning Sciences at Morgridge offers a variety of doctoral, educational specialist, masters, and certificate degrees in three core academic programs: **School Psychology, Curriculum and Instruction, Teacher Education, and Early Childhood Special Education**. Please see below for the full list of degrees available in each subject area.

### PROGRAM: SCHOOL PSYCHOLOGY

#### Doctor of Philosophy in School Psychology

The School Psychology (SP) Ph.D. program is designed to prepare highly competent, collaborative, ethical, and self-reflective scientist-practitioners who can problem-solve and share decision-making with others to optimize social, emotional, cognitive, academic, and behavioral outcomes for typically and atypically developing children and youth. The learning objectives aim to produce professionals who are competent in *consultation, assessment, intervention, and scholarship/advocacy* as they work on behalf of individuals, families, schools, and communities. These competency areas are defined as follows:

- *Consultation*: to collaborate in strengths-based, problem-solving, interdisciplinary teams with families, teachers, administrators, and other school and community personnel and to demonstrate appropriate interpersonal relations and professional dispositions and work characteristics;
- *Assessment*: to demonstrate evidence-based and culturally competent decision-making regarding selection, administration, and interpretation of assessments;
- *Intervention*: to employ data-based decision-making and systems-thinking that links assessment outcomes to effective individual, family, and group change and to deliver preventative, remedial strategic accommodations, intervention, and crisis services in a timely and professional manner;
- *Scholarship and Advocacy*: to apply, translate, and expand upon scientifically-based pedagogy and professional practice; able to advocate for the needs of children and families, to respect the dignity and worth of all persons, to exhibit compassion and self-awareness, and to demonstrate strong listening, oral and written communication skills.

The curriculum provides a strong foundation and core knowledge base in developmental, psychological, and learning theories, general and special education, and legal, ethical, and professional standards of practice. Professional skills and advanced training are required in research, measurement, program evaluation, assessment, prevention, intervention, and consultation with family, school, and community professionals. All SP applied experiences are designed within the *CoRE* framework. Ph.D. students gain competencies in conducting original research, grant writing, advanced qualitative and quantitative analysis, research design, and statistics. Graduates assume positions as administrators, university professors, and educational evaluators. Ph.D. students are expected to gain a high level of independent and collaborative research involvement with a faculty advisor.

#### Program Accreditation

The SP Ph.D. program is fully accredited by the National Association of School Psychologists (NASP). The Ph.D. program is also accredited by the American Psychological Association (APA).

Ph.D graduates are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information, visit <http://www.nasponline.org/certification/NASPAproved.aspx>

#### Educational Specialist Degree in School Psychology

The School Psychology (SP) Educational Specialist (Ed.S.) degree prepares professionals in all aspects of school psychology services to work with children and families from birth to age 21 in school or community settings. All graduates of the Ed.S. program are eligible for a Colorado Department of

Education license in School Psychology and the NASP National Certification (NCSP) after the successful completion of all coursework and passing the Praxis II licensing exam.

### **Program Accreditation**

The SP Ed.S Degree is fully accredited by the National Association of School Psychologists (NASP).

Graduates are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information, visit <http://www.nasponline.org/certification/NASPAproved.aspx>

## **Educational Specialist Degree in School Psychology (Rural Hybrid)**

The School Psychology (SP) Educational Specialist (Ed.S.) Rural Hybrid program is designed for people living in rural Colorado communities who want to pursue a graduate degree in school psychology without relocating to a university campus. The program's hybrid modality enables students to engage in virtual coursework from home during the school year and attend in-person class on campus in the summer. Applicants should identify with a rural Colorado community and plan to work as a school psychologist within this community throughout training and post-graduation.

### **Program Accreditation**

The SP Ed.S (Rural Hybrid) Degree is fully accredited by the National Association of School Psychologists (NASP).

Graduates are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information, visit <http://www.nasponline.org/certification/NASPAproved.aspx>

## **Educational Specialist Degree in School Psychology with a Concentration in Early Childhood School Psychology**

The SP Educational Specialist (Ed.S.) degree with Early Childhood School Psychology Concentration prepares professionals to work with children and families from birth to age 21. This degree requires an additional 12 hours of integrated core and practical coursework. All graduates of the Ed.S. program are eligible for a Colorado Department of Education license in School Psychology and the NASP National Certification (NCSP), after the successful completion of all coursework and passing the Praxis II/National Association of School Psychology licensing exam.

### **Program Accreditation**

The SP Ed.S./ECSP Degree is fully accredited by the National Association of School Psychologists (NASP).

Graduates are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS) as a part of the Praxis II Series. For further information, visit <http://www.nasponline.org/certification/NASPAproved.aspx>

## **Education Specialist Degree in School Psychology with a Concentration in Addictions**

The School Psychology (SP) Educational Specialist (Ed.S.) degree with an Addictions Concentration prepares professionals to intervene early, with children and adolescents, to address and prevent substance abuse. This degree requires an additional 12 hours of core and practical coursework. All graduates of the Ed.S. program are eligible for a Colorado Department of Education license in School Psychology and the NASP National Certification (NCSP) after the successful completion of all coursework and passing the Praxis II licensing exam.

### **Program Accreditation**

The SP Ed.S./AC Degree is fully accredited by the National Association of School Psychologists (NASP).

Graduates are assured eligibility for the National Certificate in School Psychology (NCSP), pending the completion of an internship consistent with NASP standards and the attainment of a passing score on the National School Psychology Examination administered by the Educational Testing Service (ETS), part of the Praxis II Series. For further information, visit <http://www.nasponline.org/certification/NASPAproved.aspx>

## **Interim Master of Arts in School Psychology (for PhD students only)**

A Master's degree in School Psychology is available as an interim degree for PhD candidates only. This concentration requires a minimum of 55 quarter hour credits, including a 200-hour practicum, but it does not lead to licensure as a professional school psychologist on its own.

### **PROGRAM: CURRICULUM AND INSTRUCTION**

## **Doctor of Philosophy in Curriculum and Instruction**

Curriculum and Instruction (C&I) Ph.D. students take a wide range of courses in curriculum, instruction, foundations, diversity, and research. The program is particularly well suited for students interested in becoming higher education faculty and leaders in schools and colleges of education. Dissertation topics cover a broad assortment of theoretical and practical topics in schools or associated institutions or communities. Additionally, students are encouraged to consider enrolling in courses in other academic units in the Morgridge College of Education and throughout the University in order to enhance or expand their educational experience. Specializations are offered in the following areas: Curriculum Studies, Gifted Education, STEM Education, Culturally and Linguistically Diverse Education, and Special Education.

## Doctor of Education in Curriculum and Instruction

The Curriculum and Instruction (C&I) EdD is designed to prepare educational practitioners as experts of curriculum and instruction, capable of engaging in problems and challenges in a variety of educational institutions and contexts, particularly at the school or district level. The aim of this program is to produce graduates who are leaders and innovators in education, equipped with cutting-edge applied research skills, creative educational visions based on established academic disciplines, moral imagination, curricular expertise, and commitments to issues of equity and social responsibility. Specializations are offered in the following areas: Curriculum Studies, \*Gifted Education, STEM Education, Culturally and Linguistically Diverse Education, and Special Education.

\*Gifted EdD is available fully online or in-person.

## Master of Arts in Curriculum and Instruction

This degree program is designed with the individual student's background and career goals in mind. Most students prepare for traditional and non-traditional positions in education that require planning, consulting, research, curriculum development, evaluation and policy-making. Instructional coaching is established in a profession that is increasingly gaining national attention. Many school districts across the US, including several in Colorado, are implementing instructional coaching as a component of transformative school reform. Specializations are offered in the following areas: Curriculum Studies, Gifted Education, STEM Education, Culturally and Linguistically Diverse Education, and Special Education.

## Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-Elementary/Secondary/K-12

The Teacher Education Program (TEP) offers an intensive, integrated, professional preparation experience. The program is structured similarly to clinical preparation models where coursework and field experiences are purposeful, connected, gradual, and cumulative. Program features such as small class sizes, built-in peer support, high academic standards, and a year-long residency in closely supervised field experiences in linguistically and culturally diverse settings promote student success in mastering the competencies of an effective teacher. Apprentice teachers can complete this program in one year, earning both teaching licensure and a master's degree.

Apprentice teachers are required to complete 840 hours of field experience in diverse public school classrooms. Apprentice teachers are required to be at their fieldwork site three days a week during the fall and winter quarters and four-five days a week in the spring quarter. A gradual release of responsibility leads to solo teaching throughout the year-long residency.

The mission of the TEP concentrations is to provide an extensive, integrated, professional experience that supports apprentice teachers in developing the dispositions, knowledge, and skills of an effective teacher of diverse learners in under-served K-12 schools. Ultimately, effective teachers engage, plan, teach, and lead to promoting the growth and development of *all* learners, and they take an active role in their own professional development.

### Dual Undergraduate-Graduate Program in Teacher Education

The Dual Undergraduate-Graduate Degree program in Teacher Education concentration is an approved program in which the University of Denver Undergraduate student begins taking classes toward a teaching license and a graduate degree program prior to earning a baccalaureate degree. Both degrees must be earned within five years of matriculation into the undergraduate degree program. Dual-degree students in the TEP program will select a cognate consisting of 9 credits of graduate course work to be completed in their undergraduate senior year. Please see the complete dual-degree guidelines and policy posted here (<http://bulletin.du.edu/graduate/dual-degrees/dual-undergraduate-graduate-degree-programs/morgridge-college-of-education/>). The nine hours of MCE coursework can be spread across the fall, winter, or spring quarters; or stacked into one or two quarters. Dual-degree students should initiate the admissions process in the winter of their junior year.

### Program Authorization and Accreditation

The program is authorized by the Colorado Department of Education (CDE) and accredited by the Council for Accreditation of Education Preparation (CAEP).

## Certificate in Curriculum and Instruction with a Concentration in the Teacher Education Program - Elementary/Secondary/K-12

The Teacher Education Program (TEP) offers an intensive, integrated, professional preparation experience. The program is structured similarly to clinical preparation models where coursework and field experiences are purposeful, connected, gradual, and cumulative. Program features such as small class sizes, built-in peer support, high academic standards, and a year-long residency in closely supervised field experiences in linguistically and culturally diverse settings promote student success in mastering the competencies of an effective teacher. Upon completion of the certificate program, the student will be eligible to apply for teacher licensure through the Colorado Department of Education.

Apprentice teachers are required to complete 840 hours of field experience in diverse public school classrooms. Apprentice teachers are required to be at their fieldwork site three days a week during the fall and winter quarters and four-five days a week in the spring quarter. A gradual release of responsibility leads to solo teaching throughout the year-long residency.

The mission of the TEP concentrations is to provide an extensive, integrated, professional experience that supports apprentice teachers in developing the dispositions, knowledge, and skills of an effective teacher of diverse learners in under-served K-12 schools. Ultimately, effective teachers engage, plan, teach, and lead to promoting the growth and development of *all* learners, and they take an active role in their own professional development.



Students who are interested in adding a certificate from MCE may do so by contacting the Office of Graduate Education. Students need to work with their advisor to have their certificate coursework count toward their specialization if also pursuing a higher degree. In order for the certificate to be awarded, the student must complete all published requirements. Students looking to qualify for an endorsement should confirm with the Colorado Department of Education the minimum requirements needed. The University of Denver provides opportunities for students to receive specific certificates in areas of specialization, while the Colorado Department of Education offers endorsements related to licensure.

### **Program Authorization and Accreditation**

The program is authorized by the Colorado Department of Education (CDE) and accredited by the Council for Accreditation of Education Preparation (CAEP).

### **Certificate in Gifted Core Education**

The Gifted Education Certificate seeks to prepare educators in the theories and best practices of Gifted Education and includes courses necessary for the Colorado Department of Education endorsements: Gifted Education Core, Gifted Education Specialist, and Director of Gifted Education.

Students who are interested in adding a certificate from MCE may do so by contacting the Office of Graduate Education. Students need to work with their advisor to have their certificate coursework count toward their specialization if also pursuing a higher degree. In order for the certificate to be awarded, the student must complete all published requirements. Students looking to qualify for an endorsement should confirm with the Colorado Department of Education the minimum requirements needed. The University of Denver provides opportunities for students to receive specific certificates in areas of specialization, while the Colorado Department of Education offers endorsements related to licensure.

### **Certificate For Special Education Generalist**

The Certificate for Special Education Generalist focuses on expanded learning opportunities for students interested in specialized work with children (5-21 years) with developmental delays and disabilities. Students in the SEG certificate program will develop the knowledge and practical skills needed to work successfully with special education programs in public schools, private schools, and community agencies that serve families with children with developmental delays, disabilities, or at-risk characteristics and qualities. Students qualify for a Colorado Department of Education endorsement if they have a Colorado teaching license.

Students who are interested in adding a certificate from MCE may do so by contacting the Office of Graduate Education. Students need to work with their advisor to have their certificate coursework count toward their specialization if also pursuing a higher degree. In order for the certificate to be awarded, the student must complete all published requirements. Students looking to qualify for an endorsement should confirm with the Colorado Department of Education the minimum requirements needed. The University of Denver provides opportunities for students to receive specific certificates in areas of specialization, while the Colorado Department of Education offers endorsements related to licensure.

### **Certificate in Culturally and Linguistically Diverse Education (CLDE)**

The Culturally and Linguistically Diverse Education (CLDE) Certificate courses prepare students to be evidence-based practitioners and researchers who can foreground culturally responsive pedagogy and the cultural, linguistic, cognitive, and academic needs of culturally and linguistically diverse learners in communities and classroom practices. Throughout their coursework, candidates learn and apply knowledge about first and second language acquisition, the selection and utilization of culturally relevant literature, essential literacy components, and curriculum and assessment practices for CLD learners with an emphasis on language and funds of knowledge to bridge communities, classrooms, and schools. Students qualify for a Colorado Department of Education endorsement if they have a Colorado teaching license.

Students who are interested in adding a certificate from MCE may do so by contacting the Office of Graduate Education. Students need to work with their advisor to have their certificate coursework count toward their specialization if also pursuing a higher degree. In order for the certificate to be awarded, the student must complete all published requirements. Students looking to qualify for an endorsement should confirm with the Colorado Department of Education the minimum requirements needed. The University of Denver provides opportunities for students to receive specific certificates in areas of specialization, while the Colorado Department of Education offers endorsements related to licensure.

#### **PROGRAM: EARLY CHILDHOOD SPECIAL EDUCATION**

### **Master of Arts in Early Childhood Special Education**

The MA in Early Childhood Special Education (ECSE) focuses on opportunities for specialized work with young children (birth through 8 years old) and families in school and community settings. It also is a pipeline to licensure and non-licensure degrees, including a PhD. Students develop the knowledge and practical skills needed to work successfully within the early childhood school and community agencies that serve children from birth through eight years old. Students are required to complete practicum hours and Praxis II tests in alignment with Colorado Department of Education licensing requirements.

Our goal is to prepare highly competent, collaborative, ethical, and self-reflective Early Childhood Special Education Specialists, who serve young children with special needs and their families in schools, districts, and community organizations. This program facilitates training and development as a scientist-practitioner who can solve problems and share decision-making with others to optimize social-emotional, cognitive, academic, and behavioral outcomes for children from birth to age eight with special needs, and their families.

### **Certificate in Early Childhood Special Education**

The Early Childhood Special Education Certificate is designed as a 1-year program that is aligned with the Masters of Arts in Early Childhood Special Education. As with the MA ECSE program, the candidates in the ECSE Certificate program are required to complete practicum hours and Praxis tests in

alignment with Colorado Department of Education licensing requirements and apply to the state for the Early Childhood Special Education Specialist Endorsement.

Students who are interested in adding a certificate from MCE may do so by contacting the Office of Graduate Education. Students need to work with their advisor to have their certificate coursework count toward their specialization if also pursuing a higher degree. In order for the certificate to be awarded, the student must complete all published requirements. Students looking to qualify for an endorsement should confirm with the Colorado Department of Education the minimum requirements needed. The University of Denver provides opportunities for students to receive specific certificates in areas of specialization, while the Colorado Department of Education offers endorsements related to licensure.

## Doctor of Philosophy in School Psychology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Doctor of Philosophy in Curriculum & Instruction

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Doctor of Education in Curriculum & Instruction

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Education Curriculum & Instruction

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education Elementary

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education K-12

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education Secondary

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Early Childhood Special Education

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Education Specialist in School Psychology**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Certificate in Culturally and Linguistically Diverse Education**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Curriculum, Instruction, & Teaching with a Concentration in Teacher Education K-12

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Early Childhood Special Education

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Gifted Education

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate in Special Education Generalist

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Other Requirements

Applicants must have an undergraduate or graduate degree in elementary, secondary or special education.

# Doctoral Programs

## Doctor of Philosophy in School Psychology

### Degree Requirements

A minimum of 90 credit hours is required beyond the MA degree. No credit hours from the earned MA can be transferred into the PhD. All MA CFSP courses are prerequisites for the PhD.

### Coursework Requirements

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		<b>10 credits</b>
CFSP 4301	Professional, Legal and Ethical Issues in School Psychology	4
CFSP 4304	Diversity in School and Community Settings	3
CFSP 4316	Infant through Adolescent Development	3
<b>B. Research, Measurement, Program Evaluation and Technology</b>		<b>23 credits</b>
RMS 4910	Introductory Statistics	4
RMS 4941	Introduction to Qualitative Research	4
RMS 4911	Correlation and Regression	4
RMS 4912	Analysis of Variance	5
Choose intermediate/advanced research methods course from RMIS course offerings		6
<b>C. Dissertation</b>		<b>5 credits</b>
CFSP 5995	Independent Research <sup>1</sup>	5
<b>D. Learning Theory, Educational Foundations, and Special Education Leadership</b>		<b>6 credits</b>
CFSP 4306	Exceptionalities in Special Ed	3
CFSP 4312	Learning Theories & Behavioral Analysis	3
<b>E. Evaluation and Assessment</b>		<b>15 credits</b>
CFSP 4321	Psycho-educational Assessment I	4
CFSP 4322	Psycho-Educational Assessment II	4
CFSP 4323	Psycho-Educational Assessment III	4
CFSP 4363	School Psychology Program Development and Evaluation	3
<b>F. Collaborative Consultation with Families and Schools</b>		<b>9 credits</b>
CFSP 4330	Family-School Partnering and Consultation	3
CFSP 4331	School and Organizational Consultation I	3
CFSP 4332	School and Organizational Consultation II	3
<b>G. Prevention, Wellness Promotion, Counseling, and Crisis Intervention</b>		<b>20 credits</b>
CFSP 4303	Psychopathology: Prevention, Diagnosis, Treatment	4
CFSP 4336	Preschool Interventions	3
or CFSP 4319	Counseling Adolescent Addictive Behaviors	
CFSP 4337	School Age Academic Competencies and Interventions	3
CFSP 4340	School Mental Health Counseling I	3
CFSP 4341	School Mental Health Counseling II	4
CFSP 4342	Crisis Intervention and Prevention	3
<b>H. Applied Coursework</b>		<b>35 credits</b>
CFSP 4349	School Psychology Practicum I (Taken quarterly)	6
CFSP 4351	School Psychology Practicum: Clinic Assignment (Taken quarterly)	8
CFSP 4353	School Psychology Practicum II (Taken quarterly)	6
CFSP 4354	School Psychology Advanced Practicum (Taken quarterly)	6
CFSP 4359	School Psychology Pre-Doctoral Internship (Taken quarterly for 1 credit each)	3



CFSP 4361	Supervision in School Psychology (Taken during one quarter)	3
CFSP 4999	Advanced Seminar in School Psychology	3
<b>I. Psychology Specialization Courses</b>		<b>12 credits</b>
CNP 4642	Adult Development	3
CNP 4705	History and Systems of Psychology	3
CNP 4768	Counseling Psychology: Social Psychology	3
CNP 4788	Physiological Psychology	3
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

#### Non-coursework Requirements

- Passing of Praxis Exam
- Comprehensive Examination
- Dissertation
- Oral defense of Dissertation

## Doctor of Philosophy in School Psychology (Pathway for EDS Professionals)

### Degree Requirements

A minimum of 52 credit hours is required beyond the earned EdS degree. No credit hours from the earned EdS can be transferred into the PhD.

#### Coursework Requirements

Code	Title	Credits
<b>A. Research, Measurement, Program Evaluation</b>		<b>22 credits</b>
Student must complete the following courses:		
RMS 4930	Quantitative Research Design	3
RMS 4941	Introduction to Qualitative Research	4
<b>Select a minimum of 15 credits from the following Intermediate/Advanced Courses:</b>		
RMS 4911	Correlation and Regression	4
RMS 4912	Analysis of Variance	5
RMS 4920	Educational Measurement	3
RMS 4921	Psychometric Theory	3
RMS 4931	Survey and Design Analysis	3
RMS 4932	Meta-Analysis Social Science Research	3
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4959	Topics in Research Design	1-5
STAT 4810	Nonparametric Statistics	4
RMS 4913		5
RMS 4914	Structural Equation Modeling	4
RMS 4915	Hierarchical Linear Modeling	4
RMS 4916	Latent Growth Curve Modeling	4
RMS 4919	Topics in Statistics	1-5
RMS 4922	Item Response Theory	3
RMS 4929	Topics in Psychometrics	1-3
RMS 4945	Community-Based Research	4
RMS 4946	Advanced Qualitative Research	4
RMS 4947	Arts-Based Research	3
RMS 4951	Mixed Method Research Design	4
<b>B. Dissertation</b>		<b>4 credits</b>
CFSP 5995	Independent Research <sup>1</sup>	4

<b>C. Field Experience</b>		<b>8 credits</b>
CFSP 4361	Supervision in School Psychology	2
CFSP 4354	School Psychology Advanced Practicum (3 courses taken quarterly for 2 credits each)	6
CFSP 4369	School Psychology Pre-Doctoral Terminal Internship	1-8
<b>D. Cognate Courses</b>		<b>12 credits</b>
CFSP 4360	Doctoral Seminar in School Psychology	3
Possible concentrations include: Data-based Decision Making; Assessment and Evaluation; Prevention, Intervention, and Consultation; Advanced Developmental Theory; Advocacy, Policy and Leadership; Clinical Psychology (APA)		9
<b>Total Credits</b>		<b>52</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

#### Non-coursework Requirements

- Comprehensive Exam
- Dissertation
- Oral Defense of Dissertation

## Doctor of Philosophy in Curriculum and Instruction

### Degree Requirements

#### Coursework requirements

Code	Title	Credits
<b>A. Required Courses</b>		
CUI 4020	Introduction to Curriculum	3
CUI 4160	Race, Class and Gender in Education	3
CUI 4035	Critical Perspectives in Education	3
CUI 4022	Curriculum Theory into Practice	3
Select one of the following courses:		3
CUI 4180	History of Education in the United States	
CUI 4130	Philosophy of Education	
<b>B. Specialization</b>		
See advisor for courses*		<b>24</b>
<b>C. Electives</b>		
		<b>3-4</b>
<b>D. Research</b>		
Introductory Research		<b>14</b>
RMS 4940	Structural Foundations of Research in Social Sciences	
RMS 4941	Introduction to Qualitative Research	
RMS 4930	Quantitative Research Design	
RMS 4910	Introductory Statistics	
Intermediate/Advanced Research		<b>18</b>
Select from the following courses for a minimum of 18 credits:		
RMS 4911	Correlation and Regression	
RMS 4912	Analysis of Variance	
RMS 4918	Propensity Score Analysis	
RMS 4922	Item Response Theory	
RMS 4924	Advanced Measurement	
RMS 4931	Survey and Design Analysis	
RMS 4932	Meta-Analysis Social Science Research	
RMS 4942	Qualitative Data Collection and Analysis	
RMS 4947	Arts-Based Research	

RMS 4948	Criticism and Connoisseurship: Qualitative research and the enhancement of practice	
RMS 4963	Evaluation Research Practice I	
RMS 4964	Evaluation Research Practice II	
RMS 4914	Structural Equation Modeling	
RMS 4915	Hierarchical Linear Modeling	
RMS 4916	Latent Growth Curve Modeling	
RMS 4945	Community-Based Research	
RMS 4946	Advanced Qualitative Research	
RMS 4951	Mixed Method Research Design	
Dissertation Research		16
CUI 4050	Research Seminar: Conducting Systematic Reviews	
CUI 4051	Seminar in Dissertation Organization and Design	
CUI 5995	Independent Research <sup>1</sup>	
<b>Total Credits</b>		<b>90</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

Select from the following approved RMS Intermediate and Advanced courses. Other research courses may be substituted with permission from your advisor and a course substitution form.

Numbers in each category above are the either a minimum or range of credit hours required. A minimum of 90 credit hours is required beyond the earned master's degree. No credit hours from the earned master's degree can be transferred into the PhD.

\* Note: If you seek a CDE endorsement, you must follow the specialization plan outlined in the C&I handbook and complete any additional necessary components required by the CDE.

#### Non-coursework Requirements

- Doctoral Applied Experiences (in at least two areas)
- Doctoral Comprehensive Examination
- Dissertation
- Oral Defense of Dissertation

## Doctor of Education in Curriculum and Instruction

### Degree Requirements

#### Coursework requirements

Code	Title	Credits
<b>A. Required Courses</b>		<b>15 credits</b>
CUI 4020	Introduction to Curriculum	3
CUI 4022	Curriculum Theory into Practice	3
CUI 4160	Race, Class and Gender in Education	3
CUI 4035	Critical Perspectives in Education	3
Choose one of the following courses:		
CUI 4180	History of Education in the United States	3
CUI 4130	Philosophy of Education	3
<b>B. Specialization</b>		<b>24 credits</b>
See advisor for courses*		
<b>C. Research</b>		<b>26 credits</b>
Required Research Coursework		
RMS 4940	Structural Foundations of Research in Social Sciences	3
RMS 4930	Quantitative Research Design	3

RMS 4941	Introduction to Qualitative Research	4
CUI 4050	Research Seminar: Conducting Systematic Reviews	3
Doctoral Research Courses <sup>1</sup>		
CUI 5980	Research as Problem Analysis	3
CUI 5981	Research as Intervention	3
CUI 5982	Applied Research	3
CUI 5983	Defense of Research	1
Research Options (Choose one):		
RMS 4942	Qualitative Data Collection and Analysis	4
RMS 4960	Introduction to Evaluation Research	3,4
RMS 4911	Correlation and Regression	4
RMS 4931	Survey and Design Analysis	3
<b>Total Credits</b>		<b>65</b>

<sup>1</sup> In order to maintain degree candidacy, MCE doctoral students who have finished all requested coursework will register for one dissertation or doctoral research credit or other credit for consecutive terms fall through spring (summers not required) until the student graduates.

Please note: the numbers in each category above are either a minimum or range of credit hours required. The 65 minimum credit requirement is only for students with an earned master's degree. No credit hours from the earned Master's degree can be transferred into the EdD.

\*Note: If you seek a CDE endorsement, you must follow the specialization plan outlined in the C&I handbook and complete any additional necessary components required by the CDE.

#### Non-coursework Requirements

- Doctoral Applied Experiences (in at least two areas)
- Doctoral Comprehensive Exam
- Dissertation in Practice
- Oral Defense of Dissertation in Practice

## Education Specialist Programs

### Education Specialist in Rural School Psychology

Minimum of 90 credits

Requirements for this program are the same as the to the Education Specialist in School Psychology.

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### Education Specialist in School Psychology

#### Degree Requirements

Minimum number of credits required for degree: 90

#### Coursework Requirements

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		
CFSP 4304	Diversity in School and Community Settings	3
CFSP 4316	Infant through Adolescent Development	3
<b>B. Learning Theory, Educational Foundations, and Special Education</b>		
CFSP 4306	Exceptionalities in Special Ed	3
CFSP 4312	Learning Theories & Behavioral Analysis	3
<b>C. Legal, Ethical, and Professional Foundations</b>		
CFSP 4301	Professional, Legal and Ethical Issues in School Psychology	4
<b>D. Research, Measurement, and Program Evaluation</b>		
RMS 4910	Introductory Statistics	4
CFSP 4363	School Psychology Program Development and Evaluation	3

<b>E. Individual Evaluation and Assessment</b>		
CFSP 4321	Psycho-educational Assessment I	4
CFSP 4322	Psycho-Educational Assessment II	4
CFSP 4323	Psycho-Educational Assessment III	4
<b>F. Prevention, Wellness Promotion, Counseling and Crisis Intervention</b>		
CFSP 4303	Psychopathology: Prevention, Diagnosis, Treatment	4
CFSP 4336	Preschool Interventions	3
or CFSP 4319	Counseling Adolescent Addictive Behaviors	
CFSP 4337	School Age Academic Competencies and Interventions	3
CFSP 4340	School Mental Health Counseling I	3
CFSP 4341	School Mental Health Counseling II	4
CFSP 4342	Crisis Intervention and Prevention	3
<b>G. Collaborative Consultation with Families and Schools</b>		
CFSP 4330	Family-School Partnering and Consultation	3
CFSP 4331	School and Organizational Consultation I	3
CFSP 4332	School and Organizational Consultation II	3
<b>H. Applied Courses</b>		
CFSP 4349	School Psychology Practicum I (taken in 3 quarters for 2 credits each)	6
CFSP 4353	School Psychology Practicum II (taken in 3 quarters for 2 credits each)	6
CFSP 4351	School Psychology Practicum: Clinic Assignment (taken quarterly)	8
<b>I. Culminating Field Experience</b>		
CFSP 4355	School Psychology Internship - EdS (1200 hours one year full-time OR two years half-time (taken three times consecutively))	6
<b>J. Final Assessment</b>		
Praxis II/NASP Exam (score of 165 or greater)		
<b>Total Credits</b>		<b>90</b>

**Non-coursework Requirements**

- Passing score on PRAXIS exam

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## Education Specialist in School Psychology with a Concentration in Early Childhood School Psychology

**Degree Requirements**

Minimum number of credits required for degree: 102

**Coursework Requirements**

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		
CFSP 4304	Diversity in School and Community Settings	3
CFSP 4316	Infant through Adolescent Development	3
<b>B. Learning Theory, Educational Foundations, and Special Education</b>		
CFSP 4312	Learning Theories & Behavioral Analysis	3
CFSP 4306	Exceptionalities in Special Ed	3
<b>C. Legal, Ethical, and Professional Foundations</b>		
CFSP 4301	Professional, Legal and Ethical Issues in School Psychology	4
<b>D. Research, Measurement, and Program Evaluation</b>		
RMS 4910	Introductory Statistics	4
CFSP 4363	School Psychology Program Development and Evaluation	3
<b>E. Individual Evaluation and Assessment</b>		
CFSP 4321	Psycho-educational Assessment I	4
CFSP 4322	Psycho-Educational Assessment II	4
CFSP 4323	Psycho-Educational Assessment III	4
<b>F. Prevention, Wellness Promotion, Counseling and Crisis Intervention</b>		

CFSP 4303	Psychopathology: Prevention, Diagnosis, Treatment	4
CFSP 4336	Preschool Interventions	3
or CFSP 4319	Counseling Adolescent Addictive Behaviors	
CFSP 4337	School Age Academic Competencies and Interventions	3
CFSP 4340	School Mental Health Counseling I	3
CFSP 4341	School Mental Health Counseling II	4
CFSP 4342	Crisis Intervention and Prevention	3
<b>G. Collaborative Consultation with Families and Schools</b>		
CFSP 4330	Family-School Partnering and Consultation	3
CFSP 4331	School and Organizational Consultation I	3
CFSP 4332	School and Organizational Consultation II	3
<b>H. Applied Courses</b>		
CFSP 4349	School Psychology Practicum I (3 courses taken quarterly for 2 credits each)	6
CFSP 4353	School Psychology Practicum II (3 courses taken quarterly for 2 credits each)	6
CFSP 4351	School Psychology Practicum: Clinic Assignment (taken quarterly)	8
<b>I. Culminating Field Experience</b>		
CFSP 4355	School Psychology Internship - EdS (1200 hours one year full-time OR two years half-time (taken three times consecutively))	6
<b>J. Final Assessment</b>		
Praxis II/NASP Exam (score of 165 or greater)		
<b>K. Concentration in Early Childhood Special Education</b>		
CFSP 4308	Early Academic Competencies and Interventions	3
or CFSP 4335	Infant & Family Interventions	
CFSP 4315	Professional, Leadership and Ethical Issues in Special Education: Birth to 21	3
CFSP 4320	Early Childhood Assessment: Formal & Standardized	3
CFSP 4326	Early Childhood Assessment: Informal & Play-Based	3
<b>Total Credits</b>		<b>102</b>

**Non-coursework Requirements**

- Passing score on PRAXIS exam

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## Education Specialist in School Psychology with a Concentration in Addictions

**Degree Requirements**

Minimum number of credits required for degree: 102

**Coursework Requirements**

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		
CFSP 4304	Diversity in School and Community Settings	3
CFSP 4316	Infant through Adolescent Development	3
<b>B. Learning Theory, Educational Foundations, and Special Education</b>		
CFSP 4306	Exceptionalities in Special Ed	3
CFSP 4312	Learning Theories & Behavioral Analysis	3
<b>C. Legal, Ethical, and Professional Foundations</b>		
CFSP 4301	Professional, Legal and Ethical Issues in School Psychology	4
<b>D. Research, Measurement, and Program Evaluation</b>		
RMS 4910	Introductory Statistics	4
CFSP 4363	School Psychology Program Development and Evaluation	3
<b>E. Individual Evaluation and Assessment</b>		
CFSP 4321	Psycho-educational Assessment I	4
CFSP 4322	Psycho-Educational Assessment II	4
CFSP 4323	Psycho-Educational Assessment III	4

**F. Prevention, Wellness Promotion, Counseling and Crisis Intervention**

CFSP 4303	Psychopathology: Prevention, Diagnosis, Treatment	4
CFSP 4336	Preschool Interventions	3
or CFSP 4319	Counseling Adolescent Addictive Behaviors	
CFSP 4337	School Age Academic Competencies and Interventions	3
CFSP 4340	School Mental Health Counseling I	3
CFSP 4341	School Mental Health Counseling II	4
CFSP 4342	Crisis Intervention and Prevention	3

**G. Collaborative Consultation with Families and Schools**

CFSP 4330	Family-School Partnering and Consultation	3
CFSP 4331	School and Organizational Consultation I	3
CFSP 4332	School and Organizational Consultation II	3

**H. Applied Courses**

CFSP 4349	School Psychology Practicum I (taken quarterly for 2 credits each)	6
CFSP 4353	School Psychology Practicum II (taken quarterly for 2 credits each)	6
CFSP 4351	School Psychology Practicum: Clinic Assignment (taken quarterly)	8

**I. Culminating Field Experience**

CFSP 4355	School Psychology Internship - EdS (1200 hours one year full-time OR two years half-time (taken three times consecutively))	6
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**J. Final Assessment**

Praxis II/NASP Exam (score of 165 or greater)

**K. Concentration in Addictions**

CNP 4787	Motivational Interviewing	4
CNP 4789	Pharmacology of Addictive Behavior I and II	4
CNP 4797	Counseling Addictive Behavior	4

**Total Credits****102****Non-coursework Requirements**

- Passing score on PRAXIS exam

## Master's Programs

### Master of Arts in Curriculum and Instruction

**Degree Requirements**

Minimum number of credits required for degree: 45

**Coursework Requirements**

Code	Title	Credits
<b>A. Required</b>		
CUI 4020	Introduction to Curriculum	3
CUI 4160	Race, Class and Gender in Education	3
CUI 4035	Critical Perspectives in Education	3
CUI 4022	Curriculum Theory into Practice	3
Select one of the following courses:		
CUI 4180	History of Education in the United States	3
CUI 4130	Philosophy of Education	3
<b>B. Specialization</b>		
See advisor for courses*		24
<b>C. Research</b>		
Choose one of the following courses:		
RMS 4900	Education Research and Measurement	
CUI 4058	Teacher as Researcher	
RMS 4920	Educational Measurement	
RMS 4940	Structural Foundations of Research in Social Sciences	
RMS 4960	Introduction to Evaluation Research	

<b>D. Electives</b>	<b>3</b>
<b>Total Credits</b>	<b>45</b>

\*Note: If you seek a CDE endorsement, you must follow the specialization plan outlined in the C&I handbook and complete any additional necessary components required by the CDE.

#### Non-coursework Requirements

- Comprehensive Portfolio

## Master of Arts in Curriculum and Instruction with A Concentration in Teacher Education Program-Elementary

### Degree Requirements

Minimum number of credits required for degree: 52

#### Coursework Requirements

Code	Title	Credits
<b>A. TEP Field Experience</b>		
TEP 4690	Field Experience	1
TEP 4690	Field Experience	4
TEP 4690	Field Experience	4
<b>B. TEP Coursework, Curriculum &amp; Assessment</b>		
CUI 4031	Teaching and Learning	3
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
CUI 4411	Wkshp: Gifted & Talented Educ	3
CUI 4502	Elementary Science and Social Studies Methods for Cultural Linguistic Diversity	3
CUI 4503	Elementary Math Methods for Culturally and Linguistically Diverse Learners	4
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
TEP 4590	Elementary Literacy Instruction I	3
TEP 4591	Elementary Literacy Instruction II	3
<b>C. Cognate Requirement</b>		
Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.		9
Aesthetics		
Culturally and Linguistically Diverse		
Gifted Education		
Special Education		
STEM Theory		
<b>Total Credits</b>		<b>52</b>

#### Non-coursework Requirements

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

## Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-Secondary

### Degree Requirements

Minimum number of credits required for degree: 52

#### Coursework Requirements

Code	Title	Credits
<b>A. TEP Field Experience</b>		
TEP 4690	Field Experience	1
TEP 4690	Field Experience	4



TEP 4690	Field Experience	4
<b>B. TEP Coursework, Curriculum &amp; Assessment</b>		
CUI 4031	Teaching and Learning	3
CUI 4411	Wkshp: Gifted & Talented Educ	3
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
CUI 4505	Mathematics across the Content Areas	3
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
TEP 4592	Secondary Literacy Instruction I	3
TEP 4593	Secondary Literacy Instruction II	3
TEP 4610	English in Secondary School	4
or TEP 4620	Social Science in Secondary School	
or TEP 4630	Science in Secondary School	
or TEP 4640	Math in Secondary School	
<b>C. Cognate Requirement</b>		
Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.		9
Aesthetics		
Culturally and Linguistically Diverse		
Gifted Education		
Special Education		
STEM Theory		
<b>Total Credits</b>		<b>52</b>

**Non-coursework Requirements**

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

## Master of Arts in Curriculum and Instruction with a Concentration in Teacher Education Program-K-12 Art-Spanish-Special Education

**Degree Requirements**

Minimum number of credits required for degree: 52

**Coursework Requirements**

Code	Title	Credits
<b>A. TEP Field Experience</b>		
TEP 4690	Field Experience	1
TEP 4690	Field Experience	4
TEP 4690	Field Experience	4
<b>B. TEP Coursework, Curriculum &amp; Assessment</b>		
CUI 4031	Teaching and Learning	3
CUI 4505	Mathematics across the Content Areas	3
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
TEP 4590	Elementary Literacy Instruction I	3
TEP 4591	Elementary Literacy Instruction II	3
Choose courses based on area		7
Special Education		

CUI 4411	Wkshp: Gifted & Talented Educ (1 credit for TEP SpED students)	
CFSP 4302	Special Education & Gifted Education Legal Issues (for SpED TEP students only)	
CFSP 4315	Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (for SPED TEP students only)	
<b>Art or Spanish</b>		
TEP 4650	Foreign Language Methods in K-12 Schools (for Spanish TEP students only)	
TEP 4520	Art Methods K-12 (for Art TEP students only)	
CUI 4411	Wkshp: Gifted & Talented Educ (3 credits for Art or Spanish TEP students)	
<b>C. Cognate Requirement</b>		
Complete 3 courses from one of the approved TEP cognates listed below. Choose courses in consultation with your advisor.		9
<b>Aesthetics</b>		
Culturally and Linguistically Diverse		
Gifted Education		
Special Education		
STEM Theory		
<b>Total Credits</b>		<b>52</b>

**Non-coursework Requirements**

- Comprehensive Portfolio for M.A. degree
- 840 hours of field experience in diverse public school classrooms

**Master of Arts in Early Childhood Special Education****Degree Requirements****Coursework Requirements**

The M.A. in Early Childhood Special Education program requires a minimum of 55 quarter hours depending on prior individual experiences and coursework.

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		<b>18 credits</b>
CFSP 4304	Diversity in School and Community Settings	3
CFSP 4305	Exceptionalities in Education: High Incidence in Disabilities	3
CFSP 4310	Early Childhood Development (Early Childhood Development)	3
CFSP 4311	Child and Adolescent Development	3
CFSP 4312	Learning Theories & Behavioral Analysis	3
CFSP 4338	Exceptionalities in Education: Low Incidence Disabilities	3
<b>B. Legal, Ethical and Professional Foundations</b>		<b>6 credits</b>
CFSP 4302	Special Education & Gifted Education Legal Issues	3
CFSP 4315	Professional, Leadership and Ethical Issues in Special Education: Birth to 21	3
<b>C. Evaluation and Assessment</b>		<b>13 credits</b>
CFSP 4320	Early Childhood Assessment: Formal & Standardized	3
CFSP 4326	Early Childhood Assessment: Informal & Play-Based	3
CFSP 4308	Early Academic Competencies and Interventions	3
RMS 4900	Education Research and Measurement	4
<b>D. Collaborative Consultation with Families and Schools</b>		<b>12 credits</b>
CFSP 4330	Family-School Partnering and Consultation	3
CFSP 4335	Infant & Family Interventions	3
CFSP 4336	Preschool Interventions	3
CFSP 4337	School Age Academic Competencies and Interventions	3

**E. Applied Courses**

		<b>6 credits</b>
CFSP 4357	Early Childhood Practicum (800 minimum hours taken quarterly covering infant, toddler, preschool, and/or kindergarten-3rd grade.)	6
Praxis ECSE Exam		PASS
<b>Total Credits</b>		<b>55</b>

Minimum number of credits required for degree: 55

**Non-coursework Requirements**

- Pass PRAXIS Exam - Special Education: Preschool/Early Childhood.
- ECSE Spring Symposium Poster & Reflection

**Certificate Programs****Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program-Elementary****Program Requirements**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
TEP 4690	Field Experience (Three quarters)	9
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
CUI 4031	Teaching and Learning	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
TEP 4590	Elementary Literacy Instruction I	3
CUI 4502	Elementary Science and Social Studies Methods for Cultural Linguistic Diversity	3
CUI 4503	Elementary Math Methods for Culturally and Linguistically Diverse Learners	4
TEP 4591	Elementary Literacy Instruction II	3
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
CUI 4411	Wkshp: Gifted & Talented Educ	3
<b>Total Credits</b>		<b>43</b>

Minimum number of credits required for certificate: 43

**Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program-Secondary****Program Requirements**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
TEP 4690	Field Experience (Three quarters)	9
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
CUI 4031	Teaching and Learning	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
TEP 4592	Secondary Literacy Instruction I	3
TEP 4593	Secondary Literacy Instruction II	3
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
TEP 4610	English in Secondary School	4
or TEP 4620	Social Science in Secondary School	
or TEP 4630	Science in Secondary School	
or TEP 4640	Math in Secondary School	
CUI 4411	Wkshp: Gifted & Talented Educ	3
CUI 4505	Mathematics across the Content Areas	3
<b>Total Credits</b>		<b>43</b>

Minimum number of credits required for certificate: 43

## Certificate in Curriculum and Instruction with a Concentration in Teacher Education Program-K-12 Art-Spanish

### Program Requirements

Code	Title	Credits
TEP 4690	Field Experience (Three quarters)	9
CUI 4540	Curriculum, Instruction and Assessment: Theory and Practice I	3
CUI 4541	Curriculum, Instruction, and Assessment: Theory and Practice II	3
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
CUI 4031	Teaching and Learning	3
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
TEP 4590	Elementary Literacy Instruction I	3
TEP 4591	Elementary Literacy Instruction II	3
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
CUI 4505	Mathematics across the Content Areas	3
TEP 4520	Art Methods K-12	4
or TEP 4650	Foreign Language Methods in K-12 Schools	
CUI 4411	Wkshp: Gifted & Talented Educ	3
<b>Total Credits</b>		<b>43</b>

Minimum number of credits required for certificate: 43

## Certificate in Early Childhood Special Education

### Program Requirements

Code	Title	Credits
<b>A. Developmental and Psychological Foundations</b>		<b>6</b>
		<b>credits</b>
CFSP 4305	Exceptionalities in Education: High Incidence in Disabilities	3
CFSP 4338	Exceptionalities in Education: Low Incidence Disabilities	3
<b>B. Legal, Ethical and Professional Foundations</b>		<b>3</b>
		<b>credits</b>
CFSP 4315	Professional, Leadership and Ethical Issues in Special Education: Birth to 21	3
<b>C. Evaluation and Assessment</b>		<b>9</b>
		<b>credits</b>
CFSP 4320	Early Childhood Assessment: Formal & Standardized	3
CFSP 4326	Early Childhood Assessment: Informal & Play-Based	3
CFSP 4308	Early Academic Competencies and Interventions	3
<b>D. Collaborative Consultation with Families and Schools</b>		<b>3</b>
		<b>credits</b>
(Choose one of the following courses)		
CFSP 4335	Infant & Family Interventions <sup>1</sup>	3
or CFSP 4336	Preschool Interventions	
<b>E. Applied Coursework</b>		<b>3</b>
		<b>credits</b>
CFSP 4357	Early Childhood Practicum (300 minimum hours taken over three quarters covering infant, toddler, preschool, and/or kindergarten-3rd grade ; 1 credit hour each ) <sup>2</sup>	3
Pass PRAXIS Exam - Special Education: Preschool/Early Childhood		PASS
<b>Total Credits</b>		<b>24</b>

### Non-coursework Requirements

- ECSE Spring Symposium Poster & Reflection

<sup>1</sup> Students have a choice of taking either of these courses to meet Colorado Department of Education competencies depending on their previous coursework. This is subject to faculty approval.

<sup>2</sup> The ECSE Practicum has flexibility based on student needs and should be distributed between infant (200 hours), toddler (200 hours), and preschool (200 hours) ages across a number of quarters.

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## Certificate in Gifted Education

### Program Requirements

Code	Title	Credits
CUI 4412	Culturally and Linguistically Diverse Learners in Gifted Education	3
CUI 4401	Psychological Aspects of Giftedness	3
CUI 4402	Curriculum for Gifted Learners	3
CUI 4403	Instructional Strategies for Gifted Learners	3
CUI 4404	Twice-Exceptional Students	3
CUI 4407	Current Issues in Gifted Education: Identification	3
CUI 4408	Creativity: Theory & Practice	3
CUI 4410	Prog Dev/Ldrshp/Comm Gifted Ed	3
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

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## Certificate in Special Education Generalist

### Program Requirements

Code	Title	Credits
<b>A. Overview of Special Education</b>		<b>9</b>
		<b>credits</b>
TEP 4010	Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities	3
CFSP 4305	Exceptionalities in Education: High Incidence in Disabilities	3
CFSP 4315	Professional, Leadership and Ethical Issues in Special Education: Birth to 21	3
<b>B. Assessment &amp; Identification of Students with Disabilities</b>		<b>3</b>
		<b>credits</b>
CUI 4542	Curriculum, Instruction, and Assessment: Theory and Practice III	3
<b>C. Understanding Behavior &amp; Affective Needs</b>		<b>3</b>
		<b>credits</b>
CFSP 4312	Learning Theories & Behavioral Analysis	3
<b>D. Reading, Oral &amp; Written Language</b>		<b>6</b>
		<b>credits</b>
TEP 4590	Elementary Literacy Instruction I	3
TEP 4591	Elementary Literacy Instruction II	3
<b>E. Mathematics</b>		<b>3</b>
		<b>credits</b>
CUI 4503 or CUI 4505	Elementary Math Methods for Culturally and Linguistically Diverse Learners Mathematics across the Content Areas	3
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

### Other Requirements:

- Praxis exam for CDE Endorsement for Special Education Generalist.
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## Certificate in Culturally and Linguistically Diverse Education

### Program Requirements

Code	Title	Credits
<b>Requirements</b>		
CUI 4529	Foundations of Education for Culturally and Linguistically Diverse Learners	3
CUI 4536	Language and Cultural Issues in Assessment and Instruction	3
CUI 4538	Literacy and Language Development for Culturally and Linguistically Diverse Learners	3
CUI 4531	Language Development and Strategies for Culturally and Linguistically Diverse Learners	3
CUI 4035	Critical Perspectives in Education	3
CUI 4022	Curriculum Theory into Practice	3
CFSP 4330	Family-School Partnering and Consultation	3
CUI 4047	Humanizing Pedagogies	3
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

## Child, Family & School Psychology (CFSP)

### CFSP 3991 Independent Study (1-10 Credits)

#### CFSP 4301 Professional, Legal and Ethical Issues in School Psychology (4 Credits)

This course examines professional, legal, and ethical issues pertinent to working with birth to age 21 populations in school and community settings. Attention is focused on federal and state education legislation, special and regular education case law, and psychological practice case law. Professional issues and contemporary service models are reviewed, including an introduction to ethical issues, federal mandates, professional training, and roles and responsibilities. Students engage in casework discussion regarding delivery of assessment, intervention, and consultation services. Special emphasis is given to current mental health and education regulations and reforms. Differential issues facing school psychology professionals in urban and rural settings are discussed, and students become acquainted with a variety of legal and ethical issues affecting practice in public schools, private settings, and higher education. Students learn about ethical standards, reasoning processes, and conduct in applied settings. Prerequisites: None.

#### CFSP 4302 Special Education & Gifted Education Legal Issues (3 Credits)

This course is designed to provide students with foundational knowledge regarding the legal issues affecting special education and gifted education in early childhood and K-12 educational settings. Attention is focused on federal and state education legislation, special education case law and gifted statutes specific to Colorado. Consideration also is given to the interaction of ethical standards of practice as they relate to legal mandates and court decisions to meet the educational and psychological needs of all students, especially those with disabilities and twice exceptionalities. Students will be exposed to legal issues affecting practice in the public schools community agencies and early childhood environments. Prerequisites: None.

#### CFSP 4303 Psychopathology: Prevention, Diagnosis, Treatment (4 Credits)

This course is designed to provide students with knowledge of mental health disorders, the diagnostic criteria as well as culturally-relevant prevention and intervention strategies. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings. Using a strengths-based approach, prevention principles, curriculum, and policy agendas are discussed. Additionally, this course explores implications for school psychologists and other school-based practitioners working with those at risk for or suffering from mental health disorders. Prerequisites: CFSP 4322, 4323, 4324, 4340, 4343.

#### CFSP 4304 Diversity in School and Community Settings (3 Credits)

This course explores diversity in children and families, and the impact of culture on personal and family development. Emphasis is placed on the intersection of school and community settings' cultures and those of children and families, and how this affects learning and development for individuals and groups of children. Attention is given to students' cultures and cultural experiences, and how these affect the work they do with children and families in school and community settings. Prerequisites: None.

#### CFSP 4305 Exceptionalities in Education: High Incidence in Disabilities (3 Credits)

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports also are addressed. Prerequisites: CFSP 4310, 4311, 4312.

#### CFSP 4306 Exceptionalities in Special Ed (3 Credits)

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports are also addressed.

**CFSP 4308 Early Academic Competencies and Interventions (3 Credits)**

This course provides an overview of early language and literacy development across diverse settings and stakeholders, such as families, teachers/providers, programs, and communities. A comparative analysis of evidence-based early literacy strategies, environments, curriculum, and a review of current evaluation and instructional language and literacy practices for working with teachers, families, and young children are undertaken. Play-based and other informal methods of assessment and intervention are covered, including the integration of technology and strategies to promote early language and literacy with infants, toddlers and preschoolers in natural environments. Prerequisite: CFSP 4310; None for ECSE CERT Students.

**CFSP 4310 Early Childhood Development (3 Credits)**

This course focuses on early childhood development during, from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized. Prerequisites: None.

**CFSP 4311 Child and Adolescent Development (3 Credits)**

This course provides an overview of growth and development from age five through 21 years of age. We will explore theories and research in developmental psychology to provide a context for typical child development. Attention will be given to the social, emotional, cognitive, and biological development of the child, with a particular focus on attachment as a framework for healthy development in these domains. Case studies will allow for the application and integration of child development theory and counseling practice. Prerequisites: None.

**CFSP 4312 Learning Theories & Behavioral Analysis (3 Credits)**

This course examines learning theories and applied behavioral principles. Students learn to apply theories to case studies and fieldwork relating to children along the developmental spectrum and across cultural contexts. Students work to investigate and analyze concepts relating to learning and behavior at home and school, and to develop positive behavioral support and effective learning plans. Prerequisites: None.

**CFSP 4315 Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (3 Credits)**

This course provides students with an understanding of the roles & responsibilities of an Early Childhood Special Education Specialist and Special Education Generalist. This course serves as the foundation for students who are interested in pursuing a profession in special education and working with children with disabilities from birth to 21 years. This course includes the ethical and professional practice standards and understanding of the multiple roles and complex situations across wide age and developmental ranges. This course also briefly covers the historical laws and legal issues associated with the profession. The course also highlights why special educators engage in professional activities and learning communities that benefit individuals with developmental disabilities and their families, colleagues, and their own professional growth. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Prerequisites: None.

**CFSP 4316 Infant through Adolescent Development (3 Credits)**

This course focuses on early childhood development from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized.

**CFSP 4317 Topics in Special Education: Learning Differences (1-3 Credits)**

This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom. Prerequisites: None.

**CFSP 4318 Pharmacology of Addictive Behaviors I & II - Applications for schools (3 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors with a focus on adolescent development. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors with an emphasis on adolescent development.

**CFSP 4319 Counseling Adolescent Addictive Behaviors (3 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and non-chemical addictive behaviors in adolescents. Gain familiarity with major addiction treatment models and their underlying assumptions in order to generate comparative critiques. Examination of the major treatment approaches to substance abuse and their accompanying theories of etiology with a focus on adolescence. Explore meaning of addiction and abuse in relation to related non-substance use compulsive behaviors. Develop basic assessment skills to identify and differentiate substance abuse from other clinical disorders within the school environment. Develop an understanding of the interpersonal function of substance abuse and related addictive behaviors as well as an understanding of the skills and attitudes that underlie effective addiction treatment in adolescents.

**CFSP 4320 Early Childhood Assessment: Formal & Standardized (3 Credits)**

This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. Assessment will focus on normed-referenced, standardized measures of cognitive, communication, emotional, social, sensory and physical motor development. Students will gain experience in administering assessments to young children, interpreting assessment results, writing assessment reports, and reporting the results to families and professionals. A variety of assessment tools will be studied for their appropriate use with young children and their families. Prerequisite: CFSP 4310.

**CFSP 4321 Psycho-educational Assessment I (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of cognitive functioning in children and adolescents. This course will include (a) review of historical and current theories of intelligence, (b) review of psychometric constructs relevant to the measurement of cognitive functioning, (c) practice in the administration and scoring of widely used measures of cognitive functioning, (d) practice in the interpretation of test scores, (e) practice in the preparation of written reports summarizing test results, (f) exploration of multicultural issues related to assessment, and (g) review of the clinical application of psychological testing in school and clinical settings. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting cognitive measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. Learning to administer and interpret cognitive assessments takes many hours of practice. Students should be aware of this and budget their time accordingly.

**CFSP 4322 Psycho-Educational Assessment II (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of academic functioning in children and adolescents. The course is designed to train students in identification and assessment for academic difficulties. Recent paradigm shifts in general and special education, fueled by federal and state law, are calling for school personnel, particularly school psychologists, who have the knowledge, skills, and leadership competencies necessary to promote better academic assessment and intervention practices for all students. The role of school psychologists is expanding and diversifying. In an era that emphasizes universal prevention and swift early intervention at the first sign of difficulty (i.e., MTSS), school psychologists may be among the best educational professionals for preventing and intervening when children experience academic difficulties. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting achievement measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. The readings and the practical work assignments required to master the techniques covered in this course are time-consuming and demanding. Students will be expected to learn the formal scoring systems used for each instrument and the theory underlying the use of these techniques. Learning to administer and interpret academic assessments takes many hours of practice. Students should budget their time accordingly.

**CFSP 4323 Psycho-Educational Assessment III (3 Credits)**

This course is the second of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Woodcock Johnson Scales. Nontraditional forms of assessment, as well as adaptive behavior measures, are also covered. Integrating results of assessments with other data to provide effective educational recommendations continues to be an emphasis. The focus of the class is on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4312, 4322.

**CFSP 4324 Psycho-educational Assessment IV (3 Credits)**

This course is designed to provide students with knowledge of the major approaches to assess a school-aged student's social and emotional status. Instruction includes underlying theories, use and interpretation of interviewing techniques, observation methods, objective behavior ratings, self-report measures, sociometric procedures and selected projective measures. Emphasis is placed on the integration and interpretation of multimethod, multisource and multisetting data to improve diagnostic accuracy, and the use of assessment results in developing effective intervention strategies. Students learn to incorporate such assessment information using case studies. In addition, students develop skills in writing case reports and in making effective presentations of social-emotional assessment results. Consideration is given to contemporary issues in the assessment of children's social emotional functioning. Lab fee required. Prerequisites: CFSP 4310, 4311, 4322, 4323.

**CFSP 4326 Early Childhood Assessment: Informal & Play-Based (3 Credits)**

This course is designed for students to learn informal and play-based assessment processes for young children (birth-6 years) using a variety of non-standardized, informal and play-based assessment methods. The entire assessment process, including screening, evaluation, interpreting results, writing an integrated report, and providing feedback to families and professionals, will be the focus. Assessment measures will be examined with consideration for when and why specific instruments should be used, in addition to the benefits and disadvantages of the instruments. Students will be trained in-depth in the administration and interpretation of a variety of instruments for assessment of the whole child including the cognitive, language, social-emotional, and sensorimotor developmental domains. Prerequisite: CFSP 4310.

**CFSP 4330 Family-School Partnering and Consultation (3 Credits)**

This course is designed to familiarize educational, mental health, and early childhood service providers with essential attitudes, approaches, and actions necessary to form successful family-school-community partnerships that can foster development and learning, especially for children with disabilities. Ecological, family systems, and family-centered theory and principles serve as the foundation for working collaboratively with families from diverse cultural and social backgrounds within school and community settings. Students gain skills in family interviewing; consultation to identify family strengths, needs, and resources; collaborative problem-solving; and multi-systemic learning. Evidence-based family involvement, education, and intervention strategies contribute to positive family-school partnering relationships are reviewed within a multi-tiered, school-based service delivery framework. Prerequisite: CFSP 4332; None for ECSE Students.

**CFSP 4331 School and Organizational Consultation I (3 Credits)**

This course is designed to acquaint students with current directions in school and organizational consultation. Key principles of successful system-wide prevention, intervention and evaluation are covered. The importance of maintaining an ecological perspective in organization consultation activities is stressed.



**CFSP 4332 School and Organizational Consultation II (3 Credits)**

This course builds on content covered in School and Organizational Consultation I. It is designed to acquaint students with current directions in classroom management and school-based consultation. Covered are issues related to consultant and consultee characteristics, consultation practices and processes, models and stages of consultation, facilitating desired outcomes in consultation, and evaluation of consultation outcomes. Special emphasis is also given to problems of classroom management and collaboration with parents, teachers and other educational and community personnel. Case analysis and practice are required.

**CFSP 4335 Infant & Family Interventions (3 Credits)**

This course will describe various models for intervention with infants and toddlers with disabilities, emphasizing intervention within natural environments. Working with children and families in home, childcare, and other community settings will be emphasized and contrasted with intervention in more clinical settings. Students learn how to consult with parents and community professionals in providing coordinated transdisciplinary services when working with children in home and community settings. All areas of development will be addressed. Field experiences with children and families are expected to practice the skills addressed in class. Families will be asked to share their experiences to enable students to gain the "human" side of theory and practice. Prerequisites: None.

**CFSP 4336 Preschool Interventions (3 Credits)**

This course covers early childhood interventions applicable within community, preschool and home environments. A hierarchy of intervention strategies is addressed including universal, targeted, and intensive approaches. There is a focus on building supportive networks, routine-based intervention strategies, and collaboration to enhance family resources. Students review empirically validated early interventions and curriculum for young children exhibiting both normal and delayed development. Prerequisite: CFSP 4310, 4312; None for ECSE CERT Students.

**CFSP 4337 School Age Academic Competencies and Interventions (3 Credits)**

The purpose of this course is to review current theories of learning disability and practices that can support the diverse learning needs of school-aged students with and without disabilities. An integrated response to intervention model will be reviewed to identify difficulties, delays, and disabilities in the domains of literacy (oral, writing, speaking, listening), mathematics, and self-regulation. Students will learn to: a) evaluate differentiated instructional environments and adaptations that can support learning; b) employ focused assessments to identify academic strengths and weaknesses; c) formulate instructional hypotheses and learning goals; and d) link assessment results to evidence-based intervention approaches or instructional strategies designed to address phonemic awareness, decoding/phonics, reading fluency, listening/reading comprehension, spelling, written expression, vocabulary, mathematical calculation, mathematical problem-solving, and study/organization/test-taking skills. Effective practices will be reviewed to reduce learning barriers and increase learning supports across school, home, and community settings. Students will collaborate on the development of instructional hypotheses and learning goals that respect cultural diversity and language differences and will develop plans to monitor instructional fidelity and students' progress over time. These goals are accomplished through critical readings, classroom discussion, homework assignments, demonstrations, modeling, video analysis, and practice with hypothetical and authentic cases referred for learning and academic issues. Prerequisite: CFSP 4312.

**CFSP 4338 Exceptionalities in Education: Low Incidence Disabilities (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low incidence disabilities such as blindness/visual impairment, deafness/hearing impairment, deaf blindness, traumatic brain injury, Fragile X syndrome, Fetal Alcohol Syndrome, traumatic brain injury, and syndromes associated with chromosomal deletions. Implications for assessment and intervention will be outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology will be addressed. Community experts on specific disabilities will be used as guest lecturers. Prerequisite: None.

**CFSP 4339 Introduction to Play Therapy (3 Credits)**

This course examines the history and theoretical bases of major theories of play to enhance children's social-emotional and adaptive functioning. Child-centered, interpretive, and structured play therapy models are reviewed. Information is covered regarding preparation, selection of materials and toys, playroom characteristics, facilitative responses, and how to adapt play therapy in school, home and clinical settings. The play therapy process is illustrated from the initial referral and contact through termination, including observing and responding during sessions, facilitation and interpretation, therapeutic limit setting, and group play therapy strategies. Case studies, role play, video and script analysis are incorporated as is brief play therapy and applications with special populations. Efficacy, evaluation and future areas for professional development are reviewed. This course is designed as an introductory experience to prepare students for further supervised practica in play therapy. Prerequisite: CFSP 4310.

**CFSP 4340 School Mental Health Counseling I (4 Credits)**

School Mental Health Counseling I is designed as a foundational introduction to major theories behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn developmentally informed and empirically driven individual and group counseling theory. Ethical guidelines are reviewed. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling II, a theoretical class that incorporates in-depth analysis of counseling theories to individual and group cases and a integrative approach to bridge the research to practice gap.

**CFSP 4341 School Mental Health Counseling II (4 Credits)**

School Mental Health Counseling II is designed as an introduction to discrete techniques behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn research-based counseling techniques and practical skills within a multi-tiered system of support. Consideration is given to integrative counseling approaches and differences between individual and group processes. These goals are accomplished through instruction and experiences that include examination of research, analysis and transcription of case studies, demonstrations, modeling, in-vivo practice, self-reflection and evaluative feedback. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling III, an advanced class that incorporates in-depth analysis of applying counseling theories to individual and group cases, as well as supervised counseling experience.

**CFSP 4342 Crisis Intervention and Prevention (3 Credits)**

This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings. Prerequisites: CFSP 4301, 4304, 4310, 4311, 4340, 4343.

**CFSP 4343 School Mental Health Counseling III (2 Credits)**

School Mental Health Counseling III is designed as an advanced counseling application class that incorporates supervised counseling experiences to improve interpersonal, emotional, and social functioning in young children to adolescents. Students learn to design, deliver, and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support.

**CFSP 4349 School Psychology Practicum I (2 Credits)**

Taken during the first year of entry, the Practica is a supervised initial year field experience designed to expose students to a variety of home-, community- and school-based settings that serve families with children who have developmental and special needs, and in the CFSP Clinic. Each week for up to four hours, students are expected to attend, observe, and participate in a range of site-specific team meetings and services offered to families and children. For the MA in Educational Psychology degree, students, during the fall or winter quarter, identify, develop and initiate a research project with input from the faculty. The MA project culminates during the fourth quarter (summer) and serves as the final project in lieu of a comprehensive exam. Prerequisites: CFSP 4301, 4304, 4349 - Must pass all prior quarters as listed in the handbook.

**CFSP 4351 School Psychology Practicum: Clinic Assignment (1-3 Credits)**

CFSP Clinic is a supervised field experience in the Morgridge College of Education's Counseling and Educational Services Clinic. Through all experiences, Clinic students will work with students and families within the zero to college age range. Casework may include: interview, assessment, data analysis, report writing for different audiences, diagnostics, data presentation, intervention, and consultation for a variety of psychoeducational and developmental concerns of children and families. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4351 - prior quarters.

**CFSP 4353 School Psychology Practicum II (2 Credits)**

This is a 500 hour supervised field experience taken after the successful completion of core courses and Practica I experience. Practica is considered a critical professional transition year to help consolidate learning and professional competencies in preparation for a subsequent Internship. Students work throughout the year with Clinic Faculty and a licensed Field Supervisor within the University of Denver psycho-educational clinic and infant, preschool, elementary, middle or high school settings and also attend weekly Practicum seminars or individual supervision sessions with a University Faculty member. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, continued professional development pertinent to the successful practice of School Psychology in urban and rural settings. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4353 - prior quarters.

**CFSP 4354 School Psychology Advanced Practicum (1 Credit)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisite: PhD students only; Pass first year courses and CFSP 4353.

**CFSP 4355 School Psychology Internship - EdS (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4356 School Psychology Pre-Doctoral Internship (4-8 Credits)**

Meets 12-month internship requirement in school psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CFSP 4357 Early Childhood Practicum (1-4 Credits)**

This course provides students with a field experience in an Early Childhood environment for students who are interested in pursuing a profession in Early Childhood Special Education. Field Practicum in Early Childhood Special Education is an off-campus, 600-hour minimum supervised experience taken throughout your coursework. Field Practicum is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Each student is required to successfully complete 3 practica; an infant/toddler, (Birth to 3 years) a preschool (3-5 years) and an early elementary focused (Kindergarten through 3rd grade). Practicum seminar is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practice. The field practicum is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students work with a licensed Field Supervisor. Students will be placed in infant, preschool, elementary school settings. During practicum, students provide direct and indirect services that support children and/or families in a variety of settings. All students attend weekly practicum seminars facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Restricted to ECSE students only.

**CFSP 4359 School Psychology Pre-Doctoral Internship (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4360 Doctoral Seminar in School Psychology (3 Credits)**

Current topics and/or controversies in the profession of Child, Family and School Psychology are addressed in an advanced seminar format. Topics vary by instructor and year and may address current issues in research, theory, policy development, and/or clinical practice.

**CFSP 4361 Supervision in School Psychology (2 Credits)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisites: PhD Students only; CFSP 4351, 4353.

**CFSP 4363 School Psychology Program Development and Evaluation (3 Credits)**

This course focuses on theory and practice of program development and evaluation in school and community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to collaborate on a comprehensive evaluation of a specific educational, health, or mental health program. Prerequisites: RMS 4910, CFSP 4332.

**CFSP 4365 School Psychology Terminal Internship - EdS (1-8 Credits)**

Meets 9-24 month internship requirement in school psychology. Prerequisites: Completion of all Practica and Program Permission. Students can only enroll in this course if they're also enrolled in CFSP 4355.

**CFSP 4369 School Psychology Pre-Doctoral Terminal Internship (1-8 Credits)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 2000 clock hours of supervised field experience across an academic year in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. The student will be closely supervised by a licensed psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisites and Restrictions: Students must be enrolled in the CFSP doctoral program. They must have successfully completed Practicum I, Practicum II and Advanced Practicum. Additionally, they must have successfully passed comprehensive exams and dissertation proposal. All other students must obtain instructor permission. Corequisite: CFSP 4359.

**CFSP 4991 MA Independent Study (1-10 Credits)**

This course allows MA or EdS Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 4995 Independent Research (1-10 Credits)**

This course is for students whose program requires completion of a masters level thesis.

**CFSP 4999 Advanced Seminar in School Psychology (1-3 Credits)**

This course is designed as an advanced topical seminar in which students will focus on the professional literature and research relevant to important topics in the field of School Psychology. There will be analysis and discussion of these advanced topics with consideration of the implications for research and practice in School Psychology. Required meeting time and assignments would be commensurate with number of credits (Repeatable). Prerequisite: Instructor Permission.

**CFSP 5991 PhD Independent Study (1-10 Credits)**

This course allows PhD Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 5995 Independent Research (1-20 Credits)**

This course is for PhD Child, Family, and School Psychology students engaged in completing their doctoral dissertation. Advisor permission required.

## Curriculum and Instruction (CUI)

**CUI 4020 Introduction to Curriculum (3 Credits)**

Introduces curriculum theory and curriculum as a field of study; includes study of issues such as standards, cognition, diversity, ecology, and social justice, among others.

**CUI 4021 Models of Curriculum (3 Credits)**

Reflects on ways various curriculum orientations may resolve modern issues or problems, with students' independent pursuit of one or two orientations in depth; orientations examined include cognitive pluralism, developmentalism, rational humanism and reconceptualism, among others. Recommended prerequisite: CUI 4020.

**CUI 4022 Curriculum Theory into Practice (3 Credits)**

Helps students move from theoretical concepts and decisions involved in curriculum development to actual construction of curricula; survey of potential components encompassed in a variety of curricula followed by participation in designing a curriculum as a member of a student team; final facet requires students to develop a curriculum. Prerequisites: CUI 4020 and 4021 or instructor's permission.

**CUI 4027 Implementing Curriculum: A Practicum (3 Credits)**

Opportunity to experience authentic role of curriculum on site; work at the Denver Zoo, the Denver Museum of Nature and Science, other museums and school sites; to develop and implement curriculum.

**CUI 4031 Teaching and Learning (3 Credits)**

This course builds the biological and contextual foundations for learning, including brain and cognitive development theory. The course also helps students build a framework for culturally responsive classroom management, including rituals, routines, and relationships with students and families. Students apply cognitive development theory and equitable classroom management strategies to analytical case studies. Course restricted to students in TEP program or instructor approval.

**CUI 4032 Analysis of Teaching (3 Credits)**

Provides a systematic introduction to the research base that characterizes effective practice and to the array of research methods that can be employed to study teaching and teacher development.

**CUI 4033 The Practice of Teaching (3 Credits)**

Course explores personal, conceptual, and empirical understandings of "teaching practice." Topics addressed have included: metaphors for teaching practice, best practices for equity and social justice, professional development practices.

**CUI 4034 Curriculum & Cultural Context (3 Credits)**

This course will address the influence of cultural, political, sociological, and economic factors on curriculum at the instructional, situational, societal, and ideological levels. Students should be interested and willing to explore these issues through readings and discussion. We will be exploring various perspectives, including our own, which inform the discussion on this critical area of education.

**CUI 4035 Critical Perspectives in Education (3 Credits)**

In this course, students will examine issues related to democracy, power, and privilege in public education. Specifically, students will learn about how anti-democratic groups are working to undermine public education in the U.S. Students will explore White privilege, racism, classism (and other "isms") and the impact they have had and continue to have in public school settings, particularly at schools that serve historically marginalized and oppressed students. Theoretical frameworks such as Critically Relevant Teaching and Critical Race Theory will be introduced in this class as well.

**CUI 4039 Transformational Teaching and Learning (3 Credits)**

This course takes an exploratory approach to the analysis of transformation teaching and learning. It asks questions such as "What are effective teaching and learning environments?" "For whom and under what circumstances?" "How can we create such environments?" We will explore how patterns of activities in the classroom can be designed to achieve simultaneously all of the major goals of educational reform. The term classroom is not restricted to the physical classroom space but "classroom" in the sense of the organized instructional activities that can extend outside of the school building into the community.

**CUI 4041 School and Curricular Reform (3 Credits)**

A look into school reform movements, why most fail and only a few succeed.

**CUI 4043 Development of Technology Enhanced Educational Environments (3 Credits)**

Utilizing emerging Learning Theories and complex Instructional Design Theories, students will move into advanced educational web page development including designing with style sheets and layers. Several customized technology mediated lessons or professional projects will be created for use in practice. Various tools, designed to enhance learning environments, will be explored.

**CUI 4046 Technology Leadership (3 Credits)**

Explores the role of ethics, values, social, legal, and power issues associated with technology in education. Analyzes how technology is transforming learning, equitable distribution of information, and the implications for providing optimal education to diverse learning populations.

**CUI 4047 Humanizing Pedagogies (3 Credits)**

This course will provide a foundation in the conceptualization, design, and implementation of a humanizing pedagogy. A humanizing pedagogy is a "revolutionary approach to instruction that ceases to be an instrument by which teachers can manipulate students, but rather expresses the consciousness of students themselves" (Freire, 1970, p. 51). Students in this course will apply their knowledge of humanizing pedagogy to specific content areas, practice, and research through the tenets of a humanizing pedagogy. Moreover, students will explore humanizing literacy and math as fundamental human rights that afford access and equity to historically marginalized communities.

**CUI 4050 Research Seminar: Conducting Systematic Reviews (0-3 Credits)**

The Curriculum and Instruction (C&I) Research Seminar: Conducting Systematic Reviews (CUI 4050, 3 credits) is the first of a series of courses for doctoral-level students in the Curriculum and Instruction Program. It is also available to students in other programs who would like to learn how to complete a systematic literature review, as well as think about identifying a research problem to address and research purpose.

**CUI 4051 Seminar in Dissertation Organization and Design (1-5 Credits)**

Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

**CUI 4058 Teacher as Researcher (3 Credits)**

Emerging philosophical and methodological issues that arise when school practitioners undertake research within their own sites; range of research traditions including quantitative, statistical research and qualitative methodologies; mastering relevant skills and accessing resources for students to be better prepared to conduct their own inquiries and understand and solve problems.

**CUI 4130 Philosophy of Education (3 Credits)**

Focuses on 3-4 philosophers and examines the contributions their philosophical ideas have on education. Philosophers studied have included John Dewey, Cornel West, Nel Noddings and Maxine Greene.

**CUI 4131 Spirituality in Education (3 Credits)**

This course will explore the role of spirituality in education from both the student and educator point of view through an examination of the big questions that are held close to the heart; the ones that guide us toward meaning making in the world. The primary goal of the course is to plumb the depths of spirituality, a deep sense of inner meaning making, that calls us toward a particular profession. The course will focus on the interface between spirituality in education through the lenses of curriculum and instruction.

**CUI 4153 Practicum: Curriculum and Instruction (0-5 Credits)**

Designed to fit the educational needs of the individual student who may choose from a wide variety of practicum (internship) experiences, including teaching, curriculum development, museum internships or research projects in curriculum and instruction on or off campus. In the case of taking on a paid position, students should consult the Office of Internationalization about their visa status and requirements. Students should work with their advisor before they plan to register in order to get this course in the class schedule when it will be needed.

**CUI 4155 Special Topics (1-10 Credits)**

Special topics in the field of education.

**CUI 4160 Race, Class and Gender in Education (3 Credits)**

Ethnicity, Class & Gender in Education applies the concepts and theories of social science disciplines - sociology, social psychology, anthropology, historical perspectives and philosophical orientations - to the inclusive examination of the issues of racism, classism, sexism, and homophobia in education. This course seeks to conceptualize ethnicity, gender and social class as interactive systems, not as separate and independent variables, that impact students, teachers, school systems and the educational enterprise. We examine educational systems and practices that historically have disadvantaged women and peoples of color and discuss strategies and techniques for empowerment of the members of these groups.

**CUI 4170 Engaging Learners through the Arts (3-5 Credits)**

This seven day institute is designed to engage participants in a challenging exploration of the creative process through workshops with professional artists in the disciplines of dance, visual arts, creative writing, music, and theatre, and to provide a greater understanding of the theory and practical applications of school reform.

**CUI 4172 Aesthetic Foundation in Education (3 Credits)**

Educational enterprise from aesthetic viewpoints; examination of a number of aesthetic theories and exploration of implications for curriculum, teaching, and evaluation.

**CUI 4180 History of Education in the United States (3 Credits)**

Traces historical context and development of K-12 schools in the United States from initial discovery of North and South America by Europeans to the present; understanding through examination of central issues that strongly influenced our current educational systems - evolution of schools, religion, social and political reform, women's issues, nationalism and ethnicity, industrialization of the nation and world.

**CUI 4310 Supporting Apprentice Teachers (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn as they learn to create culturally responsive classroom environments and to address the strengths and needs of all students particularly Culturally and Linguistically Diverse (CLD) Learners and students in Special Education. Topics addressed include mentor support for apprentice teachers' planning, teaching of reading and writing, applying a teacher evaluation framework, designing and interpreting formative and summative assessment, using data to inform instruction and differentiation for ELLs and GT identified students.

**CUI 4311 Supporting Apprentice Teachers II (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing unit and lesson plans, literacy (specifically reading), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4312 Supporting Apprentice Teachers III (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing formative assessment plans, literacy (specifically writing), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4313 Supporting Apprentice Teachers IV (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about using data to inform instruction, differentiating instruction for English Language Learners and Gifted and Talented identified students, and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4400 Nature and Needs of Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of 1) conceptual foundations and definitions of giftedness, 2) how intelligence, creativity, and non-intelligence factors are related to giftedness, 3) the nature, development, types, and needs of gifted individuals, 4) principles and issues in the identification of gifted individuals, and 5) the major issues and tensions in the education of gifted and talented individuals. Lectures, discussions, and other class activities and assigned readings and projects will include topics such as the history and nature of the giftedness construct; theories of intelligence and creativity and their relationship to conceptions of giftedness; types of giftedness; the diversity of gifted individuals and their personal and educational needs; the role of identification in the education and development of gifted children and youth; and purposes and perspectives in gifted education.

**CUI 4401 Psychological Aspects of Giftedness (3 Credits)**

The psychological development of gifted children is examined through a study of current theories, models, research, and case histories. Understanding of psychological development creates a foundation for applications and practices that nurture the psycho-social-emotional development of gifted individuals. Specific topics include the psychological nature and needs of the gifted; perfectionism, stress, and underachievement; special issues for gifted boys and gifted girls; highly gifted; and pertinent theories of psychological development. Emphasis is placed on synthesis of theories and application to specific situations.

**CUI 4402 Curriculum for Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of the conceptual foundations in the design and development of curriculum for gifted and talented students. Includes theories, models and processes for curriculum modification and curriculum design; strategies for adapting educational content, process, product, and learning environment based on the educational characteristics and needs of gifted learners; and curriculum design and development approaches that are effective in the intellectual and personal growth of gifted and talented learners. Content in this course is aligned with appropriate instructional strategies and techniques recommended for use with gifted and talented learners. Lectures, discussions, class activities, assigned reading and projects include topics such as a general overview of curricular principles and perspectives; critical analysis of general curriculum; issues of diversity in curriculum development and modification including cultural congruence; recommended models of curriculum development for gifted and talented learners; and national trends in gifted education.

**CUI 4403 Instructional Strategies for Gifted Learners (3 Credits)**

This course provides a basic understanding of how to adapt curriculum for gifted learners through various instructional strategies. Strategies studied include: acceleration, enrichment, differentiation, compacting, grouping, independent study, and service learning. By selecting instructional strategies based on assessed learner needs, educators can reach many types of gifted learners in their classrooms including gifted students of poverty and gifted learners of cultural and ethnic diversity. The objectives of this class are that participants: know about and be able to define instructional strategies that meet assessed academic and affective needs of gifted learners and be able to adapt curriculum for gifted learners using learned instructional strategies.

**CUI 4404 Twice-Exceptional Students (3 Credits)**

The purpose of this course is to acquaint the student with the various areas of exceptionalities typically encountered with gifted students and to provide classroom related techniques to assist the teacher in identifying and working with twice-exceptional children in an effective manner. Environmental, behavioral, motivational, emotional and educational needs are addressed. Legal responsibilities, parent communication and staff development will be emphasized.

**CUI 4405 Practicum in Gifted Education (1-3 Credits)**

Students wishing to earn credit for the Practicum in Gifted Education must complete an experience in three of the five areas (Teaching, Assessment, Administration, Research, or Policy). Students must submit a Practicum Proposal outlining the intended practicum experiences. This Proposal must be approved by the practicum faculty supervisor when the practicum experiences are begun.

**CUI 4407 Current Issues in Gifted Education: Identification (3 Credits)**

This course focuses on the screening and selecting of gifted and talented students. It is designed for practicing professionals - teachers, counselors, psychologists, and administrators - who must make decisions about the identification and serving of gifted and talented students. Course uses multiple assessments, both quantitative and qualitative, to identify gifted students within an increasingly diverse population (including culturally- and ethnically-diverse, high-potential, linguistically-different students with unique affective needs as well as high-potential economically-disadvantaged students). Students will use data to diagnose educational needs, prescribe appropriate educational strategies and to incorporate appropriate identification strategies for identifying gifted and talented students. Legal responsibilities and parent communication as well as staff development are emphasized. Students are required to develop an identification model based on relevant theory and current practices to be used in their particular setting. Enforced Prerequisites: CUI 4400 with a minimum grade of C- OR CUI 4401 with a minimum grade of C-.

**CUI 4408 Creativity: Theory & Practice (3 Credits)**

The essence of innovation is creativity, in thought, process and outcome. Classic and current theories provide a foundation for analysis of the concept of creativity. This course is designed to provide participants with an understanding of 1) the conceptual foundations and definitions of creativity; 2) how intelligence, creativity, and non-intellective factors are related to the constructs of giftedness; 3) documented brain research underlying exceptional cognition and/or creativity; 4) principles and issues in the identification and appropriate programming for creative individuals; and 5) the multiple perspectives and manifestations of creativity. Salon discussion groups, lectures, class activities and assigned readings and projects focus on the history and nature of the construct of creativity, theories of creativity, the role of innovation and transformation, assessment and measurement tools, environmental support of the creative process and creativity, and teaching and learning applications.

**CUI 4410 Prog Dev/Ldrshp/Comm Gifted Ed (3 Credits)**

This course emphasizes the concepts and practices involved in development and management of school- and district-based programs for the special education of gifted and talented children and youth. The course leads to in-depth understanding of program components and systems, program planning and evaluation, program leadership, advocacy in gifted education, and communications. In addition, emphasis is placed on planning and development of staff development in relation to gifted children. This course includes extensive in-class discussion and field applications.

**CUI 4411 Wkshp: Gifted & Talented Educ (1-3 Credits)**

This blended course is designed to provide participants with an overview of the education of gifted and talented students. Areas of focus within the course include definitions of gifted and talented learners, gifted learner characteristics, educational/academic and affective/psychosocial needs, common identification methods, and research-based instructional strategies for gifted learners. Course restricted to students in TEP program or instructor approval.

**CUI 4412 Culturally and Linguistically Diverse Learners in Gifted Education (3 Credits)**

Culturally and Linguistically Diverse Learners have inequitable access to gifted programming, curricula and services; therefore, they do not receive instruction that nurtures their learning talents, culture, and emergent bilingualism. This course is designed to address the needs of the Culturally and Linguistically Diverse (CLD) and the Gifted and Talented (GT) learner. Upon completion of this course, students should be able to meet the approved standards for the English Language Learner Professional Development Pathway. In addition to ELL standards, this course is aligned with state gifted education standards.

**CUI 4450 Education and Psychology of Exceptional Children (3 Credits)**

Characteristics of students with moderate needs and state criteria used to determine eligibility for special education population.

**CUI 4451 Teaching the Exceptional Child (3 Credits)**

This course provides a broad overview of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional education needs. This course also explores the characteristics of students with various disabilities, the history of Special Education, The Individuals with Disabilities Education Act (IDEA) and its current implications, the Response to Intervention Model (RtI) and the Individualized Education Plan (IEP). Prerequisite: CUI 4450.

**CUI 4452 Low Incidence Disabilities and Behavior Intervention (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low-incidence disabilities including fragile X syndrome and Fetal Alcohol Syndrome, along with syndromes associated with chromosomal deletions. Implications for assessment and intervention are outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology are addressed. This class also addresses theories, research, effective practices, and background information needed to implement successful behavior intervention programs for whole classroom management and for students identified with behavioral needs. Prerequisites: TEP 4010 and CUI 4451.

**CUI 4453 Curriculum Adaptations and Assessments for Children with Disabilities (3 Credits)**

This course applies theories, research, effective practices, and background information for assessment for students with disabilities, monitoring student academic progress, and transition planning for students exiting K-12 schools.

**CUI 4455 Assessment of Students with Special Needs (3 Credits)**

Theories, research, effective practices and background information needed to develop, implement, analyze, and apply assessment data for mild/moderate-needs students.

**CUI 4457 Behavior Intervention (3 Credits)**

Theories, research, effective practices, and background information needed to implement successful behavior intervention programs for mild/moderate-needs students.

**CUI 4459 Curriculum, Collaboration, and Transitions in K-12 Schools (3 Credits)**

Knowledge, techniques to develop independent skills for K-12 moderate/mild-needs students and transitions across grade levels.

**CUI 4500 Elementary Literacy: Theory and Practice I (1-3 Credits)**

This course provides an introduction and overview to the many components that make up a quality balanced literacy program. During the course students will analyze current research and theory in reading and writing instruction. This course will use students' classroom placements to create a foundational understanding on which to build solid literacy philosophy as well as instructional ideas and strategies.

**CUI 4501 Elementary Literacy: Theory and Practice II (1-3 Credits)**

This course is an extension of Elementary Literacy I and concentrates on the continued development of theories and practical strategies for teaching literacy in diverse classrooms. This course will supply K-6 teachers with the skills to assess student abilities, select appropriate instructional strategies, and design effective instructional programs that lead to increased listening, speaking, reading and writing achievement of all children.

**CUI 4502 Elementary Science and Social Studies Methods for Cultural Linguistic Diversity (3-4 Credits)**

This course will enable students to develop a deeper understanding of science and social studies content and curriculum in the elementary classroom. Students will explore a range of instructional materials and develop teaching strategies with the guidance of state content standards and research on effective classroom instruction for culturally and linguistically diverse students. This course will revolve around discussion of key questions in the following eight areas: The Role of Social Studies and Science; Instruction; Standards; Content Knowledge; Curriculum Integration; Technology; Culturally Responsive Pedagogy; Sheltered Instruction. Course restricted to students in TEP program or instructor approval.

**CUI 4503 Elementary Math Methods for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course prepares students for mathematics instruction in elementary classrooms. We will study theories of learning, the development of children's mathematical thinking, and research-based instructional practices in mathematics. Students will solve mathematical problems using a variety of methods, practice giving math lessons, engage in continuous instructional improvement activities, grapple with issues of equity—race, class, gender, ability, and the intersections therein—as they pertain to math teaching and explore digital resources related to teaching math for understanding. Course restricted to students in TEP program or instructor approval.

**CUI 4504 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity I (3 Credits)**

This course is the first of a two-course study that will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4505 Mathematics across the Content Areas (2,3 Credits)**

In this class, prospective secondary teachers study fundamental mathematical ideas and how they apply to various real-world settings. For instance, students may explore the mathematics of gerrymandering and map projections. Students will also engage in mathematical practices such as argumentation and justification. Finally, students will learn about inquiry-based approaches to teaching that they can use in their secondary classrooms with their students.

**CUI 4506 Mathematics for Elementary School Teachers I (2,3 Credits)**

In this class, prospective elementary school teachers experience an in-depth look at the representations of rational numbers, including base-ten and decimal numbers, integers, fractions, and arithmetic operations on these sets. Problem solving is emphasized throughout. Students also learn about inquiry-based approaches to teaching that they can use in their classrooms with their students.

**CUI 4507 Mathematics for Elementary School Teachers II (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisite: CUI 4506.

**CUI 4508 Mathematics for Elementary School Teachers III (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisites: CUI 4506.

**CUI 4509 Mathematics for Middle School Teachers (3 Credits)**

Mathematics education for middle school teachers. Meets Common Core State Standards.

**CUI 4511 Secondary Literacy: Reading and Writing Across Content Areas I (3 Credits)**

This course is the first of a two-course study that is designed to give secondary Residents an introduction to best practices in content area literacy instruction for in 6-12 classrooms. In support of the instructional shifts presented by the Common Core State Standards, Residents will explore the rationale behind instructional strategies for literacy instruction in the content area classrooms, as well as examine tools and techniques for teaching students to become strategic readers and writers as they model their own thinking and scaffold students' use of strategies for content area literacy.

**CUI 4512 High School Mathematics from an Advanced Perspective (3 Credits)**

High School mathematics education. Meets Common Core State Standards.



**CUI 4513 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity II (3 Credits)**

This course is an extension of the Autumn quarter session and will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards, Next Generation Science Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4514 Secondary Literacy: Reading and Writing Across Content Areas II (3 Credits)**

This course is an extension of the Autumn quarter session. In this course, Residents will deepen their knowledge of the English language and linguistics, through an analysis of socio and psycholinguistics, as well as rigorous practice in grammar, syntax and semantics. As Residents gain a more practical understanding of the complexities of the English language, they will be better able to support their English Language Learners. This course addresses the following Common Core State Standards: L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking L3: Apply knowledge of language to understand how language functions in different context to make effective choices for meaning or style, and to comprehend more fully when reading or listening. W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**CUI 4521 Urban Education II: School, Student, Family and Community Influences on Student Learning (2-4 Credits)**

This course will consider how teachers are able to foster meaningful connections between the educational goals of the schools and the personal and cultural experiences of young people. Students will study the child in relation to family, school, and community, as well as the relationships between teacher and pupil. We will emphasize the cultural complexity of an urban society and pay special attention to ways that curriculum, language, and literacy affect school success.

**CUI 4527 Supporting English Language Learners and Students with Special Needs Across Content Areas (3 Credits)**

This course evaluates similarities and differences in theory, methods, approaches, and techniques in meeting the needs of diverse learners including English Language Learners, special needs, and/or gifted. Differentiated instruction, Sheltered instruction, and Response to Intervention (RTI) are key methodologies in meeting needs of diverse learners.

**CUI 4529 Foundations of Education for Culturally and Linguistically Diverse Learners (3 Credits)**

This course will examine the essential knowledge and orientations educators must possess to effectively meet the needs of culturally and linguistically diverse (CLD) learners through the analysis of historical, political, ethical, and legal foundations of language education in the United States. This course will explore the immigrant experience and the experience of CLD learners in schools in order to understand how the psychosocial aspects of the immigrant experience can impact second language learning. Course restricted to students in TEP program or instructor approval.

**CUI 4530 Second Language Acquisition (1-3 Credits)****CUI 4531 Language Development and Strategies for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course will evaluate methods, approaches, and techniques in language teaching. This course will also explore classroom strategies and practices for content-area instruction through sheltered instruction, and socio-cultural context of second language acquisition in U. S. public schools including how teachers can support bilingualism, multilingualism, biculturalism, and multiculturalism in the mainstream classroom. Furthermore, this course will explore the needs of special education and gifted culturally and linguistically diverse learners.

**CUI 4532 Culturally Responsive Pedagogy (3,4 Credits)**

This course examines the intricate web of variables that interact in the effort to create culturally responsive pedagogy. It examines the need and establishes a definition for culturally responsive pedagogy; and includes an examination of one's conception of self and "others;" conception of social relations; and conception of knowledge teaching and learning in a culturally diverse context. Furthermore, it cultivates the practice of culturally responsive teaching as well as explores the reality of implementing cultural responsive pedagogy in an era of standardization. In sum, this course helps practicing teachers acquire the dispositions, cultural knowledge, and competencies to adapt their curriculum and instructional skills for culturally responsive classroom practice.

**CUI 4536 Language and Cultural Issues in Assessment and Instruction (3-4 Credits)**

This course expands the educators' knowledge of the connection between data-based instruction and assessment. Educators assess student learning by utilizing strategies that provide continuous feedback on the effectiveness of instruction. Educators learn informal and formal assessment practices that promote student learning and achievement. Educators develop knowledge and understanding of initial assessment of culturally and linguistically diverse learners' skills and abilities in order to provide appropriate placement and instruction. Educators utilize native language tests to promote adequate placement/transition of students. This course also helps educators develop a framework to analyze and develop culturally responsive assessment practices in order to improve student achievement. Finally, this course integrates Response to Intervention (RTI) strategies to improve student assessment.

**CUI 4538 Literacy and Language Development for Culturally and Linguistically Diverse Learners (3,4 Credits)**

Attaining age-appropriate English literacy skills poses many challenges to culturally and linguistically diverse (CLD) learners. Educators must therefore develop proficiency in effective literacy instruction for CLD learners. Effective literacy instruction includes a repertoire of teaching practices designed to scaffold literacy and language across the content areas, and culturally relevant curriculum as an essential component to support the achievement of CLD learners. This course will focus on helping educators gain the necessary skills, orientations, and competencies to advance the literacy of CLD learners through linguistic and cultural knowledge.

**CUI 4540 Curriculum, Instruction and Assessment: Theory and Practice I (1-3 Credits)**

This course explores the theoretical underpinning and practical application of curriculum design. Students design their own curriculum unit aligned to standards, essential questions, big understandings, and social justice themes. Course restricted to students in TEP program or instructor approval.

**CUI 4541 Curriculum, Instruction, and Assessment: Theory and Practice II (1-4 Credits)**

In this course, apprentice teachers will explore the theoretical underpinnings and practical application of data and assessment. This course will build essential knowledge and skills in school and classroom assessments, research methodology, and equity in assessment practices. Students will design a series of assessments aligned to unit goals. Course restricted to students in TEP program or instructor approval.

**CUI 4542 Curriculum, Instruction, and Assessment: Theory and Practice III (1-4 Credits)**

This is the third and final quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations. Course restricted to students in TEP program or instructor approval.

**CUI 4544 Ed Psych: Exceptional Child (1-3 Credits)**

The focus of this course is on educating children and adolescents with special needs in the general education classroom. The intent is to enable future educators to better serve the needs of these children in their classrooms. Topics such as the special education process, information on specific disabilities, accommodations and modifications, behavior issues, mental health, and communicating with parents will be addressed.

**CUI 4600 History and Philosophy of STEM Education (3 Credits)**

The goal of this course is to help future Science, Technology, Engineering, and Mathematics (STEM) education leaders understand the historical trajectory of public education in relation to the larger sociopolitical forces of American history. Two premises guide this course: 1. Social and political conditions in society exert intense pressure on STEM fields and STEM education, which poses significant challenges to STEM education leaders. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4610 Learning & Teaching of STEM (3 Credits)**

In this course, students will be introduced to foundational research literature on learning and teaching in STEM education. The research introduced will focus extensively on theories of learning and how these theories are influencing P-16 STEM curriculum, instruction and assessment. The literature base introduced is foundational to research conducted in STEM education.

**CUI 4620 Research on Diversity, Equity, and Social Justice in STEM Education (3 Credits)**

The goal of this course is to help future STEM education leaders understand the current context of issues of diversity, equity and social justice in STEM education and explore its implications for access and opportunity for traditionally marginalized students. Two premises guide this course: 1. Social and political conditions in contemporary society exert intense pressure on STEM fields and STEM education. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4640 Improving STEM Instruction (3 Credits)**

For as long as the United States has implemented public education—well over 100 years—many features of schooling have stayed the same. Despite waves of curricular and policy reforms, widespread anxiety over student achievement (especially in comparison to other countries), and concerted efforts to “disrupt” education, many elements of teaching and learning persist. In STEM education, especially, scholars and practitioners have been advocating for the same things for decades: teaching for conceptual understanding, using rich tasks that encourage student collaboration, incorporating discourse in the classroom, and supporting students to engage in STEM practices like proof, argumentation, and the scientific method. We know that these things can support meaningful student learning. But most K-12 STEM classrooms are centered on memorization and standardized testing. Why is it so hard to change? The short answer: It's complicated. In this course, students will critically examine various instructional improvement efforts, identifying both the ways in which these efforts are potentially productive and potentially destructive. We'll juxtapose these efforts with relevant research on teacher learning and organizational change in order to critique reform efforts. Ultimately, students will become more critical consumers of instructional improvement efforts and will be better prepared to translate research into practice. Although STEM is the focus of this class, the overarching ideas of the course are applicable to many other subjects.

**CUI 4690 Field Experience: Curriculum & Instruction (3 Credits)**

This course provides students with an authentic field experience for those pursuing a degree in Curriculum & Instruction. Field Experience in Curriculum & Instruction is an off-campus, experience taken throughout the coursework plan. Field Experience is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Field Experience is a hybrid on-line and face-to-face seminar that is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practices. The Field Experience is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students engage in weekly experience seminars (either on-line or face-to-face) facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that educators are lifelong learners and regularly reflect on and adjust their practice.

**CUI 4700 Foundations of Education: Cognitive Theory I (3 Credits)**

Introduction to cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula.

**CUI 4710 Foundations of Education: Cognitive Theory II (3 Credits)**

Second course in cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula. Prerequisite: CUI 4700.

**CUI 4720 Discourse in the Mathematics Classroom (3 Credits)**

The study of discourse as it relates to mathematics teaching and student learning.

**CUI 4730 STEM and Instructional Technology (3 Credits)**

The goal of this course is to help students understand the role of technology in teaching and learning, particularly in Science, Technology, Engineering, and Mathematics (STEM) courses. Three premises guide this course: 1) Technology offers great potential for innovation in education, but it also can be dangerous if used inappropriately and indiscriminately; 2) Social and political conditions in society exert intense pressures on technology in STEM education, which poses significant challenges to STEM education leaders; and, 3) Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4740 Policy and STEM Education (3 Credits)**

In this course, students will be introduced to and explore a range of educational policies and how those policies have influenced and continue to influence Science, Technology, Engineering, and Mathematics (STEM) education. A particular focus of the class will be the underlying ideologies of policies that have had a strong influence on the development of curriculum and research in STEM education. Students will learn how to critique educational policies in general and policies that have influenced STEM education in particular. Students will also develop a policy brief that is specific to some area of STEM education that they will publicly disseminate.

**CUI 4991 MA Independent Study (1-10 Credits)****CUI 4995 Independent Research (1-10 Credits)****CUI 5980 Research as Problem Analysis (3 Credits)**

This course is the first of three culminating research courses for students in the Ed.D. in Curriculum and Instruction. This course is designed to guide candidates through the doctoral proposal process and introduce the initial stages of data collection and analysis.

**CUI 5981 Research as Intervention (3 Credits)**

This course is the second of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates finish collecting their data and analyze their data. This course will also introduce and develop the evaluation or analysis section of the doctoral paper and the beginning steps of the dissemination of the research project.

**CUI 5982 Applied Research (3 Credits)**

This course is the final of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates disseminate their project, reflect on their project, and defend their project. This course is specifically focused on writing the quasi-practical section of the doctoral paper and the dissemination of the research project to the community partner.

**CUI 5983 Defense of Research (1 Credit)**

This course will build on the “persistent problems of practice” and research questions identified in CUI: 5980, data collection and analysis in CUI 5981, and applied research skills in CUI 5982. By the end of the course you will be able to schedule and present your doctoral research project for defense. Completion of CUI: 5982 “Research as Applied Research” or permission of the instructor.

**CUI 5991 PhD Independent Study (1-10 Credits)****CUI 5993 Dissertation in Practice (1-4 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in C&I; must have completed C&I doctoral research courses (CUI 5980, CUI 5981, and CUI 5982).

**CUI 5995 Independent Research (1-10 Credits)**

## Special Education (SPED)

**SPED 4001 Teaching Individuals with Developmental Disabilities DD and Behavioral Disorders (5 Credits)**

This course will introduce students to the concepts and principles of behavior on which the discipline of applied behavior analysis was founded. Topics of study will include the history and dimensions of applied behavior analysis, defining and measuring behavior, procedures and factors related to behavior change, and the role of the basic principles of behavior (positive and negative reinforcement, punishment, stimulus control, and motivating operations) in establishing new behavior and decreasing problem behavior.

**SPED 4002 Teaching Individuals with Developmental Disabilities and Behavioral Disorders (4 Credits)**

This course focuses on the basic principles of assessment, instruction, and curriculum development; application of formal and informal assessment procedures for goal selection, formulating instructional plans, and adapting instructional materials to accommodate learning needs of students with developmental disabilities and/or behavioral disorders.

**SPED 4003 Advanced Concepts and Principles in Behavior Analysis (5 Credits)**

This course focuses on the definitions and characteristics of applied behavior analysis and the concepts, principles, and processes. Concepts related to ethics and behavior change procedures will also be discussed. The purpose of this graduate-level course is to provide students pursuing a BACB® credential with 45 hours of instruction in advanced content areas of philosophical underpinnings and concepts and principles as outlined by the coursework requirements for BACB® credentials. The course covers content from areas A & B from the 5th edition of the BACB®’s Behavior Analyst Task List®.

**SPED 4004 Single Case Research Design (5 Credits)**

The purpose of this course is to provide master's level students with 45 hours of instruction in the content areas of measurement, data display, data analysis, and single-case research experimental design and evaluation. This course describes the rationales for single-case research in applied settings. It will equip students to critique, design, and conduct single-case research for applied behavior analysis applications. The course covers content from areas C and D from the 5th edition of the BACB®'s Behavior Analyst Task List®.

**SPED 4005 Ethics in Applied Behavior Analysis (5 Credits)**

This course focuses on ethical and professional conduct in the field of applied behavior analysis. An overview of the profession of behavior analysis is addressed, including the history, foundations, and ethics of the field, as well as professional skills for ethical practice. During this course, we will specifically review the BACB's Compliance Code and disciplinary systems.

**SPED 4991 Independent Study (1-10 Credits)**

Independent study/research.

**SPED 5001 Multi-tiered Systems of Support (3 Credits)**

This course will provide (a) an overview of the historical, legal, and theoretical foundations of multi-tiered systems of support; (b) review the research and evidence-base of a multi-tiered system of support approach for behavior; and (c) explore the influence of behavior analytic procedures within a multi-tiered system of support.

**SPED 5002 FBA's and BIP's in Schools (3 Credits)**

This course will enable students to develop the skills needed for completing Functional Behavior Assessments (FBA), developing Behavior Intervention Plans (BIP), and applying behavior analytic principles to (1) implement the developed BIP, (2) monitor BIP implementation, (3) measure BIP effectiveness, and (4) collaborate with others to improve BIP implementation. Additionally, the course will focus on applying behavior analytic principles through a developmentally appropriate and culturally responsive lens.

**SPED 5003 Supervision and Management (3 Credits)**

This course focuses on supervision and management practices in the field of applied behavior analysis and related settings (i.e., clinics, schools). An overview of supervision is addressed, including foundations, ethics, and professional skills for both the supervisor and the supervisee. During this course, we will specifically review the BACB's standards for supervisory practices as they relate to improving and maintain the behavior-analytic, professional, and ethical repertoires of practitioners and facilitate the delivery of high-quality services to his/her clients.

## Teacher Education Prep (TEP)

**TEP 4010 Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities (2-4 Credits)**

This course serves as the foundation for understanding children with disabilities and dis/abilities, as well as the philosophies, laws and policies that support the students. To be responsive to the diverse strengths, needs, and experiences children bring to the classroom, educators need a foundational knowledge of special education and opportunities that can influence student learning. We emphasize a strengths-based perspective and provide pedagogy for supporting for all learners. We introduce the classroom teacher's role in understanding the Individual Education Program (IEP) process, designing lesson plans and inclusive practices based on differentiated and universal design learning instructional strategies and working collaboratively with families and interdisciplinary teams. In addition, we introduce potential commonalities of students with high-incidence disabilities, the history and legal aspects of Special Education and the Response to Intervention Model (RtI)/Multi-Tiered System of Supports (MTSS). Course restricted to students in TEP program or instructor approval.

**TEP 4520 Art Methods K-12 (3-4 Credits)**

Throughout this course, Apprentice Teachers will analyze the following essential questions about teaching and learning in the visual arts field: 1) What type of visual arts classroom environment best supports student learning and skill development in a 21st century classroom?, 2) How do the Colorado Academic Standards guide arts instruction?, 3) What is the role of descriptive feedback in the reflective practice of teaching and learning?, 4) How can visual arts instruction enhance positive-identity development for diverse learners?, and 5) How can visual arts educators use arts assessment in curriculum planning and to gauge student learning?.

**TEP 4590 Elementary Literacy Instruction I (3,4 Credits)**

This is the first of two elementary literacy classes. The purpose of Literacy Instruction I is to provide apprentice teachers with the research-based foundations of reading processes for diverse learners. Teacher candidates will be knowledgeable about the development of reading, the science of reading research, and its application to effective instructional practices within the language domains of reading, writing, speaking, and listening. Teacher candidates will learn how to plan and organize core literacy practices such as interactive read alouds and small group reading instruction in conjunction with Colorado Academic Standards and the Common Core State Standards. The National Reading Panel (NRP) summarized their findings in five components of reading instruction that will guide our work together: phonemic awareness, phonics, fluency, vocabulary development, and text comprehension. Course restricted to students in TEP program or instructor approval.

**TEP 4591 Elementary Literacy Instruction II (3-4 Credits)**

This is the second quarter of a twenty-week course focused on literacy with an emphasis on language, phonics, and writing. The purpose of TEP 4591 or Literacy Instruction is to provide teacher candidates with the research-based foundations and processes employed in skillful speaking, listening, reading and writing. Specifically, we will look at the building blocks of literacy that include phonics and language acquisition: phonology, morphology, and syntax and its application to reading and writing as we build from our reading emphasis the previous quarter. In this course, there will be a shift from literacy input (reading and listening) from the previous quarter to literacy output (writing and speaking). Further, at the end of the course, teacher candidates will reflect upon their literacy philosophy as we review key concepts and classroom strategies. Course restricted to students in TEP program or instructor approval.

**TEP 4592 Secondary Literacy Instruction I (3,4 Credits)**

This is the first quarter of a twenty-week course on literacy. The purpose of this course is to provide teacher candidates with the research-based foundations of literacy and cognitive processes employed in skillful reading and writing for effective secondary instruction. In this first course, teacher candidates will be knowledgeable about the stages of reading as well as student literacy development in reading, writing, speaking, and listening. Teacher candidates will practice recognizing and evaluating these skills on a micro level through a mini-case study of an individual student. Teacher candidates will learn how to plan, organize, and tailor literacy instruction in their specific content area using ongoing and summative assessment in conjunction with the Common Core State Standards/Colorado Academic Standards. Teacher candidates will develop the knowledge, skills and understanding of the science of reading as it applies to all students from a wide range of backgrounds. There is a special emphasis in this course on literacy instruction in urban, diverse, and multi-lingual settings. Course restricted to students in TEP program or instructor approval.

**TEP 4593 Secondary Literacy Instruction II (3,4 Credits)**

This is a literacy course for secondary-level English, math, science and social studies teacher candidates. In this course, there will be a shift of focus from literacy input (reading) from the previous quarter to literacy output (writing), and we will broaden our scope from analyzing one student at a time to assessing and addressing students' literacy needs in a whole-classroom environment. This quarter we will also examine outside influences – such as culture, language, and technology – on classroom literacy and how literacy practices and teaching methods can be adapted for multiple contexts. Throughout the course, teacher candidates will develop and reflect upon their literacy philosophy in terms of planning and instruction in a specific content area. Course restricted to students in TEP program or instructor approval.

**TEP 4600 Introduction to Secondary Methods (3-6 Credits)**

Provides general introduction to principles of effective secondary instruction curriculum design and assessment. Frequently covered topics include: design of classroom environments, comparison of different instructional practices, purposes for and approaches to assessment, comparison of middle and high school philosophies, introduction to instructional unit plan development, and theories of instructional approach and design. Course lays a foundation for more specialized subject-matter methods courses. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4610 English in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching English Language Arts at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4620 Social Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Social Studies at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4630 Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Science at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4640 Math in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Mathematics at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4650 Foreign Language Methods in K-12 Schools (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Foreign Language at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4690 Field Experience (1-12 Credits)**

Involves field experiences, including full-day teaching for 12 weeks in elementary or secondary school classroom and regularly scheduled seminar discussions with supervisor. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4691 Field Experience I (1 Credit)**

This is the first quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4540 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4692 Field Experience II (1 Credit)**

This is the second quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4541 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4693 Field Experience III (1 Credit)**

This is the final quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4542 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4781 Elementary Art Methods (3-6 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in elementary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4782 Secondary Art Methods (3-4 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in secondary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4991 Independent Study (1-10 Credits)****TEP 4995 Independent Research (1-10 Credits)****Child, Family School Psych Courses****CFSP 3991 Independent Study (1-10 Credits)****CFSP 4301 Professional, Legal and Ethical Issues in School Psychology (4 Credits)**

This course examines professional, legal, and ethical issues pertinent to working with birth to age 21 populations in school and community settings. Attention is focused on federal and state education legislation, special and regular education case law, and psychological practice case law. Professional issues and contemporary service models are reviewed, including an introduction to ethical issues, federal mandates, professional training, and roles and responsibilities. Students engage in casework discussion regarding delivery of assessment, intervention, and consultation services. Special emphasis is given to current mental health and education regulations and reforms. Differential issues facing school psychology professionals in urban and rural settings are discussed, and students become acquainted with a variety of legal and ethical issues affecting practice in public schools, private settings, and higher education. Students learn about ethical standards, reasoning processes, and conduct in applied settings. Prerequisites: None.

**CFSP 4302 Special Education & Gifted Education Legal Issues (3 Credits)**

This course is designed to provide students with foundational knowledge regarding the legal issues affecting special education and gifted education in early childhood and K-12 educational settings. Attention is focused on federal and state education legislation, special education case law and gifted statutes specific to Colorado. Consideration also is given to the interaction of ethical standards of practice as they relate to legal mandates and court decisions to meet the educational and psychological needs of all students, especially those with disabilities and twice exceptionalities. Students will be exposed to legal issues affecting practice in the public schools community agencies and early childhood environments. Prerequisites: None.

**CFSP 4303 Psychopathology: Prevention, Diagnosis, Treatment (4 Credits)**

This course is designed to provide students with knowledge of mental health disorders, the diagnostic criteria as well as culturally-relevant prevention and intervention strategies. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings. Using a strengths-based approach, prevention principles, curriculum, and policy agendas are discussed. Additionally, this course explores implications for school psychologists and other school-based practitioners working with those at risk for or suffering from mental health disorders. Prerequisites: CFSP 4322, 4323, 4324, 4340, 4343.

**CFSP 4304 Diversity in School and Community Settings (3 Credits)**

This course explores diversity in children and families, and the impact of culture on personal and family development. Emphasis is placed on the intersection of school and community settings' cultures and those of children and families, and how this affects learning and development for individuals and groups of children. Attention is given to students' cultures and cultural experiences, and how these affect the work they do with children and families in school and community settings. Prerequisites: None.

**CFSP 4305 Exceptionalities in Education: High Incidence in Disabilities (3 Credits)**

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports also are addressed. Prerequisites: CFSP 4310, 4311, 4312.

**CFSP 4306 Exceptionalities in Special Ed (3 Credits)**

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports are also addressed.

**CFSP 4308 Early Academic Competencies and Interventions (3 Credits)**

This course provides an overview of early language and literacy development across diverse settings and stakeholders, such as families, teachers/providers, programs, and communities. A comparative analysis of evidence-based early literacy strategies, environments, curriculum, and a review of current evaluation and instructional language and literacy practices for working with teachers, families, and young children are undertaken. Play-based and other informal methods of assessment and intervention are covered, including the integration of technology and strategies to promote early language and literacy with infants, toddlers and preschoolers in natural environments. Prerequisite: CFSP 4310; None for ECSE CERT Students.

**CFSP 4310 Early Childhood Development (3 Credits)**

This course focuses on early childhood development during, from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized. Prerequisites: None.

**CFSP 4311 Child and Adolescent Development (3 Credits)**

This course provides an overview of growth and development from age five through 21 years of age. We will explore theories and research in developmental psychology to provide a context for typical child development. Attention will be given to the social, emotional, cognitive, and biological development of the child, with a particular focus on attachment as a framework for healthy development in these domains. Case studies will allow for the application and integration of child development theory and counseling practice. Prerequisites: None.

**CFSP 4312 Learning Theories & Behavioral Analysis (3 Credits)**

This course examines learning theories and applied behavioral principles. Students learn to apply theories to case studies and fieldwork relating to children along the developmental spectrum and across cultural contexts. Students work to investigate and analyze concepts relating to learning and behavior at home and school, and to develop positive behavioral support and effective learning plans. Prerequisites: None.

**CFSP 4315 Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (3 Credits)**

This course provides students with an understanding of the roles & responsibilities of an Early Childhood Special Education Specialist and Special Education Generalist. This course serves as the foundation for students who are interested in pursuing a profession in special education and working with children with disabilities from birth to 21 years. This course includes the ethical and professional practice standards and understanding of the multiple roles and complex situations across wide age and developmental ranges. This course also briefly covers the historical laws and legal issues associated with the profession. The course also highlights why special educators engage in professional activities and learning communities that benefit individuals with developmental disabilities and their families, colleagues, and their own professional growth. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Prerequisites: None.

**CFSP 4316 Infant through Adolescent Development (3 Credits)**

This course focuses on early childhood development from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized.

**CFSP 4317 Topics in Special Education: Learning Differences (1-3 Credits)**

This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom. Prerequisites: None.

**CFSP 4318 Pharmacology of Addictive Behaviors I & II - Applications for schools (3 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors with a focus on adolescent development. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors with an emphasis on adolescent development.

**CFSP 4319 Counseling Adolescent Addictive Behaviors (3 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and non-chemical addictive behaviors in adolescents. Gain familiarity with major addiction treatment models and their underlying assumptions in order to generate comparative critiques. Examination of the major treatment approaches to substance abuse and their accompanying theories of etiology with a focus on adolescence. Explore meaning of addiction and abuse in relation to related non-substance use compulsive behaviors. Develop basic assessment skills to identify and differentiate substance abuse from other clinical disorders within the school environment. Develop an understanding of the interpersonal function of substance abuse and related addictive behaviors as well as an understanding of the skills and attitudes that underlie effective addiction treatment in adolescents.

**CFSP 4320 Early Childhood Assessment: Formal & Standardized (3 Credits)**

This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. Assessment will focus on normed-referenced, standardized measures of cognitive, communication, emotional, social, sensory and physical motor development. Students will gain experience in administering assessments to young children, interpreting assessment results, writing assessment reports, and reporting the results to families and professionals. A variety of assessment tools will be studied for their appropriate use with young children and their families. Prerequisite: CFSP 4310.

**CFSP 4321 Psycho-educational Assessment I (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of cognitive functioning in children and adolescents. This course will include (a) review of historical and current theories of intelligence, (b) review of psychometric constructs relevant to the measurement of cognitive functioning, (c) practice in the administration and scoring of widely used measures of cognitive functioning, (d) practice in the interpretation of test scores, (e) practice in the preparation of written reports summarizing test results, (f) exploration of multicultural issues related to assessment, and (g) review of the clinical application of psychological testing in school and clinical settings. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting cognitive measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. Learning to administer and interpret cognitive assessments takes many hours of practice. Students should be aware of this and budget their time accordingly.

**CFSP 4322 Psycho-Educational Assessment II (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of academic functioning in children and adolescents. The course is designed to train students in identification and assessment for academic difficulties. Recent paradigm shifts in general and special education, fueled by federal and state law, are calling for school personnel, particularly school psychologists, who have the knowledge, skills, and leadership competencies necessary to promote better academic assessment and intervention practices for all students. The role of school psychologists is expanding and diversifying. In an era that emphasizes universal prevention and swift early intervention at the first sign of difficulty (i.e., MTSS), school psychologists may be among the best educational professionals for preventing and intervening when children experience academic difficulties. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting achievement measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. The readings and the practical work assignments required to master the techniques covered in this course are time-consuming and demanding. Students will be expected to learn the formal scoring systems used for each instrument and the theory underlying the use of these techniques. Learning to administer and interpret academic assessments takes many hours of practice. Students should budget their time accordingly.

**CFSP 4323 Psycho-Educational Assessment III (3 Credits)**

This course is the second of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Woodcock Johnson Scales. Nontraditional forms of assessment, as well as adaptive behavior measures, are also covered. Integrating results of assessments with other data to provide effective educational recommendations continues to be an emphasis. The focus of the class is on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4312, 4322.

**CFSP 4324 Psycho-educational Assessment IV (3 Credits)**

This course is designed to provide students with knowledge of the major approaches to assess a school-aged student's social and emotional status. Instruction includes underlying theories, use and interpretation of interviewing techniques, observation methods, objective behavior ratings, self-report measures, sociometric procedures and selected projective measures. Emphasis is placed on the integration and interpretation of multimethod, multisource and multisetting data to improve diagnostic accuracy, and the use of assessment results in developing effective intervention strategies. Students learn to incorporate such assessment information using case studies. In addition, students develop skills in writing case reports and in making effective presentations of social-emotional assessment results. Consideration is given to contemporary issues in the assessment of children's social emotional functioning. Lab fee required. Prerequisites: CFSP 4310, 4311, 4322, 4323.

**CFSP 4326 Early Childhood Assessment: Informal & Play-Based (3 Credits)**

This course is designed for students to learn informal and play-based assessment processes for young children (birth-6 years) using a variety of non-standardized, informal and play-based assessment methods. The entire assessment process, including screening, evaluation, interpreting results, writing an integrated report, and providing feedback to families and professionals, will be the focus. Assessment measures will be examined with consideration for when and why specific instruments should be used, in addition to the benefits and disadvantages of the instruments. Students will be trained in-depth in the administration and interpretation of a variety of instruments for assessment of the whole child including the cognitive, language, social-emotional, and sensorimotor developmental domains. Prerequisite: CFSP 4310.

**CFSP 4330 Family-School Partnering and Consultation (3 Credits)**

This course is designed to familiarize educational, mental health, and early childhood service providers with essential attitudes, approaches, and actions necessary to form successful family-school-community partnerships that can foster development and learning, especially for children with disabilities. Ecological, family systems, and family-centered theory and principles serve as the foundation for working collaboratively with families from diverse cultural and social backgrounds within school and community settings. Students gain skills in family interviewing; consultation to identify family strengths, needs, and resources; collaborative problem-solving; and multi-systemic learning. Evidence-based family involvement, education, and intervention strategies contribute to positive family-school partnering relationships are reviewed within a multi-tiered, school-based service delivery framework. Prerequisite: CFSP 4332; None for ECSE Students.

**CFSP 4331 School and Organizational Consultation I (3 Credits)**

This course is designed to acquaint students with current directions in school and organizational consultation. Key principles of successful system-wide prevention, intervention and evaluation are covered. The importance of maintaining an ecological perspective in organization consultation activities is stressed.



**CFSP 4332 School and Organizational Consultation II (3 Credits)**

This course builds on content covered in School and Organizational Consultation I. It is designed to acquaint students with current directions in classroom management and school-based consultation. Covered are issues related to consultant and consultee characteristics, consultation practices and processes, models and stages of consultation, facilitating desired outcomes in consultation, and evaluation of consultation outcomes. Special emphasis is also given to problems of classroom management and collaboration with parents, teachers and other educational and community personnel. Case analysis and practice are required.

**CFSP 4335 Infant & Family Interventions (3 Credits)**

This course will describe various models for intervention with infants and toddlers with disabilities, emphasizing intervention within natural environments. Working with children and families in home, childcare, and other community settings will be emphasized and contrasted with intervention in more clinical settings. Students learn how to consult with parents and community professionals in providing coordinated transdisciplinary services when working with children in home and community settings. All areas of development will be addressed. Field experiences with children and families are expected to practice the skills addressed in class. Families will be asked to share their experiences to enable students to gain the "human" side of theory and practice. Prerequisites: None.

**CFSP 4336 Preschool Interventions (3 Credits)**

This course covers early childhood interventions applicable within community, preschool and home environments. A hierarchy of intervention strategies is addressed including universal, targeted, and intensive approaches. There is a focus on building supportive networks, routine-based intervention strategies, and collaboration to enhance family resources. Students review empirically validated early interventions and curriculum for young children exhibiting both normal and delayed development. Prerequisite: CFSP 4310, 4312; None for ECSE CERT Students.

**CFSP 4337 School Age Academic Competencies and Interventions (3 Credits)**

The purpose of this course is to review current theories of learning disability and practices that can support the diverse learning needs of school-aged students with and without disabilities. An integrated response to intervention model will be reviewed to identify difficulties, delays, and disabilities in the domains of literacy (oral, writing, speaking, listening), mathematics, and self-regulation. Students will learn to: a) evaluate differentiated instructional environments and adaptations that can support learning; b) employ focused assessments to identify academic strengths and weaknesses; c) formulate instructional hypotheses and learning goals; and d) link assessment results to evidence-based intervention approaches or instructional strategies designed to address phonemic awareness, decoding/phonics, reading fluency, listening/reading comprehension, spelling, written expression, vocabulary, mathematical calculation, mathematical problem-solving, and study/organization/test-taking skills. Effective practices will be reviewed to reduce learning barriers and increase learning supports across school, home, and community settings. Students will collaborate on the development of instructional hypotheses and learning goals that respect cultural diversity and language differences and will develop plans to monitor instructional fidelity and students' progress over time. These goals are accomplished through critical readings, classroom discussion, homework assignments, demonstrations, modeling, video analysis, and practice with hypothetical and authentic cases referred for learning and academic issues. Prerequisite: CFSP 4312.

**CFSP 4338 Exceptionalities in Education: Low Incidence Disabilities (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low incidence disabilities such as blindness/visual impairment, deafness/hearing impairment, deaf blindness, traumatic brain injury, Fragile X syndrome, Fetal Alcohol Syndrome, traumatic brain injury, and syndromes associated with chromosomal deletions. Implications for assessment and intervention will be outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology will be addressed. Community experts on specific disabilities will be used as guest lecturers. Prerequisite: None.

**CFSP 4339 Introduction to Play Therapy (3 Credits)**

This course examines the history and theoretical bases of major theories of play to enhance children's social-emotional and adaptive functioning. Child-centered, interpretive, and structured play therapy models are reviewed. Information is covered regarding preparation, selection of materials and toys, playroom characteristics, facilitative responses, and how to adapt play therapy in school, home and clinical settings. The play therapy process is illustrated from the initial referral and contact through termination, including observing and responding during sessions, facilitation and interpretation, therapeutic limit setting, and group play therapy strategies. Case studies, role play, video and script analysis are incorporated as is brief play therapy and applications with special populations. Efficacy, evaluation and future areas for professional development are reviewed. This course is designed as an introductory experience to prepare students for further supervised practica in play therapy. Prerequisite: CFSP 4310.

**CFSP 4340 School Mental Health Counseling I (4 Credits)**

School Mental Health Counseling I is designed as a foundational introduction to major theories behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn developmentally informed and empirically driven individual and group counseling theory. Ethical guidelines are reviewed. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling II, a theoretical class that incorporates in-depth analysis of counseling theories to individual and group cases and a integrative approach to bridge the research to practice gap.

**CFSP 4341 School Mental Health Counseling II (4 Credits)**

School Mental Health Counseling II is designed as an introduction to discrete techniques behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn research-based counseling techniques and practical skills within a multi-tiered system of support. Consideration is given to integrative counseling approaches and differences between individual and group processes. These goals are accomplished through instruction and experiences that include examination of research, analysis and transcription of case studies, demonstrations, modeling, in-vivo practice, self-reflection and evaluative feedback. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling III, an advanced class that incorporates in-depth analysis of applying counseling theories to individual and group cases, as well as supervised counseling experience.

**CFSP 4342 Crisis Intervention and Prevention (3 Credits)**

This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings. Prerequisites: CFSP 4301, 4304, 4310, 4311, 4340, 4343.

**CFSP 4343 School Mental Health Counseling III (2 Credits)**

School Mental Health Counseling III is designed as an advanced counseling application class that incorporates supervised counseling experiences to improve interpersonal, emotional, and social functioning in young children to adolescents. Students learn to design, deliver, and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support.

**CFSP 4349 School Psychology Practicum I (2 Credits)**

Taken during the first year of entry, the Practica is a supervised initial year field experience designed to expose students to a variety of home-, community- and school-based settings that serve families with children who have developmental and special needs, and in the CFSP Clinic. Each week for up to four hours, students are expected to attend, observe, and participate in a range of site-specific team meetings and services offered to families and children. For the MA in Educational Psychology degree, students, during the fall or winter quarter, identify, develop and initiate a research project with input from the faculty. The MA project culminates during the fourth quarter (summer) and serves as the final project in lieu of a comprehensive exam. Prerequisites: CFSP 4301, 4304, 4349 - Must pass all prior quarters as listed in the handbook.

**CFSP 4351 School Psychology Practicum: Clinic Assignment (1-3 Credits)**

CFSP Clinic is a supervised field experience in the Morgridge College of Education's Counseling and Educational Services Clinic. Through all experiences, Clinic students will work with students and families within the zero to college age range. Casework may include: interview, assessment, data analysis, report writing for different audiences, diagnostics, data presentation, intervention, and consultation for a variety of psychoeducational and developmental concerns of children and families. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4351 - prior quarters.

**CFSP 4353 School Psychology Practicum II (2 Credits)**

This is a 500 hour supervised field experience taken after the successful completion of core courses and Practica I experience. Practica is considered a critical professional transition year to help consolidate learning and professional competencies in preparation for a subsequent Internship. Students work throughout the year with Clinic Faculty and a licensed Field Supervisor within the University of Denver psycho-educational clinic and infant, preschool, elementary, middle or high school settings and also attend weekly Practicum seminars or individual supervision sessions with a University Faculty member. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, continued professional development pertinent to the successful practice of School Psychology in urban and rural settings. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4353 - prior quarters.

**CFSP 4354 School Psychology Advanced Practicum (1 Credit)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisite: PhD students only; Pass first year courses and CFSP 4353.

**CFSP 4355 School Psychology Internship - EdS (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4356 School Psychology Pre-Doctoral Internship (4-8 Credits)**

Meets 12-month internship requirement in school psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CFSP 4357 Early Childhood Practicum (1-4 Credits)**

This course provides students with a field experience in an Early Childhood environment for students who are interested in pursuing a profession in Early Childhood Special Education. Field Practicum in Early Childhood Special Education is an off-campus, 600-hour minimum supervised experience taken throughout your coursework. Field Practicum is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Each student is required to successfully complete 3 practica; an infant/toddler, (Birth to 3 years) a preschool (3-5 years) and an early elementary focused (Kindergarten through 3rd grade). Practicum seminar is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practice. The field practicum is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students work with a licensed Field Supervisor. Students will be placed in infant, preschool, elementary school settings. During practicum, students provide direct and indirect services that support children and/or families in a variety of settings. All students attend weekly practicum seminars facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Restricted to ECSE students only.

**CFSP 4359 School Psychology Pre-Doctoral Internship (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4360 Doctoral Seminar in School Psychology (3 Credits)**

Current topics and/or controversies in the profession of Child, Family and School Psychology are addressed in an advanced seminar format. Topics vary by instructor and year and may address current issues in research, theory, policy development, and/or clinical practice.

**CFSP 4361 Supervision in School Psychology (2 Credits)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisites: PhD Students only; CFSP 4351, 4353.

**CFSP 4363 School Psychology Program Development and Evaluation (3 Credits)**

This course focuses on theory and practice of program development and evaluation in school and community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to collaborate on a comprehensive evaluation of a specific educational, health, or mental health program. Prerequisites: RMS 4910, CFSP 4332.

**CFSP 4365 School Psychology Terminal Internship - EdS (1-8 Credits)**

Meets 9-24 month internship requirement in school psychology. Prerequisites: Completion of all Practica and Program Permission. Students can only enroll in this course if they're also enrolled in CFSP 4355.

**CFSP 4369 School Psychology Pre-Doctoral Terminal Internship (1-8 Credits)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 2000 clock hours of supervised field experience across an academic year in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. The student will be closely supervised by a licensed psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisites and Restrictions: Students must be enrolled in the CFSP doctoral program. They must have successfully completed Practicum I, Practicum II and Advanced Practicum. Additionally, they must have successfully passed comprehensive exams and dissertation proposal. All other students must obtain instructor permission. Corequisite: CFSP 4359.

**CFSP 4991 MA Independent Study (1-10 Credits)**

This course allows MA or EdS Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 4995 Independent Research (1-10 Credits)**

This course is for students whose program requires completion of a masters level thesis.

**CFSP 4999 Advanced Seminar in School Psychology (1-3 Credits)**

This course is designed as an advanced topical seminar in which students will focus on the professional literature and research relevant to important topics in the field of School Psychology. There will be analysis and discussion of these advanced topics with consideration of the implications for research and practice in School Psychology. Required meeting time and assignments would be commensurate with number of credits (Repeatable). Prerequisite: Instructor Permission.

**CFSP 5991 PhD Independent Study (1-10 Credits)**

This course allows PhD Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 5995 Independent Research (1-20 Credits)**

This course is for PhD Child, Family, and School Psychology students engaged in completing their doctoral dissertation. Advisor permission required.

**Curriculum and Instruction Courses****CUI 4020 Introduction to Curriculum (3 Credits)**

Introduces curriculum theory and curriculum as a field of study; includes study of issues such as standards, cognition, diversity, ecology, and social justice, among others.

**CUI 4021 Models of Curriculum (3 Credits)**

Reflects on ways various curriculum orientations may resolve modern issues or problems, with students' independent pursuit of one or two orientations in depth; orientations examined include cognitive pluralism, developmentalism, rational humanism and reconceptualism, among others. Recommended prerequisite: CUI 4020.

**CUI 4022 Curriculum Theory into Practice (3 Credits)**

Helps students move from theoretical concepts and decisions involved in curriculum development to actual construction of curricula; survey of potential components encompassed in a variety of curricula followed by participation in designing a curriculum as a member of a student team; final facet requires students to develop a curriculum. Prerequisites: CUI 4020 and 4021 or instructor's permission.

**CUI 4027 Implementing Curriculum: A Practicum (3 Credits)**

Opportunity to experience authentic role of curriculum on site; work at the Denver Zoo, the Denver Museum of Nature and Science, other museums and school sites; to develop and implement curriculum.

**CUI 4031 Teaching and Learning (3 Credits)**

This course builds the biological and contextual foundations for learning, including brain and cognitive development theory. The course also helps students build a framework for culturally responsive classroom management, including rituals, routines, and relationships with students and families. Students apply cognitive development theory and equitable classroom management strategies to analytical case studies. Course restricted to students in TEP program or instructor approval.

**CUI 4032 Analysis of Teaching (3 Credits)**

Provides a systematic introduction to the research base that characterizes effective practice and to the array of research methods that can be employed to study teaching and teacher development.

**CUI 4033 The Practice of Teaching (3 Credits)**

Course explores personal, conceptual, and empirical understandings of "teaching practice." Topics addressed have included: metaphors for teaching practice, best practices for equity and social justice, professional development practices.

**CUI 4034 Curriculum & Cultural Context (3 Credits)**

This course will address the influence of cultural, political, sociological, and economic factors on curriculum at the instructional, situational, societal, and ideological levels. Students should be interested and willing to explore these issues through readings and discussion. We will be exploring various perspectives, including our own, which inform the discussion on this critical area of education.

**CUI 4035 Critical Perspectives in Education (3 Credits)**

In this course, students will examine issues related to democracy, power, and privilege in public education. Specifically, students will learn about how anti-democratic groups are working to undermine public education in the U.S. Students will explore White privilege, racism, classism (and other "isms") and the impact they have had and continue to have in public school settings, particularly at schools that serve historically marginalized and oppressed students. Theoretical frameworks such as Critically Relevant Teaching and Critical Race Theory will be introduced in this class as well.

**CUI 4039 Transformational Teaching and Learning (3 Credits)**

This course takes an exploratory approach to the analysis of transformation teaching and learning. It asks questions such as "What are effective teaching and learning environments?" "For whom and under what circumstances?" "How can we create such environments?" We will explore how patterns of activities in the classroom can be designed to achieve simultaneously all of the major goals of educational reform. The term classroom is not restricted to the physical classroom space but "classroom" in the sense of the organized instructional activities that can extend outside of the school building into the community.

**CUI 4041 School and Curricular Reform (3 Credits)**

A look into school reform movements, why most fail and only a few succeed.

**CUI 4043 Development of Technology Enhanced Educational Environments (3 Credits)**

Utilizing emerging Learning Theories and complex Instructional Design Theories, students will move into advanced educational web page development including designing with style sheets and layers. Several customized technology mediated lessons or professional projects will be created for use in practice. Various tools, designed to enhance learning environments, will be explored.

**CUI 4046 Technology Leadership (3 Credits)**

Explores the role of ethics, values, social, legal, and power issues associated with technology in education. Analyzes how technology is transforming learning, equitable distribution of information, and the implications for providing optimal education to diverse learning populations.

**CUI 4047 Humanizing Pedagogies (3 Credits)**

This course will provide a foundation in the conceptualization, design, and implementation of a humanizing pedagogy. A humanizing pedagogy is a "revolutionary approach to instruction that ceases to be an instrument by which teachers can manipulate students, but rather expresses the consciousness of students themselves" (Freire, 1970, p. 51). Students in this course will apply their knowledge of humanizing pedagogy to specific content areas, practice, and research through the tenets of a humanizing pedagogy. Moreover, students will explore humanizing literacy and math as fundamental human rights that afford access and equity to historically marginalized communities.

**CUI 4050 Research Seminar: Conducting Systematic Reviews (0-3 Credits)**

The Curriculum and Instruction (C&I) Research Seminar: Conducting Systematic Reviews (CUI 4050, 3 credits) is the first of a series of courses for doctoral-level students in the Curriculum and Instruction Program. It is also available to students in other programs who would like to learn how to complete a systematic literature review, as well as think about identifying a research problem to address and research purpose.

**CUI 4051 Seminar in Dissertation Organization and Design (1-5 Credits)**

Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

**CUI 4058 Teacher as Researcher (3 Credits)**

Emerging philosophical and methodological issues that arise when school practitioners undertake research within their own sites; range of research traditions including quantitative, statistical research and qualitative methodologies; mastering relevant skills and accessing resources for students to be better prepared to conduct their own inquiries and understand and solve problems.

**CUI 4130 Philosophy of Education (3 Credits)**

Focuses on 3-4 philosophers and examines the contributions their philosophical ideas have on education. Philosophers studied have included John Dewey, Cornel West, Nel Noddings and Maxine Greene.

**CUI 4131 Spirituality in Education (3 Credits)**

This course will explore the role of spirituality in education from both the student and educator point of view through an examination of the big questions that are held close to the heart; the ones that guide us toward meaning making in the world. The primary goal of the course is to plumb the depths of spirituality, a deep sense of inner meaning making, that calls us toward a particular profession. The course will focus on the interface between spirituality in education through the lenses of curriculum and instruction.

**CUI 4153 Practicum: Curriculum and Instruction (0-5 Credits)**

Designed to fit the educational needs of the individual student who may choose from a wide variety of practicum (internship) experiences, including teaching, curriculum development, museum internships or research projects in curriculum and instruction on or off campus. In the case of taking on a paid position, students should consult the Office of Internationalization about their visa status and requirements. Students should work with their advisor before they plan to register in order to get this course in the class schedule when it will be needed.

**CUI 4155 Special Topics (1-10 Credits)**

Special topics in the field of education.

**CUI 4160 Race, Class and Gender in Education (3 Credits)**

Ethnicity, Class & Gender in Education applies the concepts and theories of social science disciplines - sociology, social psychology, anthropology, historical perspectives and philosophical orientations - to the inclusive examination of the issues of racism, classism, sexism, and homophobia in education. This course seeks to conceptualize ethnicity, gender and social class as interactive systems, not as separate and independent variables, that impact students, teachers, school systems and the educational enterprise. We examine educational systems and practices that historically have disadvantaged women and peoples of color and discuss strategies and techniques for empowerment of the members of these groups.

**CUI 4170 Engaging Learners through the Arts (3-5 Credits)**

This seven day institute is designed to engage participants in a challenging exploration of the creative process through workshops with professional artists in the disciplines of dance, visual arts, creative writing, music, and theatre, and to provide a greater understanding of the theory and practical applications of school reform.

**CUI 4172 Aesthetic Foundation in Education (3 Credits)**

Educational enterprise from aesthetic viewpoints; examination of a number of aesthetic theories and exploration of implications for curriculum, teaching, and evaluation.

**CUI 4180 History of Education in the United States (3 Credits)**

Traces historical context and development of K-12 schools in the United States from initial discovery of North and South America by Europeans to the present; understanding through examination of central issues that strongly influenced our current educational systems - evolution of schools, religion, social and political reform, women's issues, nationalism and ethnicity, industrialization of the nation and world.

**CUI 4310 Supporting Apprentice Teachers (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn as they learn to create culturally responsive classroom environments and to address the strengths and needs of all students particularly Culturally and Linguistically Diverse (CLD) Learners and students in Special Education. Topics addressed include mentor support for apprentice teachers' planning, teaching of reading and writing, applying a teacher evaluation framework, designing and interpreting formative and summative assessment, using data to inform instruction and differentiation for ELLs and GT identified students.

**CUI 4311 Supporting Apprentice Teachers II (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing unit and lesson plans, literacy (specifically reading), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4312 Supporting Apprentice Teachers III (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing formative assessment plans, literacy (specifically writing), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4313 Supporting Apprentice Teachers IV (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about using data to inform instruction, differentiating instruction for English Language Learners and Gifted and Talented identified students, and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4400 Nature and Needs of Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of 1) conceptual foundations and definitions of giftedness, 2) how intelligence, creativity, and non-intelligence factors are related to giftedness, 3) the nature, development, types, and needs of gifted individuals, 4) principles and issues in the identification of gifted individuals, and 5) the major issues and tensions in the education of gifted and talented individuals. Lectures, discussions, and other class activities and assigned readings and projects will include topics such as the history and nature of the giftedness construct; theories of intelligence and creativity and their relationship to conceptions of giftedness; types of giftedness; the diversity of gifted individuals and their personal and educational needs; the role of identification in the education and development of gifted children and youth; and purposes and perspectives in gifted education.

**CUI 4401 Psychological Aspects of Giftedness (3 Credits)**

The psychological development of gifted children is examined through a study of current theories, models, research, and case histories. Understanding of psychological development creates a foundation for applications and practices that nurture the psycho-social-emotional development of gifted individuals. Specific topics include the psychological nature and needs of the gifted; perfectionism, stress, and underachievement; special issues for gifted boys and gifted girls; highly gifted; and pertinent theories of psychological development. Emphasis is placed on synthesis of theories and application to specific situations.

**CUI 4402 Curriculum for Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of the conceptual foundations in the design and development of curriculum for gifted and talented students. Includes theories, models and processes for curriculum modification and curriculum design; strategies for adapting educational content, process, product, and learning environment based on the educational characteristics and needs of gifted learners; and curriculum design and development approaches that are effective in the intellectual and personal growth of gifted and talented learners. Content in this course is aligned with appropriate instructional strategies and techniques recommended for use with gifted and talented learners. Lectures, discussions, class activities, assigned reading and projects include topics such as a general overview of curricular principles and perspectives; critical analysis of general curriculum; issues of diversity in curriculum development and modification including cultural congruence; recommended models of curriculum development for gifted and talented learners; and national trends in gifted education.

**CUI 4403 Instructional Strategies for Gifted Learners (3 Credits)**

This course provides a basic understanding of how to adapt curriculum for gifted learners through various instructional strategies. Strategies studied include: acceleration, enrichment, differentiation, compacting, grouping, independent study, and service learning. By selecting instructional strategies based on assessed learner needs, educators can reach many types of gifted learners in their classrooms including gifted students of poverty and gifted learners of cultural and ethnic diversity. The objectives of this class are that participants: know about and be able to define instructional strategies that meet assessed academic and affective needs of gifted learners and be able to adapt curriculum for gifted learners using learned instructional strategies.

**CUI 4404 Twice-Exceptional Students (3 Credits)**

The purpose of this course is to acquaint the student with the various areas of exceptionalities typically encountered with gifted students and to provide classroom related techniques to assist the teacher in identifying and working with twice-exceptional children in an effective manner. Environmental, behavioral, motivational, emotional and educational needs are addressed. Legal responsibilities, parent communication and staff development will be emphasized.

**CUI 4405 Practicum in Gifted Education (1-3 Credits)**

Students wishing to earn credit for the Practicum in Gifted Education must complete an experience in three of the five areas (Teaching, Assessment, Administration, Research, or Policy). Students must submit a Practicum Proposal outlining the intended practicum experiences. This Proposal must be approved by the practicum faculty supervisor when the practicum experiences are begun.

**CUI 4407 Current Issues in Gifted Education: Identification (3 Credits)**

This course focuses on the screening and selecting of gifted and talented students. It is designed for practicing professionals - teachers, counselors, psychologists, and administrators - who must make decisions about the identification and serving of gifted and talented students. Course uses multiple assessments, both quantitative and qualitative, to identify gifted students within an increasingly diverse population (including culturally- and ethnically-diverse, high-potential, linguistically-different students with unique affective needs as well as high-potential economically-disadvantaged students). Students will use data to diagnose educational needs, prescribe appropriate educational strategies and to incorporate appropriate identification strategies for identifying gifted and talented students. Legal responsibilities and parent communication as well as staff development are emphasized. Students are required to develop an identification model based on relevant theory and current practices to be used in their particular setting. Enforced Prerequisites: CUI 4400 with a minimum grade of C- OR CUI 4401 with a minimum grade of C-.

**CUI 4408 Creativity: Theory & Practice (3 Credits)**

The essence of innovation is creativity, in thought, process and outcome. Classic and current theories provide a foundation for analysis of the concept of creativity. This course is designed to provide participants with an understanding of 1) the conceptual foundations and definitions of creativity; 2) how intelligence, creativity, and non-intellective factors are related to the constructs of giftedness; 3) documented brain research underlying exceptional cognition and/or creativity; 4) principles and issues in the identification and appropriate programming for creative individuals; and 5) the multiple perspectives and manifestations of creativity. Salon discussion groups, lectures, class activities and assigned readings and projects focus on the history and nature of the construct of creativity, theories of creativity, the role of innovation and transformation, assessment and measurement tools, environmental support of the creative process and creativity, and teaching and learning applications.

**CUI 4410 Prog Dev/Ldrshp/Comm Gifted Ed (3 Credits)**

This course emphasizes the concepts and practices involved in development and management of school- and district-based programs for the special education of gifted and talented children and youth. The course leads to in-depth understanding of program components and systems, program planning and evaluation, program leadership, advocacy in gifted education, and communications. In addition, emphasis is placed on planning and development of staff development in relation to gifted children. This course includes extensive in-class discussion and field applications.

**CUI 4411 Wkshp: Gifted & Talented Educ (1-3 Credits)**

This blended course is designed to provide participants with an overview of the education of gifted and talented students. Areas of focus within the course include definitions of gifted and talented learners, gifted learner characteristics, educational/academic and affective/psychosocial needs, common identification methods, and research-based instructional strategies for gifted learners. Course restricted to students in TEP program or instructor approval.

**CUI 4412 Culturally and Linguistically Diverse Learners in Gifted Education (3 Credits)**

Culturally and Linguistically Diverse Learners have inequitable access to gifted programming, curricula and services; therefore, they do not receive instruction that nurtures their learning talents, culture, and emergent bilingualism. This course is designed to address the needs of the Culturally and Linguistically Diverse (CLD) and the Gifted and Talented (GT) learner. Upon completion of this course, students should be able to meet the approved standards for the English Language Learner Professional Development Pathway. In addition to ELL standards, this course is aligned with state gifted education standards.

**CUI 4450 Education and Psychology of Exceptional Children (3 Credits)**

Characteristics of students with moderate needs and state criteria used to determine eligibility for special education population.

**CUI 4451 Teaching the Exceptional Child (3 Credits)**

This course provides a broad overview of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional education needs. This course also explores the characteristics of students with various disabilities, the history of Special Education, The Individuals with Disabilities Education Act (IDEA) and its current implications, the Response to Intervention Model (RtI) and the Individualized Education Plan (IEP). Prerequisite: CUI 4450.

**CUI 4452 Low Incidence Disabilities and Behavior Intervention (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low-incidence disabilities including fragile X syndrome and Fetal Alcohol Syndrome, along with syndromes associated with chromosomal deletions. Implications for assessment and intervention are outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology are addressed. This class also addresses theories, research, effective practices, and background information needed to implement successful behavior intervention programs for whole classroom management and for students identified with behavioral needs. Prerequisites: TEP 4010 and CUI 4451.

**CUI 4453 Curriculum Adaptations and Assessments for Children with Disabilities (3 Credits)**

This course applies theories, research, effective practices, and background information for assessment for students with disabilities, monitoring student academic progress, and transition planning for students exiting K-12 schools.

**CUI 4455 Assessment of Students with Special Needs (3 Credits)**

Theories, research, effective practices and background information needed to develop, implement, analyze, and apply assessment data for mild/moderate-needs students.

**CUI 4457 Behavior Intervention (3 Credits)**

Theories, research, effective practices, and background information needed to implement successful behavior intervention programs for mild/moderate-needs students.

**CUI 4459 Curriculum, Collaboration, and Transitions in K-12 Schools (3 Credits)**

Knowledge, techniques to develop independent skills for K-12 moderate/mild-needs students and transitions across grade levels.

**CUI 4500 Elementary Literacy: Theory and Practice I (1-3 Credits)**

This course provides an introduction and overview to the many components that make up a quality balanced literacy program. During the course students will analyze current research and theory in reading and writing instruction. This course will use students' classroom placements to create a foundational understanding on which to build solid literacy philosophy as well as instructional ideas and strategies.

**CUI 4501 Elementary Literacy: Theory and Practice II (1-3 Credits)**

This course is an extension of Elementary Literacy I and concentrates on the continued development of theories and practical strategies for teaching literacy in diverse classrooms. This course will supply K-6 teachers with the skills to assess student abilities, select appropriate instructional strategies, and design effective instructional programs that lead to increased listening, speaking, reading and writing achievement of all children.

**CUI 4502 Elementary Science and Social Studies Methods for Cultural Linguistic Diversity (3-4 Credits)**

This course will enable students to develop a deeper understanding of science and social studies content and curriculum in the elementary classroom. Students will explore a range of instructional materials and develop teaching strategies with the guidance of state content standards and research on effective classroom instruction for culturally and linguistically diverse students. This course will revolve around discussion of key questions in the following eight areas: The Role of Social Studies and Science; Instruction; Standards; Content Knowledge; Curriculum Integration; Technology; Culturally Responsive Pedagogy; Sheltered Instruction. Course restricted to students in TEP program or instructor approval.

**CUI 4503 Elementary Math Methods for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course prepares students for mathematics instruction in elementary classrooms. We will study theories of learning, the development of children's mathematical thinking, and research-based instructional practices in mathematics. Students will solve mathematical problems using a variety of methods, practice giving math lessons, engage in continuous instructional improvement activities, grapple with issues of equity—race, class, gender, ability, and the intersections therein—as they pertain to math teaching and explore digital resources related to teaching math for understanding. Course restricted to students in TEP program or instructor approval.

**CUI 4504 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity I (3 Credits)**

This course is the first of a two-course study that will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4505 Mathematics across the Content Areas (2,3 Credits)**

In this class, prospective secondary teachers study fundamental mathematical ideas and how they apply to various real-world settings. For instance, students may explore the mathematics of gerrymandering and map projections. Students will also engage in mathematical practices such as argumentation and justification. Finally, students will learn about inquiry-based approaches to teaching that they can use in their secondary classrooms with their students.

**CUI 4506 Mathematics for Elementary School Teachers I (2,3 Credits)**

In this class, prospective elementary school teachers experience an in-depth look at the representations of rational numbers, including base-ten and decimal numbers, integers, fractions, and arithmetic operations on these sets. Problem solving is emphasized throughout. Students also learn about inquiry-based approaches to teaching that they can use in their classrooms with their students.

**CUI 4507 Mathematics for Elementary School Teachers II (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisite: CUI 4506.

**CUI 4508 Mathematics for Elementary School Teachers III (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisites: CUI 4506.

**CUI 4509 Mathematics for Middle School Teachers (3 Credits)**

Mathematics education for middle school teachers. Meets Common Core State Standards.

**CUI 4511 Secondary Literacy: Reading and Writing Across Content Areas I (3 Credits)**

This course is the first of a two-course study that is designed to give secondary Residents an introduction to best practices in content area literacy instruction for in 6-12 classrooms. In support of the instructional shifts presented by the Common Core State Standards, Residents will explore the rationale behind instructional strategies for literacy instruction in the content area classrooms, as well as examine tools and techniques for teaching students to become strategic readers and writers as they model their own thinking and scaffold students' use of strategies for content area literacy.

**CUI 4512 High School Mathematics from an Advanced Perspective (3 Credits)**

High School mathematics education. Meets Common Core State Standards.



**CUI 4513 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity II (3 Credits)**

This course is an extension of the Autumn quarter session and will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards, Next Generation Science Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4514 Secondary Literacy: Reading and Writing Across Content Areas II (3 Credits)**

This course is an extension of the Autumn quarter session. In this course, Residents will deepen their knowledge of the English language and linguistics, through an analysis of socio and psycholinguistics, as well as rigorous practice in grammar, syntax and semantics. As Residents gain a more practical understanding of the complexities of the English language, they will be better able to support their English Language Learners. This course addresses the following Common Core State Standards: L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking L3: Apply knowledge of language to understand how language functions in different context to make effective choices for meaning or style, and to comprehend more fully when reading or listening. W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**CUI 4521 Urban Education II: School, Student, Family and Community Influences on Student Learning (2-4 Credits)**

This course will consider how teachers are able to foster meaningful connections between the educational goals of the schools and the personal and cultural experiences of young people. Students will study the child in relation to family, school, and community, as well as the relationships between teacher and pupil. We will emphasize the cultural complexity of an urban society and pay special attention to ways that curriculum, language, and literacy affect school success.

**CUI 4527 Supporting English Language Learners and Students with Special Needs Across Content Areas (3 Credits)**

This course evaluates similarities and differences in theory, methods, approaches, and techniques in meeting the needs of diverse learners including English Language Learners, special needs, and/or gifted. Differentiated instruction, Sheltered instruction, and Response to Intervention (RTI) are key methodologies in meeting needs of diverse learners.

**CUI 4529 Foundations of Education for Culturally and Linguistically Diverse Learners (3 Credits)**

This course will examine the essential knowledge and orientations educators must possess to effectively meet the needs of culturally and linguistically diverse (CLD) learners through the analysis of historical, political, ethical, and legal foundations of language education in the United States. This course will explore the immigrant experience and the experience of CLD learners in schools in order to understand how the psychosocial aspects of the immigrant experience can impact second language learning. Course restricted to students in TEP program or instructor approval.

**CUI 4530 Second Language Acquisition (1-3 Credits)****CUI 4531 Language Development and Strategies for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course will evaluate methods, approaches, and techniques in language teaching. This course will also explore classroom strategies and practices for content-area instruction through sheltered instruction, and socio-cultural context of second language acquisition in U. S. public schools including how teachers can support bilingualism, multilingualism, biculturalism, and multiculturalism in the mainstream classroom. Furthermore, this course will explore the needs of special education and gifted culturally and linguistically diverse learners.

**CUI 4532 Culturally Responsive Pedagogy (3,4 Credits)**

This course examines the intricate web of variables that interact in the effort to create culturally responsive pedagogy. It examines the need and establishes a definition for culturally responsive pedagogy; and includes an examination of one's conception of self and "others;" conception of social relations; and conception of knowledge teaching and learning in a culturally diverse context. Furthermore, it cultivates the practice of culturally responsive teaching as well as explores the reality of implementing cultural responsive pedagogy in an era of standardization. In sum, this course helps practicing teachers acquire the dispositions, cultural knowledge, and competencies to adapt their curriculum and instructional skills for culturally responsive classroom practice.

**CUI 4536 Language and Cultural Issues in Assessment and Instruction (3-4 Credits)**

This course expands the educators' knowledge of the connection between data-based instruction and assessment. Educators assess student learning by utilizing strategies that provide continuous feedback on the effectiveness of instruction. Educators learn informal and formal assessment practices that promote student learning and achievement. Educators develop knowledge and understanding of initial assessment of culturally and linguistically diverse learners' skills and abilities in order to provide appropriate placement and instruction. Educators utilize native language tests to promote adequate placement/transition of students. This course also helps educators develop a framework to analyze and develop culturally responsive assessment practices in order to improve student achievement. Finally, this course integrates Response to Intervention (RTI) strategies to improve student assessment.

**CUI 4538 Literacy and Language Development for Culturally and Linguistically Diverse Learners (3,4 Credits)**

Attaining age-appropriate English literacy skills poses many challenges to culturally and linguistically diverse (CLD) learners. Educators must therefore develop proficiency in effective literacy instruction for CLD learners. Effective literacy instruction includes a repertoire of teaching practices designed to scaffold literacy and language across the content areas, and culturally relevant curriculum as an essential component to support the achievement of CLD learners. This course will focus on helping educators gain the necessary skills, orientations, and competencies to advance the literacy of CLD learners through linguistic and cultural knowledge.

**CUI 4540 Curriculum, Instruction and Assessment: Theory and Practice I (1-3 Credits)**

This course explores the theoretical underpinning and practical application of curriculum design. Students design their own curriculum unit aligned to standards, essential questions, big understandings, and social justice themes. Course restricted to students in TEP program or instructor approval.

**CUI 4541 Curriculum, Instruction, and Assessment: Theory and Practice II (1-4 Credits)**

In this course, apprentice teachers will explore the theoretical underpinnings and practical application of data and assessment. This course will build essential knowledge and skills in school and classroom assessments, research methodology, and equity in assessment practices. Students will design a series of assessments aligned to unit goals. Course restricted to students in TEP program or instructor approval.

**CUI 4542 Curriculum, Instruction, and Assessment: Theory and Practice III (1-4 Credits)**

This is the third and final quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations. Course restricted to students in TEP program or instructor approval.

**CUI 4544 Ed Psych: Exceptional Child (1-3 Credits)**

The focus of this course is on educating children and adolescents with special needs in the general education classroom. The intent is to enable future educators to better serve the needs of these children in their classrooms. Topics such as the special education process, information on specific disabilities, accommodations and modifications, behavior issues, mental health, and communicating with parents will be addressed.

**CUI 4600 History and Philosophy of STEM Education (3 Credits)**

The goal of this course is to help future Science, Technology, Engineering, and Mathematics (STEM) education leaders understand the historical trajectory of public education in relation to the larger sociopolitical forces of American history. Two premises guide this course: 1. Social and political conditions in society exert intense pressure on STEM fields and STEM education, which poses significant challenges to STEM education leaders. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4610 Learning & Teaching of STEM (3 Credits)**

In this course, students will be introduced to foundational research literature on learning and teaching in STEM education. The research introduced will focus extensively on theories of learning and how these theories are influencing P-16 STEM curriculum, instruction and assessment. The literature base introduced is foundational to research conducted in STEM education.

**CUI 4620 Research on Diversity, Equity, and Social Justice in STEM Education (3 Credits)**

The goal of this course is to help future STEM education leaders understand the current context of issues of diversity, equity and social justice in STEM education and explore its implications for access and opportunity for traditionally marginalized students. Two premises guide this course: 1. Social and political conditions in contemporary society exert intense pressure on STEM fields and STEM education. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4640 Improving STEM Instruction (3 Credits)**

For as long as the United States has implemented public education—well over 100 years—many features of schooling have stayed the same. Despite waves of curricular and policy reforms, widespread anxiety over student achievement (especially in comparison to other countries), and concerted efforts to “disrupt” education, many elements of teaching and learning persist. In STEM education, especially, scholars and practitioners have been advocating for the same things for decades: teaching for conceptual understanding, using rich tasks that encourage student collaboration, incorporating discourse in the classroom, and supporting students to engage in STEM practices like proof, argumentation, and the scientific method. We know that these things can support meaningful student learning. But most K-12 STEM classrooms are centered on memorization and standardized testing. Why is it so hard to change? The short answer: It's complicated. In this course, students will critically examine various instructional improvement efforts, identifying both the ways in which these efforts are potentially productive and potentially destructive. We'll juxtapose these efforts with relevant research on teacher learning and organizational change in order to critique reform efforts. Ultimately, students will become more critical consumers of instructional improvement efforts and will be better prepared to translate research into practice. Although STEM is the focus of this class, the overarching ideas of the course are applicable to many other subjects.

**CUI 4690 Field Experience: Curriculum & Instruction (3 Credits)**

This course provides students with an authentic field experience for those pursuing a degree in Curriculum & Instruction. Field Experience in Curriculum & Instruction is an off-campus, experience taken throughout the coursework plan. Field Experience is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Field Experience is a hybrid on-line and face-to-face seminar that is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practices. The Field Experience is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students engage in weekly experience seminars (either on-line or face-to-face) facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that educators are lifelong learners and regularly reflect on and adjust their practice.

**CUI 4700 Foundations of Education: Cognitive Theory I (3 Credits)**

Introduction to cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula.

**CUI 4710 Foundations of Education: Cognitive Theory II (3 Credits)**

Second course in cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula. Prerequisite: CUI 4700.

**CUI 4720 Discourse in the Mathematics Classroom (3 Credits)**

The study of discourse as it relates to mathematics teaching and student learning.

**CUI 4730 STEM and Instructional Technology (3 Credits)**

The goal of this course is to help students understand the role of technology in teaching and learning, particularly in Science, Technology, Engineering, and Mathematics (STEM) courses. Three premises guide this course: 1) Technology offers great potential for innovation in education, but it also can be dangerous if used inappropriately and indiscriminately; 2) Social and political conditions in society exert intense pressures on technology in STEM education, which poses significant challenges to STEM education leaders; and, 3) Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4740 Policy and STEM Education (3 Credits)**

In this course, students will be introduced to and explore a range of educational policies and how those policies have influenced and continue to influence Science, Technology, Engineering, and Mathematics (STEM) education. A particular focus of the class will be the underlying ideologies of policies that have had a strong influence on the development of curriculum and research in STEM education. Students will learn how to critique educational policies in general and policies that have influenced STEM education in particular. Students will also develop a policy brief that is specific to some area of STEM education that they will publicly disseminate.

**CUI 4991 MA Independent Study (1-10 Credits)****CUI 4995 Independent Research (1-10 Credits)****CUI 5980 Research as Problem Analysis (3 Credits)**

This course is the first of three culminating research courses for students in the Ed.D. in Curriculum and Instruction. This course is designed to guide candidates through the doctoral proposal process and introduce the initial stages of data collection and analysis.

**CUI 5981 Research as Intervention (3 Credits)**

This course is the second of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates finish collecting their data and analyze their data. This course will also introduce and develop the evaluation or analysis section of the doctoral paper and the beginning steps of the dissemination of the research project.

**CUI 5982 Applied Research (3 Credits)**

This course is the final of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates disseminate their project, reflect on their project, and defend their project. This course is specifically focused on writing the quasi-practical section of the doctoral paper and the dissemination of the research project to the community partner.

**CUI 5983 Defense of Research (1 Credit)**

This course will build on the “persistent problems of practice” and research questions identified in CUI: 5980, data collection and analysis in CUI 5981, and applied research skills in CUI 5982. By the end of the course you will be able to schedule and present your doctoral research project for defense. Completion of CUI: 5982 “Research as Applied Research” or permission of the instructor.

**CUI 5991 PhD Independent Study (1-10 Credits)****CUI 5993 Dissertation in Practice (1-4 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in C&I; must have completed C&I doctoral research courses (CUI 5980, CUI 5981, and CUI 5982).

**CUI 5995 Independent Research (1-10 Credits)****Special Education Courses****SPED 4001 Teaching Individuals with Developmental Disabilities DD and Behavioral Disorders (5 Credits)**

This course will introduce students to the concepts and principles of behavior on which the discipline of applied behavior analysis was founded. Topics of study will include the history and dimensions of applied behavior analysis, defining and measuring behavior, procedures and factors related to behavior change, and the role of the basic principles of behavior (positive and negative reinforcement, punishment, stimulus control, and motivating operations) in establishing new behavior and decreasing problem behavior.

**SPED 4002 Teaching Individuals with Developmental Disabilities and Behavioral Disorders (4 Credits)**

This course focuses on the basic principles of assessment, instruction, and curriculum development; application of formal and informal assessment procedures for goal selection, formulating instructional plans, and adapting instructional materials to accommodate learning needs of students with developmental disabilities and/or behavioral disorders.

**SPED 4003 Advanced Concepts and Principles in Behavior Analysis (5 Credits)**

This course focuses on the definitions and characteristics of applied behavior analysis and the concepts, principles, and processes. Concepts related to ethics and behavior change procedures will also be discussed. The purpose of this graduate-level course is to provide students pursuing a BACB® credential with 45 hours of instruction in advanced content areas of philosophical underpinnings and concepts and principles as outlined by the coursework requirements for BACB® credentials. The course covers content from areas A & B from the 5th edition of the BACB®’s Behavior Analyst Task List®.

**SPED 4004 Single Case Research Design (5 Credits)**

The purpose of this course is to provide master’s level students with 45 hours of instruction in the content areas of measurement, data display, data analysis, and single-case research experimental design and evaluation. This course describes the rationales for single-case research in applied settings. It will equip students to critique, design, and conduct single-case research for applied behavior analysis applications. The course covers content from areas C and D from the 5th edition of the BACB®’s Behavior Analyst Task List®.

**SPED 4005 Ethics in Applied Behavior Analysis (5 Credits)**

This course focuses on ethical and professional conduct in the field of applied behavior analysis. An overview of the profession of behavior analysis is addressed, including the history, foundations, and ethics of the field, as well as professional skills for ethical practice. During this course, we will specifically review the BACB's Compliance Code and disciplinary systems.

**SPED 4991 Independent Study (1-10 Credits)**

Independent study/research.

**SPED 5001 Multi-tiered Systems of Support (3 Credits)**

This course will provide (a) an overview of the historical, legal, and theoretical foundations of multi-tiered systems of support; (b) review the research and evidence-base of a multi-tiered system of support approach for behavior; and (c) explore the influence of behavior analytic procedures within a multi-tiered system of support.

**SPED 5002 FBA's and BIP's in Schools (3 Credits)**

This course will enable students to develop the skills needed for completing Functional Behavior Assessments (FBA), developing Behavior Intervention Plans (BIP), and applying behavior analytic principles to (1) implement the developed BIP, (2) monitor BIP implementation, (3) measure BIP effectiveness, and (4) collaborate with others to improve BIP implementation. Additionally, the course will focus on applying behavior analytic principles through a developmentally appropriate and culturally responsive lens.

**SPED 5003 Supervision and Management (3 Credits)**

This course focuses on supervision and management practices in the field of applied behavior analysis and related settings (i.e., clinics, schools). An overview of supervision is addressed, including foundations, ethics, and professional skills for both the supervisor and the supervisee. During this course, we will specifically review the BACB's standards for supervisory practices as they relate to improving and maintaining the behavior-analytic, professional, and ethical repertoires of practitioners and facilitate the delivery of high-quality services to his/her clients.

**Teacher Ed Prep Courses****TEP 4010 Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities (2-4 Credits)**

This course serves as the foundation for understanding children with disabilities and dis/abilities, as well as the philosophies, laws and policies that support the students. To be responsive to the diverse strengths, needs, and experiences children bring to the classroom, educators need a foundational knowledge of special education and opportunities that can influence student learning. We emphasize a strengths-based perspective and provide pedagogy for supporting for all learners. We introduce the classroom teacher's role in understanding the Individual Education Program (IEP) process, designing lesson plans and inclusive practices based on differentiated and universal design learning instructional strategies and working collaboratively with families and interdisciplinary teams. In addition, we introduce potential commonalities of students with high-incidence disabilities, the history and legal aspects of Special Education and the Response to Intervention Model (RtI)/Multi-Tiered System of Supports (MTSS). Course restricted to students in TEP program or instructor approval.

**TEP 4520 Art Methods K-12 (3-4 Credits)**

Throughout this course, Apprentice Teachers will analyze the following essential questions about teaching and learning in the visual arts field: 1) What type of visual arts classroom environment best supports student learning and skill development in a 21st century classroom?, 2) How do the Colorado Academic Standards guide arts instruction?, 3) What is the role of descriptive feedback in the reflective practice of teaching and learning?, 4) How can visual arts instruction enhance positive-identity development for diverse learners?, and 5) How can visual arts educators use arts assessment in curriculum planning and to gauge student learning?.

**TEP 4590 Elementary Literacy Instruction I (3,4 Credits)**

This is the first of two elementary literacy classes. The purpose of Literacy Instruction I is to provide apprentice teachers with the research-based foundations of reading processes for diverse learners. Teacher candidates will be knowledgeable about the development of reading, the science of reading research, and its application to effective instructional practices within the language domains of reading, writing, speaking, and listening. Teacher candidates will learn how to plan and organize core literacy practices such as interactive read alouds and small group reading instruction in conjunction with Colorado Academic Standards and the Common Core State Standards. The National Reading Panel (NRP) summarized their findings in five components of reading instruction that will guide our work together: phonemic awareness, phonics, fluency, vocabulary development, and text comprehension. Course restricted to students in TEP program or instructor approval.

**TEP 4591 Elementary Literacy Instruction II (3-4 Credits)**

This is the second quarter of a twenty-week course focused on literacy with an emphasis on language, phonics, and writing. The purpose of TEP 4591 or Literacy Instruction is to provide teacher candidates with the research-based foundations and processes employed in skillful speaking, listening, reading and writing. Specifically, we will look at the building blocks of literacy that include phonics and language acquisition: phonology, morphology, and syntax and its application to reading and writing as we build from our reading emphasis the previous quarter. In this course, there will be a shift from literacy input (reading and listening) from the previous quarter to literacy output (writing and speaking). Further, at the end of the course, teacher candidates will reflect upon their literacy philosophy as we review key concepts and classroom strategies. Course restricted to students in TEP program or instructor approval.

**TEP 4592 Secondary Literacy Instruction I (3,4 Credits)**

This is the first quarter of a twenty-week course on literacy. The purpose of this course is to provide teacher candidates with the research-based foundations of literacy and cognitive processes employed in skillful reading and writing for effective secondary instruction. In this first course, teacher candidates will be knowledgeable about the stages of reading as well as student literacy development in reading, writing, speaking, and listening. Teacher candidates will practice recognizing and evaluating these skills on a micro level through a mini-case study of an individual student. Teacher candidates will learn how to plan, organize, and tailor literacy instruction in their specific content area using ongoing and summative assessment in conjunction with the Common Core State Standards/Colorado Academic Standards. Teacher candidates will develop the knowledge, skills and understanding of the science of reading as it applies to all students from a wide range of backgrounds. There is a special emphasis in this course on literacy instruction in urban, diverse, and multi-lingual settings. Course restricted to students in TEP program or instructor approval.

**TEP 4593 Secondary Literacy Instruction II (3,4 Credits)**

This is a literacy course for secondary-level English, math, science and social studies teacher candidates. In this course, there will be a shift of focus from literacy input (reading) from the previous quarter to literacy output (writing), and we will broaden our scope from analyzing one student at a time to assessing and addressing students' literacy needs in a whole-classroom environment. This quarter we will also examine outside influences – such as culture, language, and technology – on classroom literacy and how literacy practices and teaching methods can be adapted for multiple contexts. Throughout the course, teacher candidates will develop and reflect upon their literacy philosophy in terms of planning and instruction in a specific content area. Course restricted to students in TEP program or instructor approval.

**TEP 4600 Introduction to Secondary Methods (3-6 Credits)**

Provides general introduction to principles of effective secondary instruction curriculum design and assessment. Frequently covered topics include: design of classroom environments, comparison of different instructional practices, purposes for and approaches to assessment, comparison of middle and high school philosophies, introduction to instructional unit plan development, and theories of instructional approach and design. Course lays a foundation for more specialized subject-matter methods courses. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4610 English in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching English Language Arts at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4620 Social Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Social Studies at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4630 Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Science at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4640 Math in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Mathematics at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4650 Foreign Language Methods in K-12 Schools (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Foreign Language at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4690 Field Experience (1-12 Credits)**

Involves field experiences, including full-day teaching for 12 weeks in elementary or secondary school classroom and regularly scheduled seminar discussions with supervisor. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4691 Field Experience I (1 Credit)**

This is the first quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4540 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4692 Field Experience II (1 Credit)**

This is the second quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4541 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4693 Field Experience III (1 Credit)**

This is the final quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4542 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4781 Elementary Art Methods (3-6 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in elementary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4782 Secondary Art Methods (3-4 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in secondary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4991 Independent Study (1-10 Credits)****TEP 4995 Independent Research (1-10 Credits)**

## College of Natural Sciences and Mathematics

The College of Natural Sciences & Mathematics offers graduate students opportunities to collaborate with faculty scholars to apply new knowledge and research that changes lives and challenges entrenched ideas. We offer access to resources such as innovative geospatial software, high resolution fluorescence imaging systems, and electron paramagnetic resonance—amongst much more. From the mystery of a blinking binary star system to the movement of a molecule inside a cell, the College of Natural Sciences & Mathematics offers the expertise and resources to support your investigative journey.

## Biological Sciences

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Phone: 303-871-3661

Fax: 303-871-3471

Email: [biology@du.edu](mailto:biology@du.edu) ([Biology@du.edu](mailto:biology@du.edu))

Website: <http://www.biology.du.edu> (<https://www.du.edu/nsm/departments/biologicalsciences/>)

### Why study biology at the University of Denver?

The department of biological sciences offers graduate programs at the doctoral (PhD) or master's (MS) level. Students earn a degree in biological studies with a concentration in either cell and molecular biology or biology, ecology and evolution. Both program tracks involve a combination of course work, lab or field research and a defended thesis or dissertation. Students begin their research under the direction of a faculty member during the first year. All students are expected to present their work at scientific meetings and publish their work in peer-reviewed scientific journals. Doctoral students also have the opportunity to participate in teaching undergraduate courses.

### Research areas

The PhD and MS programs are centered on primary research that coincides with faculty experience and expertise. Students will conduct their research in a university environment using state-of-the-art techniques and facilities. The current research emphases of the department are

- Cell and molecular biology is supported by major research facilities that include real-time PCR instruments, a DNA WAVE HPLC, a Hitachi transmission electron microscope and an Olympus Fluoview 1000 confocal microscope and other advanced imaging systems.
- Biology, ecology and evolution takes advantage of unique field study sites that include an alpine research station on Mt. Evans in the Arapaho National Forest and collaborative research opportunities with the Denver Botanic Gardens.

### Career opportunities

A student who completes the MS degree is in a strong position to pursue a range of postgraduate opportunities, including a career in biotech, academic or government lab or agency, or continued studies in a professional or PhD program. The doctoral degree carries the credential for a professional career in research or academics.

## Doctor of Philosophy in Biological Sciences with a Concentration in Biology, Ecology and Evolution

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences also will be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: one year of general chemistry, one year of calculus (recommended), one year of physics, two years of biology and one year of organic chemistry.

**Standardized Test Scores**

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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**Doctor of Philosophy in Biological Sciences with a Concentration in Cell and Molecular Biology****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Prerequisites**

- Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences also will be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: one year of general chemistry, one year of calculus (recommended), one year of physics, two years of biology and one year of organic chemistry.

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- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Professional Science Master in Biomedical Sciences

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in biology, biochemistry, biomedical sciences or a related field from a regionally accredited institution prior to beginning graduate coursework at DU. Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences will also be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: two years of biology and one year of chemistry, one year of calculus (recommended), and one year of physics (recommended).

### Standardized Test Scores

- GRE, MCAT or DAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

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## Professional Science Master in Biomedical Sciences with a Concentration in Clinical Exercise Physiology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in biology, biochemistry, biomedical sciences or a related field from a regionally accredited institution prior to beginning graduate coursework at DU. Students with an undergraduate major in chemistry, physics or mathematics and minimal preparation in biological sciences will also be considered but may be required to take undergraduate courses when the prerequisites are lacking. Course prerequisites include: two years of biology and one year of chemistry, one year of calculus (recommended), and one year of physics (recommended).

### Standardized Test Scores

- GRE, MCAT or DAT scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.



**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

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**Master of Science in Biological Sciences with a Concentration in Biology, Ecology and Evolution****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Standardized Test Scores**

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

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**Master of Science in Biological Sciences with a Concentration in Cell and Molecular Biology****Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Standardized Test Scores**

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

## Master of Science in Clinical Exercise Physiology

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

Graduate studies in the department of biological sciences provide graduate students with a set of structured core classes that establish a strong foundation of basic knowledge in cell and molecular biology or ecology and evolution and that allow the knowledge to be built upon in subsequent specialized courses and independent research. Research areas are usually linked to the interest of the supervising faculty member. The department's current research strengths center around the two areas: cell and molecular biology (biophysics, neuroscience, neuroendocrinology, cell signaling and physiology, developmental biology, aging, molecular forensics and molecular evolution) and ecology and evolution (biogeochemistry, conservation biology, restoration ecology, molecular evolution). To complete research commitments, MS students generally work with a major professor of choice in the laboratory and/or field for about two years, while PhD students generally work for five years.

## Doctoral Programs

### Doctor of Philosophy in Biological Sciences with a Concentration in Biology, Ecology and Evolution

#### Degree Requirements

The major requirements for completion of the PhD degree are 90 quarter hours of graduate course work and research credit, completion of all candidacy exams, and successful defense of the PhD dissertation. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by their adviser and dissertation committee.

#### Coursework Requirements

The course work includes the following graduate core curriculum:

Code	Title	Credits
BIOL 4220	Grad Sem: Ecology & Evolution	
BIOL 4090 or BIOL 4085	Biostatistics Accelerated Biostatistics	
BIOL 4095	Research Methods and Analysis	
BIOL 4330	Foundations in Literature: Ecology (3 terms required)	

BIOL 4231	Responsible Conduct in Rsrch
BIOL 4991 or BIOL 4995	Independent Study (*) Independent Research

- Courses that the dissertation committee judges to complement the student's major field also may be used.

**Total Credits****90****Non-coursework requirements**

Additional requirements are attendance at departmental seminars, passing performance in the qualifying examination and the research proposal examination, presentation of one departmental seminar per year, completion of a research dissertation of publishable quality, and successful oral defense of the dissertation. PhD students are required to pass both a qualifying exam and research proposal exam to advance to candidacy.

Up to 10 quarter hours of graduate credit (or a blanket transfer of 45 quarter hours from a previous master's program) may be accepted as transfer credit with approval of the departmental graduate committee and the Office of Graduate Studies.

**Doctor of Philosophy in Biological Sciences with a Concentration in Cell and Molecular Biology****Degree Requirements**

The major requirements for completion of the PhD degree are 90 quarter hours of graduate course work and research credit, completion of all candidacy exams, and successful defense of the PhD dissertation. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by their adviser and dissertation committee.

**Coursework Requirements**

The course work includes the 20-credit graduate core curriculum:

Code	Title	Credits
BIOL 4211	Advanced Cell Biology	
BIOL 4212	Advanced Molecular Biology	
BIOL 4213	Advanced Cell Signaling	
BIOL 4310	Foundations in Literature: Cell and Molecular Biology (3 terms required)	
BIOL 4090 or BIOL 4085	Biostatistics Accelerated Biostatistics	
BIOL 4231	Responsible Conduct in Rsrch	
BIOL 4991 or BIOL 4995	Independent Study (*) Independent Research	

- Courses the dissertation committee judges to complement the student's major field also may be used.

**Total Credits****90****Non-coursework requirements**

Additional requirements are attendance at departmental seminars, passing performance in the qualifying examination and the research proposal examination, presentation of one departmental seminar per year, completion of a research dissertation of publishable quality, and successful oral defense of the dissertation. PhD students are required to pass both a qualifying exam and research proposal exam to advance to candidacy.

Up to 10 quarter hours of graduate credit (or a blanket transfer of 45 quarter hours from a previous master's program) may be accepted as transfer credit with approval of the departmental graduate committee and the Office of Graduate Studies.

**Professional Science Master Programs****Professional Science Master in Biomedical Sciences**

The Professional Science Master's (PSM) program in Biomedical Sciences offers rigorous academic training and professional practical skills to prepare students for challenging careers in the biomedical and health sciences. Through advanced coursework in the natural sciences and complementary coursework, students gain in-depth scientific knowledge and a strong foundation in ethics, leadership, communication and professional skills. Furthermore, the students will gain awareness of the many issues, concerns, and future directions of health and biomedical sciences fields.

This multi- and inter-disciplinary program is designed to be very individualized with one-on-one advising to customize the curriculum and capstone internship in order to complement and expand on the student's past academics and experiences and to prepare them for their future career goals. The student is matched with a capstone mentor whose professional experiences aligns with the student's future career goals. The overall goal of the

capstone experience is for the student to gain advanced disciplinary knowledge and professional skills by applying the appropriate modes of inquiry, research and professional skills to address a specific problem or concern in the biomedical sciences.

The PSM program emphasizes active communication with an external Advisory Board to ensure that the curriculum and capstone experiences are relevant and beneficial to both students and the bioscience and healthcare industries. The advisory board, comprised of leaders in biomedical research, biotechnology, clinical healthcare, health institutions and hospital administration, provides input regarding the knowledge and skill set and professional competencies most sought by employers and academic graduate programs in biomedical fields. This Master's program is recognized and approved as an affiliated PSM program with the National Professional Science Association.

## Professional Science Master in Biomedical Sciences

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
BIOL 4085	Accelerated Biostatistics	2
BIOL 4155	Leadership in Science	1
BIOL 4211 or BIOL 4213	Advanced Cell Biology Advanced Cell Signaling	3
BIOL 4212	Advanced Molecular Biology	3
BIOL 4231	Responsible Conduct in Rsrch	1
BIOL 4310 or BIOL 4331	Foundations in Literature: Cell and Molecular Biology Foundations in Literature: Evolution	2
Must be taken 2 times.		
BIOL 4870	Medical Ethics	4
BIOL 4880	Capstone in Biomedical Sciences	4
BIOL 4980	Internship in Biomedical Sciences	2
BIOL 4991	Independent Study	1
<b>Elective Courses</b>		<b>20</b>
Electives can be chosen from the approved list of existing elective courses in consultation with the Program Director. Additional upper level (3000- or 4000-level) elective courses will be considered with approval of the Program Director.		
<b>Natural Sciences</b>		
BIOL 3005	Science Communication	4
BIOL 3025	Science and the Law	2,4
BIOL 3110	Special Topics: Biology	1-4
BIOL 3120	General Microbiology	4
BIOL 3145	Cellular and Molecular Biology of Cancer	4
BIOL 3150	Intracellular Dynamics	4
BIOL 3160	Biophysics: Ion Channels & Disease	4
BIOL 3241	Anatomy and Physiology of the Skeletal, Nervous and Muscular systems	5
BIOL 3242	Human Anatomy and Physiology - Systems of homeostasis	5
BIOL 3251	Exercise Physiology	4
BIOL 3252	High Altitude Physiology	4
BIOL 3253	Environmental Physiology of Animals	4
BIOL 3256	Advanced Human Anatomy & Physiology	5
BIOL 3260	Nutritional Physiology	3
BIOL 3280	Intro to Pathophysiology	4
BIOL 3410	Animal Behavior	4
BIOL 3560	Molecular Biology Laboratory	4
BIOL 3570	Proteins in Biological Systems	4
BIOL 3610	Developmental Biology	4
BIOL 3615	Blood Vessel Development and Disease	4
BIOL 3630	Cell Biology of Development	4
BIOL 3640	Introductory Neurobiology	4

BIOL 3641	Systems Neuroscience	4
BIOL 3642	Neuropharmacology	4
BIOL 3644	Neuromuscular Pathophysiology	4
BIOL 3647	Neuroscience of Movement	4
BIOL 3648	Molecular Mechanisms of Neurological Disease	4
BIOL 3649	Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics	4
BIOL 3650	Endocrinology	4
BIOL 3656	Cellular Aspects of Diabetes and Obesity	4
BIOL 3670	Molecular Immunology	4
BIOL 3675	Virology	4
BIOL 3702	Advanced Topics in Regulatory Biology	1-4
BIOL 3704	Advanced Topics in Cell Biology	1-4
BIOL 3705	Advanced Topics in Molecular Biology	1-4
BIOL 3708	Topics in Integrative Physiology	2-4
BIOL 3800	Human Molecular Biology	4
BIOL 3850	Genetic Engineering	4
BIOL 3855	Genetic Model Organisms in Health & Disease	4
BIOL 3910	Viruses & Infectious Human Diseases	4
BIOL 3920	Forensic Pathology	2-4
BIOL 4095	Research Methods and Analysis	4
BIOL 4500	Clinical Exercise Physiology	5
BIOL 4510	Exercise Testing & Prescription	4
BIOL 4515	Research Techniques in Exercise Physiology	4
BIOL 4530	Advanced Cardiovascular and Pulmonary Physiology	4
BIOL 4540	Electrocardiogram Interpretation	2
HLTH 3600	Cultural Responsiveness in Health Care	2
HLTH 3700	Topics in Health	1-4
CHEM 3811	Biochemistry-Proteins	3
CHEM 3812	Biochemistry-Membranes/Metabolism	3
CHEM 3813	Biochemistry-Nucleic Acids	3
CHEM 3820	Biochemistry Lab	3
CHEM 3831	Advanced Protein Biochemistry	3
<b>Global Health</b>		
GEOG 3755	Geography of Health	4
INTS 4362	Gender and Health	4
INTS 4367	Global Health Affairs	4
INTS 4368	HIV & AIDS in International Affairs	4
INTS 4423	Introduction to Epidemiology	4
INTS 4435	Health and Development	4
INTS 4516	Major Diseases in Global Health (From Pathophysiology to Action)	4
INTS 4557	Cross-Cultural Communications	4
<b>Social Sciences</b>		
ANTH 4320	Medical Anthropology	4
CNP 4707	Introduction to Integrated Health	3
CNP 4772	Diversity Seminar: Psycho-Social Issues	1-5
CNP 4778	Health Psychology	3
CNP 4784	Psychopathology	5
CNP 4788	Physiological Psychology	3
CNP 4789	Pharmacology of Addictive Behavior I and II	4
PSYC 3020	Adolescence	4
PSYC 4011	Proseminar in Emotion	4
PSYC 4045	Proseminar in Human Brain Development	4

PSYC 4085	Stress & Health	4
PSYC 4262	Affective Neuroscience	4
PSYC 4526	Prosem in Cog Neuroscience	4
PSYC 4571	Multicult Issues & Ment Health	4
PSYC 4688	Clinical Psychopharmacology	4
<b>Engineering</b>		
ENBI 4510	Biomechanics	4
ENBI 4520	Introduction to Cardiovascular Engineering	4
<b>Business</b>		
ACTG 4610	Financial Accounting and Reporting	4
FIN 4630	Managerial Finance	4
INFO 4000	Foundations of Business	4
INFO 4100	Survey of Business Analytics	4
MGMT 4620	Organizational Dynamics	4
MGMT 4630	Strategic Human Resources Management	4
MKTG 4100	Marketing Concepts	4
<b>Public Policy</b>		
PPOL 4400	Introduction to Policy Analysis	4
PPOL 4501	Great Issues Forum	2
PPOL 4502	Issues Forum II	2
PPOL 4600	Regulation and Institutional Analysis	4
PPOL 4700	Public Management & Budgeting	4
<b>Total Credits</b>		<b>45</b>

Minimum credits required for degree: 45

#### Non-coursework Requirements

- Capstone project- The program requires a capstone project which involves interactions with health or biomedical professions from outside of the DU community. The capstone experience will be culminated in a formal scholarly work (both written and orally presented) that reflects a student's individual professional interest and the integration of science with strong professional skills. Thus, the capstone project includes a written and public oral presentation of the project.

#### Additional requirements:

- maintain a minimum GPA of 3.0
- successful completion of capstone project
- completion of capstone paper
- successful oral defense of capstone project

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## Professional Science Master in Biomedical Sciences with a Concentration in Clinical Exercise Physiology

The Professional Science Master's (PSM) in Biomedical Sciences program offers rigorous advanced academic training and professional practical skills in order to prepare students for challenging careers in the biomedical sciences and health sciences. The PSM in Biomedical Sciences is a rigorous one-year academic program requiring 45-credit hours of course work and successful completion of the written and oral defense of a capstone project. The concentration in Clinical Exercise Physiology provides expanding academic offerings in the area of integrative human physiology, as well as advanced knowledge of cardiovascular, pulmonary and metabolic diseases, orthopedic or musculoskeletal, neuromuscular, and neoplastic immunological or hematological diseases.

Students who enroll in the concentration in Clinical Exercise Physiology are required to complete the PSM required coursework and choose from the physiology-selected elective coursework. The physiology coursework is relatively flexible to consider the academic background of the individual student. All coursework plans will be determined in collaboration with the program director and approved by the director. For the concentration in CEP, student will complete a capstone project related to exercise physiology with a capstone mentor who specializes in a specific physiological system and/or exercise physiology.

## Professional Science Master in Biomedical Sciences with a Concentration in Clinical Exercise Physiology

### Degree Requirements

Minimum credits required for degree: 45

Code	Title	Credits
<b>Required Courses:</b>		<b>25</b>
BIOL 4085	Accelerated Biostatistics	2
BIOL 4155	Leadership in Science	1
BIOL 4211	Advanced Cell Biology	3
or BIOL 4213	Advanced Cell Signaling	
BIOL 4212	Advanced Molecular Biology	3
BIOL 4231	Responsible Conduct in Rsrch	1
BIOL 4310	Foundations in Literature: Cell and Molecular Biology (Must be taken two times)	2
or BIOL 4331	Foundations in Literature: Evolution	
BIOL 4870	Medical Ethics	4
BIOL 4880	Capstone in Biomedical Sciences	4
BIOL 4980	Internship in Biomedical Sciences	2
BIOL 4991	Independent Study	1
<b>Elective Courses</b>		<b>20</b>
Electives can be chosen from the approved list of existing elective courses in consultation with the Program Director. Additional upper level (3000- or 4000-level) elective courses will be considered with approval of the Program Director.		
<b>Natural Sciences</b>		
BIOL 3005	Science Communication	
BIOL 3110	Special Topics: Biology	
BIOL 3120	General Microbiology	
BIOL 3252	High Altitude Physiology	
BIOL 3241 & BIOL 3242	Anatomy and Physiology of the Skeletal, Nervous and Muscular systems and Human Anatomy and Physiology - Systems of homeostasis	
BIOL 3260	Nutritional Physiology	
BIOL 3610	Developmental Biology	
BIOL 3647	Neuroscience of Movement	
BIOL 3648	Molecular Mechanisms of Neurological Disease	
BIOL 3649	Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics	
BIOL 3650	Endocrinology	
BIOL 3656	Cellular Aspects of Diabetes and Obesity	
BIOL 3670	Molecular Immunology	
BIOL 3675	Virology	
BIOL 3702	Advanced Topics in Regulatory Biology	
BIOL 3704	Advanced Topics in Cell Biology	
BIOL 3850	Genetic Engineering	
BIOL 4095	Research Methods and Analysis	
BIOL 4500	Clinical Exercise Physiology	
BIOL 4510	Exercise Testing & Prescription	
BIOL 4515	Research Techniques in Exercise Physiology	
BIOL 4530	Advanced Cardiovascular and Pulmonary Physiology	
BIOL 4540	Electrocardiogram Interpretation	
HLTH 3600	Cultural Responsiveness in Health Care	
HLTH 3700	Topics in Health	
CHEM 3811	Biochemistry-Proteins	
CHEM 3812	Biochemistry-Membranes/Metabolism	
CHEM 3813	Biochemistry-Nucleic Acids	
<b>Global Health</b>		
INTS 4423	Introduction to Epidemiology	
INTS 4516	Major Diseases in Global Health (From Pathophysiology to Action)	
INTS 4557	Cross-Cultural Communications	
<b>Social Sciences</b>		

CNP 4707	Introduction to Integrated Health
CNP 4784	Psychopathology
CNP 4789	Pharmacology of Addictive Behavior I and II
PSYC 3020	Adolescence
PSYC 4011	Proseminar in Emotion
PSYC 4045	Proseminar in Human Brain Development
PSYC 4085	Stress & Health
PSYC 4262	Affective Neuroscience
PSYC 4526	Prosem in Cog Neuroscience
PSYC 4688	Clinical Psychopharmacology

### Non-coursework Requirements

- Capstone project- The program requires a capstone project which involves interactions with health or biomedical professions from outside of the DU community. The capstone experience will be culminated in a formal scholarly work (both written and orally presented) that reflects a student's professional interest and the integration of science with strong professional skills. Thus, the capstone project includes a written and public oral presentation of the project.

### Additional requirements:

- maintain a minimum GPA of 3.0
- successful completion of capstone project
- completion of capstone paper
- successful oral defense of capstone project

## Master of Science Programs

### Master of Science in Biological Sciences with a Concentration in Biology, Ecology and Evolution

#### Degree Requirements

The major requirements for completion of the MS degree are 45 quarter hours of course work and research credit, and successful defense of the MS thesis. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by the major adviser and thesis committee.

#### Coursework Requirements

The course work includes the following graduate core curriculum:

Code	Title	Credits
BIOL 4220	Grad Sem: Ecology & Evolution	
BIOL 4090	Biostatistics	
or BIOL 4085	Accelerated Biostatistics	
BIOL 4095	Research Methods and Analysis	
BIOL 4330	Foundations in Literature: Ecology (2 terms needed)	
BIOL 4231	Responsible Conduct in Rsrch	
BIOL 4991	Independent Study (*)	
or BIOL 4995	Independent Research	

- Courses the thesis committee judges to complement the student's major field also may be used.

#### Total Credits

45

#### Non-coursework Requirements

Additional requirements are attendance at all departmental seminars, a thesis based on a research project approved by the thesis committee, and a successful oral defense of the thesis.



## Master of Science in Biological Sciences with a Concentration in Cell and Molecular Biology

### Degree Requirements

The major requirements for completion of the MS degree are 45 quarter hours of course work and research credit, and successful defense of the MS thesis. Graduate Students must maintain a minimum GPA of 3.0 and make adequate progress on research as assessed by the major adviser and thesis committee.

### Coursework Requirements

The course work includes the 16-credit graduate core curriculum:

Code	Title	Credits
BIOL 4211	Advanced Cell Biology	
BIOL 4310	Foundations in Literature: Cell and Molecular Biology (3 terms required)	
BIOL 4231	Responsible Conduct in Rsrch	
BIOL 4090 or BIOL 4085	Biostatistics Accelerated Biostatistics	
BIOL 4212	Advanced Molecular Biology	
BIOL 4213	Advanced Cell Signaling	
BIOL 4991 or BIOL 4995	Independent Study (*) Independent Research	
• Courses the thesis committee judges to complement the student's major field also may be used.		
<b>Total Credits</b>		<b>45</b>

### Non-coursework requirements

Additional requirements are attendance at all departmental seminars, a thesis based on a research project approved by the thesis committee and a successful oral defense of the thesis.

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## Master of Science in Clinical Exercise Physiology

In clinical exercise physiology (CEP), exercise is used to help patients manage or reduce their risk of chronic disease. Clinicians develop exercise recommendations, administer diagnostics tests and provide guidance that promotes healthy lifestyles. This Master's degree program provides in-depth knowledge and hands-on experiences in preventive and rehabilitative practices for patients at-risk of or challenged by cardiovascular, pulmonary and metabolic diseases, orthopedic or musculoskeletal, neuromuscular, and neoplastic immunological or hematological diseases, as well as healthy and low risk populations. The curriculum provides the knowledge, clinical experience and skills needed by individuals preparing for successful completion of the exam for the ACSM clinical exercise physiologist certification. The program prepares students for clinical and research careers in clinics, research centers, or health and wellness centers, especially careers in cardiac rehabilitation, pulmonary rehabilitation, diabetes prevention, cancer prevention and rehabilitation, obesity prevention and treatment, and other related careers. CEPs also could pursue positions working with both amateur and professional athletes who aspire to improve their performance. If further advanced education is of interest, this program provides an excellent foundation for doctoral work in physical therapy, occupational therapy, and other related disciplines or in preparation for medical school.

## Master of Science in Clinical Exercise Physiology

### Degree Requirements

45 credit hours of coursework and written comprehensive exam and internship presentation

Code	Title	Credits
<b>Required Courses</b>		
BIOL 3260	Nutritional Physiology	4
BIOL 4085	Accelerated Biostatistics	2
BIOL 4231	Responsible Conduct in Rsrch	1
BIOL 4500	Clinical Exercise Physiology	5
BIOL 4510	Exercise Testing & Prescription	4
BIOL 4515	Research Techniques in Exercise Physiology (Research Techniques in Exercise Physiology)	4
BIOL 4530	Advanced Cardiovascular and Pulmonary Physiology	4
BIOL 4540	Electrocardiogram Interpretation	2
BIOL 4980	Internship in Biomedical Sciences	6
<b>Clinical Exercise Physiology Elective Courses</b>		<b>13</b>
BIOL 3145	Cellular and Molecular Biology of Cancer	

BIOL 3160	Biophysics: Ion Channels & Disease
BIOL 3252	High Altitude Physiology
BIOL 3280	Intro to Pathophysiology
BIOL 3615	Blood Vessel Development and Disease
BIOL 3641	Systems Neuroscience
BIOL 3644	Neuromuscular Pathophysiology
BIOL 3647	Neuroscience of Movement
BIOL 3649	Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics
BIOL 3650	Endocrinology
BIOL 3656	Cellular Aspects of Diabetes and Obesity
BIOL 3670	Molecular Immunology
BIOL 3675	Virology
BIOL 3708	Topics in Integrative Physiology
BIOL 3910	Viruses & Infectious Human Diseases
BIOL 4870	Medical Ethics

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**Total Credits**
**45**

## Biology (BIOL)

### **BIOL 3005 Science Communication (4 Credits)**

Science communication has shaped, and continues to shape, the world in which we live (e.g., why you wash your hands, why we don't feed bears in U.S. national parks anymore, and why some students imagine themselves becoming scientists or not). Sharing how science is conducted and how new knowledge is generated through the scientific method also plays a critical role in our future: creating engaged citizens, shaping the next generation of scientists, increasing diversity and diverse perspectives in the sciences, informing policy-makers and lawyers, combatting misconceptions, increasing trust of scientists, and guiding our own individual behaviors. But, like any other complex skillset, science communication takes practice. This course provides students with a range of resources and skills for effective, ethical, and evidence-based communication of complex socio-scientific issues. It provides a supportive environment in which students will practice and refine their science communication through peer feedback and engagement with real audiences. The focus is on cultivating practical communication skills, with emphasis on effective speaking, writing and exhibition of scientific topics with the variety of audiences students will encounter in their future careers. Course readings, activities, and final projects also examine how identity shapes both the science we do and the lenses we and other stakeholders bring to communication tasks. The course is hybrid, highly interactive, and writing-intensive. This course is restricted to Junior or Senior Standing UG majoring in the College of Natural Sciences and Mathematics.

### **BIOL 3025 Science and the Law (2,4 Credits)**

This course will focus on the intersection of science and US law. Four major areas of focus that will be covered are the admissibility of expert witnesses / scientific evidence in court; how advances in forensic genetics and national DNA databases raise legal issues pertaining to expectations of privacy and the standards for reaching a verdict; the impact of US Supreme Court opinions on the patenting of genes used as diagnostic markers for human disease and the legal landscape surrounding issues of evolution and creationism/intelligent design. Students will then explore how the law impacts their own areas of scientific interest. The goal of this course is to increase our understanding as scientists of how advances in science impact and are impacted by the US judicial system. PREREQUISITES: BIOL 1010 AND BIOL 1011.

### **BIOL 3035 Invasive Species Ecology (4 Credits)**

This course investigates those plants and animal species that have dramatically expanded their ranges and cause ecological harm. Topics covered include the mechanisms of ecological impacts across the globe, how invasive species are used to test basic ecological theory, the application of this research for managing real species, and related issues such as the debate within the scientific community about the term "invasive." We use a case-study approach, and students have the opportunity to go into the field as a class to observe the real invasions and learn sampling methods.

### **BIOL 3044 Coral Reef Ecology (3 Credits)**

Ecology of coral reefs; organization and distribution of reefs; review of reef organisms and their interactions with each other and their physical environment; threats to coral reef conservation. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisite: (BIOL 2010 or BIOL 2050) OR (GEOG 1201, GEOG 1202, and GEOG 1203).

### **BIOL 3045 Coral Reef Ecology Lab (1 Credit)**

Ecology of coral reefs laboratory to supplement lecture material; travel to the Caribbean over spring break to observe coral reefs firsthand; introduction to research methods. SCUBA certification and permission of instructor required. A travel and dive fee is associated with this course.

### **BIOL 3055 Ecology of the Rockies (4 Credits)**

A week in residence at the Mt. Evans Field Station prior to the start of fall quarter includes field projects dealing with ecology and environmental issues. On campus classes involve data analysis and interpretation and formal scientific communication. Themes include terrestrial and aquatic ecosystems, taxonomic groups ranging from conifer stands to aquatic insects and mountain goats. Lab fee associated with this course. Prerequisite: BIOL 2010 or permission of instructor.

**BIOL 3070 Ecological Field Methods (4 Credits)**

Series of field exercises for students to learn principles and procedures of field methodology, data analysis and technical writing in ecology; problems drawn from population, community and ecosystem ecology. Lab fee associated with this course. Prerequisite: BIOL 2010.

**BIOL 3074 Forest Ecology (4 Credits)**

This course provides an overview of the distribution, structure, function, and dynamics of forest ecosystems. Topics include: paleoecology, ecophysiology, disturbance, succession, community analysis, forest hydrology, primary productivity, and nutrient cycling. Throughout, we maintain an emphasis on the scientific process and how it is used to study the controls on the distribution and abundance of organisms.

**BIOL 3085 Insect Ecology (4 Credits)**

A general introduction to insect biology and the science of entomology. Arthropods are the most diverse group of animals on Earth and insects account for more than half of all known living organisms. This course explores the biodiversity of insects on Earth, insect morphology and physiology. The evolutionary history and taxonomy of key orders of insects is emphasized as well as the importance of insects to our everyday lives. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisites: BIOL 1010, BIOL 1011, and BIOL 2010.

**BIOL 3090 Microbial Ecology (4 Credits)**

Interactions among microorganisms and their environment. Impact of ecological principles on microbial diseases, pollutant degradation, nutrient cycles and global change. Prerequisites: BIOL 1010, BIOL 1020, AND BIOL 2510.

**BIOL 3095 Global Change Ecology (4 Credits)**

Over the past century, the mean surface temperature of our planet has increased slightly less than 1°C. While this may seem like a small increment, this change is already profoundly affecting Earth's organisms and ecological communities, and predictions for the impacts of continued change range from severe to catastrophic. Humans are also changing the environment through alteration of nutrient and water regimes. Topics include cause of climate change, comparison to past climatic change, human contribution to change and effect on organisms, communities and ecosystems. Prerequisites: BIOL 1010, BIOL 1011, AND BIOL 2010. RECOMMENDED PREREQUISITES/COREQUISITES: BIOL 2090.

**BIOL 3110 Special Topics: Biology (1-5 Credits)**

Topics of special interest to teaching/research faculty of department presented as needed to complement and expand existing curriculum. May be repeated for credit. PREREQUISITES: BIOL 1010.

**BIOL 3120 General Microbiology (4 Credits)**

Fundamental principles of microorganisms in the world and in disease; role of bacteria in biological phenomena. Includes laboratory. Lab fee associated with this course. Counts as a category elective for Ecology and Biodiversity majors. Prerequisite: BIOL 2120.

**BIOL 3145 Cellular and Molecular Biology of Cancer (4 Credits)**

This course examines the mechanisms that underlie the development and progression of cancer. The cellular and molecular events that drive uncontrolled cell proliferation and eventual metastasis of tumors are discussed. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3150 Intracellular Dynamics (4 Credits)**

Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3160 Biophysics: Ion Channels & Disease (4 Credits)**

Examines ion channel structure and function and the ways in which this information provides insight into human disease. The focus is on the use of biophysical techniques in combination with molecular and genetic analysis of channel genes. General Physics recommended. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3230 Nutrition (3 Credits)**

Investigation of metabolism, all nutrients and various applications of nutrition to sports and healthy living. Prerequisite: BIOL 3250.

**BIOL 3241 Anatomy and Physiology of the Skeletal, Nervous and Muscular systems (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Skeletal, Muscular, and Nervous system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3242 Human Anatomy and Physiology - Systems of homeostasis (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Cardiovascular, Respiratory, Urinary, Digestive, Immune and Reproductive system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3251 Exercise Physiology (4 Credits)**

This course will cover exercise physiology topics included but not limited to: energy systems, physiological response to exercise/training, and exercise programming. A strong background in human physiology is recommended. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 1010.

**BIOL 3252 High Altitude Physiology (4 Credits)**

This course is an advanced course in physiology for those interested in both the impacts of altitude exposure on health and athletic performance. We live at altitude in Denver, and in fact there are many factors affecting our bodies (which we may or may not realize) that impact our daily lives. This course aims to provide insight on the acute and chronic physiological responses of altitude as well as to provide a deeper understanding into the use of hypoxic environments for improving health and benefiting athletic performance. We will explore the physiological mechanisms related to these reduced oxygen environments as well as develop projects that contribute to the understanding of using this environment as a stimulus. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 3242.

**BIOL 3253 Environmental Physiology of Animals (4 Credits)**

By studying species across the animal kingdom, we will learn about the vast array of physiological strategies that have evolved to help animals maintain homeostasis in the face of varied environmental challenges. We will cover foundational principals of animal physiological ecology and evolution, as well as new and exciting discoveries through weekly discussions of primary literature. We will focus primary literature discussions on "extreme environments," as Earth's harshest landscapes provide exciting and powerful examples of adaptations of physiological systems. This course will be delivered through a combination of lectures, active learning assignments, readings from the scientific literature, and group discussions. By the end of this course, you will develop a new perspective on the ecological and evolutionary factors that shape physiological similarities and differences among the animals of our planet (including humans). This course counts as a category elective for the Ecology and Biodiversity major and Physiology in Health and Disease major. Prerequisites: BIOL 1010 and BIOL 1011.

**BIOL 3256 Advanced Human Anatomy & Physiology (0-5 Credits)**

This one quarter course is intended for advanced biology and physiology majors with an interest in the anatomical structure and physiological functioning of body systems. This course builds upon the Human Anatomy and Human Physiology courses that are prerequisites. This advanced course will explore in greater depth understanding mechanisms of action of major body systems and elaborate on the relationship between structure and function. In addition to didactic content, students will complete evaluation of primary literature and design laboratory experiments to test hypotheses of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, models, dissections, inquiry-based learning, experimentation and a variety of assessments. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. Please note that the lab portion of this course requires dissection. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisites: BIOL 3241 and BIOL 3242.

**BIOL 3260 Nutritional Physiology (4 Credits)**

This course is designed to introduce the fundamental concepts, content and scientific bases of nutritional physiology at the levels. This course will examine the scientific structure and properties of carbohydrates, proteins and lipids as the major macronutrients required for human health. In addition, it includes exploration of the digestion, absorption and metabolism of both macronutrients and micronutrients. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 2120.

**BIOL 3280 Intro to Pathophysiology (4 Credits)**

This course is designed as an introduction of the mechanisms and consequences of disease based on physiological dysfunction in the major organ systems. The course will focus on the fundamental concepts and processes of human pathophysiology through exploration of the unique physiological roles of several body systems, how these systems have important integrative relationships that underlie the overall physiological functioning of healthy humans, and how system function is altered in disease and the clinical manifestations of these changes. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 2120. A course in human physiology is recommended.

**BIOL 3410 Animal Behavior (4 Credits)**

This class examines animal behavior from an evolutionary and ecological perspective. The course provides the background needed to understand behavioral evolution, including a focus on the inheritance of behavior, natural selection, sexual selection, and kin selection. This class studies the evolution of a variety of behaviors, including communication and displays, mate choice, parental care, cooperation, mating systems, social behavior, habitat selection, foraging, and anti-predator behavior. The emphasis is on theoretical principles, design of experiments, and interpretation of data. This course counts as a category elective for the Ecology and Biodiversity major. Prerequisites: BIOL 1010 and BIOL 1011, and BIOL 2010. Recommended Prerequisite: BIOL 2090.

**BIOL 3560 Molecular Biology Laboratory (4 Credits)**

Laboratory based course that covers techniques in gene excision, cloning and reinsertion and gene sequencing. Lab fee associated with this course. Prerequisite: BIOL 2510, or permission of instructor.

**BIOL 3570 Proteins in Biological Systems (4 Credits)**

Proteins considered in their biological setting; protein synthesis and degradation; survey of protein functions in vivo; introduction to protein biotechnology. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3610 Developmental Biology (4 Credits)**

Processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of microbial model systems. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120 and 2510.

**BIOL 3615 Blood Vessel Development and Disease (4 Credits)**

This course details the underlying biological programs during blood vessel development and mechanisms that lead to vascular pathologies. The class will incorporate aspects embryology, signaling transduction, and genetics as well as current techniques in developmental biology to comprehensively cover how blood vessels are formed embryonically. Additionally, we will discuss in detail how defects in blood vessel-related signaling programs later manifest into disease. Prerequisite for this course is Cell Structure and Function (BIOL2120/2121).

**BIOL 3630 Cell Biology of Development (4 Credits)**

Every organism has a stereotypical shape, but how does this shape arise? This course examines the cellular and molecular mechanisms that direct the forming of body and tissue shape. This course counts a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3640 Introductory Neurobiology (4 Credits)**

Organization and function of vertebrate central nervous system; nature of action potential, biochemistry of neurotransmitters, neuropeptides, functional anatomy of nervous system, phylogeny of nervous system. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3641 Systems Neuroscience (4 Credits)**

Structure and function of the brain and spinal cord, emphasis on functional systems including sensory perception, motor control and consciousness. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 3640 or 3241.

**BIOL 3642 Neuropharmacology (4 Credits)**

How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120. Recommended prerequisites: BIOL 3640.

**BIOL 3644 Neuromuscular Pathophysiology (4 Credits)**

Cellular and molecular basis for normal nerve and muscle functions and the alteration of these functions by toxins, trauma and diseases of the brain, nerves and muscles; how specific insults produce clinical symptoms and pathology. Prerequisite: BIOL 2120.

**BIOL 3646 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is the capstone course for the neuroscience portion of the cognitive neuroscience program. Seminar topics include but are not limited to neurological disorders, model systems in neuroscience and sensory systems.

**BIOL 3647 Neuroscience of Movement (4 Credits)**

Producing the vast array of movements that humans (and many animals) use everyday represents one of the body's greatest challenges and greatest successes. These various movements require that the nervous, muscular, and skeletal systems work in concert to achieve a common goal. This course will explore the scientific basis of movement production, with particular emphasis on the neuroscience of motor control. We will explore how the nervous system drives the development of movement strategies at an early age, modifies movement strategies to adapt to changing demands throughout life, and how injury, dysfunction, and/or aging can lead to movement challenges. This course counts as a category elective for the Physiology in Health and Disease major and Cognitive Neuroscience concentration. Required prerequisite: Cell Structure & Function (BIOL 2120); Recommended prerequisite (1 or more of the following): Introduction to Neuroscience (BIOL 3640) or permission of instructor.

**BIOL 3648 Molecular Mechanisms of Neurological Disease (4 Credits)**

This course will be an in-depth study into some of the key molecular mechanisms involved in the pathogenesis of human neurological disease. A particular emphasis will be placed on the role of RNA regulation and metabolism. The primary focus will be on five devastating diseases: 1. Spinal Muscular Atrophy (SMA) 2. Fragile X Syndrome (FXS) and Fragile X Tremor Ataxia Syndrome (FXTAS) 3. Myotonic Dystrophy type 1 and 2 (DM1 and DM2) 4. Spinocerebellar Ataxia type 2 (SCA2) 5. Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal Dementia (FTD) This course will cover a variety of topics including disease pathophysiology and pathogenesis. However, readings will be assigned from the recent primary literature discussing cellular and molecular mechanisms. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2510 Genetics.

**BIOL 3649 Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics (4 Credits)**

Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics covers the following disorders: Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxia, Creutzfeldt-Jakob disease, multiple sclerosis, traumatic brain injury and spinal cord injury. Course literature includes primary journal articles and review papers describing the etiology and pathophysiological mechanisms of these disorders. Potential therapeutic approaches to treatment are also investigated. The course format typically includes a lecture reviewing the basic biology, symptoms, and current treatments for each disorder, followed by a thorough analysis of primary research papers focused on novel molecular mechanisms and new targets for therapeutic development. Grading is based on 3 exams throughout the academic quarter and participation in discussing journal articles in class. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 2120 Cell Structure and Function. Recommended: BIOL 3640 Introductory Neurobiology. For Graduate Students: an additional term paper is required with the exact topic to be agreed upon by the student and instructor.

**BIOL 3650 Endocrinology (4 Credits)**

Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3656 Cellular Aspects of Diabetes and Obesity (4 Credits)**

This course focuses on specific cellular and molecular events key to the understanding of the pathological conditions of diabetes and obesity. Topics include the endocrine pancreas, adipose tissue and neuroendocrine control energy expenditure and feeding behavior. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3670 Molecular Immunology (4 Credits)**

The ability to distinguish self from non-self is crucial to all organisms. In humans Organs, cells and other higher animals, this task fall to the immune system. Suppression of this system is key to numerous pathogenic viruses including Ebola and human immunodeficiency virus. The failure to adequately regulate immune response underlies allergic reactions, arthritis and diabetes. This course will introduce students to the organs, cells and molecules that underlie mammalian immune response; immunogenetics and the fundamental mechanisms of cell mediated and humoral immune response; and the relationship of immune system to human disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510.

**BIOL 3675 Virology (4 Credits)**

Viruses are the ultimate cell biologists. They usurp essential cellular components to create new virus progeny leading to pathological cellular physiology. This course will delve into the genetic and cellular principles that govern virus entry, replication, and assembly and cover a broad range of DNA and RNA-based virus families. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3700 Topics in Ecology (1-4 Credits)**

Topics vary; may include plant, animal, biochemical, alpine or aquatic; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: one quarter of undergraduate ecology and/or instructor's permission.

**BIOL 3701 Topics in Genetics (1-4 Credits)**

Topics vary; may include genetic methods, molecular genetics, human genetics, chromosomes or population genetics; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510 and/or instructor's permission.

**BIOL 3702 Advanced Topics in Regulatory Biology (1-4 Credits)**

Topics vary; may include endocrinology, physiology or immunology; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor's permission usually required.

**BIOL 3703 Advanced Topics in Developmental Biology (1-4 Credits)**

Topics vary; may include gene expression in development, developmental immunogenetics, developmental biochemistry or aging; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: instructor's permission.

**BIOL 3704 Advanced Topics in Cell Biology (1-4 Credits)**

Topics vary; may include supramolecular structure, microscopy, membranes and techniques. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3705 Advanced Topics in Molecular Biology (1-4 Credits)**

Topics vary, but may include biochemistry, supramolecular structure and function, molecular genetics, membrane biology. May be taken more than once for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: varies with course and instructor; instructor's permission usually required.

**BIOL 3706 Topics in Evolution (1-4 Credits)**

Topics vary, but may include molecular evolution, plant evolution and animal evolution. Prerequisite: BIOL 2120 and BIOL 2510.

**BIOL 3707 Advanced Topics in Conservation Biology (1-4 Credits)****BIOL 3708 Topics in Integrative Physiology (2-4 Credits)**

Topics for this course include, but are not limited to, human physiology and disease, integrative physiology, environmental or social impacts on human physiology and health, and comparative physiology. Students will gain knowledge of a specific topic in physiology and/or pathophysiology through discussion of current literature and research. May be repeated for credit. Prerequisite: BIOL 2120.

**BIOL 3800 Human Molecular Biology (4 Credits)**

Medical Genetics is the 24th member of the American Board of Medical Specialties. This course will introduce students to the fundamentals of molecular biology with an emphasis on understanding of how the field is applied in the context of medical diagnostics, personalized/precision medicine and other commercial applications. Students will be introduced to published research reports and provided with opportunities to critically examine the application of molecular biology to central questions in such areas as oncology, inherited diseases and genetically engineered organisms. Prerequisite: BIOL 2510.

**BIOL 3850 Genetic Engineering (4 Credits)**

This course will cover principles in gene manipulation and its application in research, medicine and industry. More specifically, this course will explain emerging technologies in genetic engineering and its practical and ethical implications. Topics will incorporate historical and emerging aspects of developmental biology, chemistry, and genetics as well as current techniques in genetic manipulation that are related to genomic editing. Additionally, students will be trained to interface with genomic databases and employ DNA sequence editing software to manipulate DNA sequences to achieve novel cloned products. This course counts as a category elective for the Molecular Biology major. Prerequisite for this course is Genetics BIOL 2510.

**BIOL 3855 Genetic Model Organisms in Health & Disease (4 Credits)**

This course is focused on how basic science studies using genetic model organisms have had a major impact on human health and disease in addition to helping us understand fundamental aspects of biology. We will cover clinically relevant recent advances from bacterial studies (i.e. CRISPR/Cas9-mediated genome editing) to how studies in fruit flies revealed insights into immune disease. Students will gain a better appreciation for why researchers using model organisms were awarded Nobel prizes as well as why major medical funding organizations like the National Institutes of Health, American Cancer Society, and American Heart Association support research using non-human systems. This course will prepare students to understand health-relevant research from varied model systems. Students will learn practical aspects for determining which model systems are best suited to answer which types of questions. They will also practice designing experiments and defending their importance in grant abstract-style essays. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3910 Viruses & Infectious Human Diseases (4 Credits)**

From sexually transmitted viruses to bacterial pneumonia, infectious pathogens are the number one threat to human health. This course will introduce students to prions, viruses and bacterial pathogens with an emphasis on those commonly encountered in clinical medical practice. Through the use of technical/scientific research journals students will be encouraged to investigate the etiology, pathogenesis and treatment of human infectious disease with an emphasis on the clinical, molecular diagnostic and therapeutic aspects of the disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510. Recommended prerequisite: BIOL 3800.

**BIOL 3950 Undergraduate Research (1-10 Credits)**

Participation in faculty research programs by agreement between student and faculty member. Maximum of 5 quarter hours of BIOL 3950 and/or BIOL 3991 may be applied to the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3991 Independent Study (1-10 Credits)**

Topic in biology studied under faculty supervision. Student's responsibility to identify faculty supervisor before registering for class. Maximum of 5 quarter hours of BIOL 3991 and/or BIOL 3950 may be applied toward the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3995 Independent Research (1-10 Credits)****BIOL 4050 Topics in Plant Biology (2 Credits)**

Varying topics; areas of plant-animal interactions, co-evolution, plant ecology, plant biochemistry/physiology.

**BIOL 4085 Accelerated Biostatistics (2 Credits)**

This is an accelerated online statistics course for graduate students in Biology. Basic probability and hypothesis testing is the foundation of teaching applied statistics, including simple statistics (t-tests, F-tests, and chi square) and more advanced procedures (regression, correlation, analysis of variance). In addition, students learn more complex tools (multiple regression, multi-classification ANOVA, Student-Newman-Keuls tests), including non-parametric Tests (Mann-Whitney U, Sign test, Wilcoxon Rank Sum).

**BIOL 4090 Biostatistics (4 Credits)**

Statistic on biological research; emphasis on procedures, applications of regression, correlation, analysis of variance, and nonparametric tests. Include instruction on computer aided (Mac and PC) statistical analysis and presentation of results. Cross listed with BIOL 2090.

**BIOL 4095 Research Methods and Analysis (4 Credits)**

The purpose of this course is to introduce you to topics of applying statistical knowledge to real data, including specific tests/models as well as issues related to project design such as adequate sample size, avoiding confounding variables, unexplained error, and other common challenges. It is geared toward both field and lab-based projects, but the topics covered are relevant to research generally. Each week we will discuss the reading for that week with the objective of clarifying points and where possible, applying the concepts to real data from our own work. Prerequisites: BIOL 4090 or permission of instructor. Prerequisites: BIOL 4090.

**BIOL 4150 Special Topics in Adv Biology (1-4 Credits)**

Topics of special interests to teaching and research faculty presented as needed to complement and expand existing curriculum. May be taken more than once for credit.

**BIOL 4155 Leadership in Science (1 Credit)**

This course addresses the basic leadership skills necessary to succeed in the dynamic professional environment of the biomedical sciences. Topics covered include leadership strategies and professional negotiation, conflict resolution, and team-building. Students will determine leadership strengths and weaknesses and use case studies to strengthen their leadership practices.

**BIOL 4211 Advanced Cell Biology (4 Credits)**

Students study the subcellular structure and organization of the cell. Organelle structure and function are examined in detail as well as biogenesis and degradation (turnover) of these subcellular structures. Cytoskeletal dynamics are also a major focus. Specific topics covered include cell division, macromolecular synthesis, membrane transport, cell-matrix and cell-cell communication, cell migration, cell differentiation, and mechanisms of cell death. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students. Cross listed with BIOL 4150.

**BIOL 4212 Advanced Molecular Biology (3 Credits)**

This course focuses on a detailed analysis of regulated gene expression. The topics include lectures and readings of relevant literature in areas covering gene regulation at multiple steps, including transcription, RNA processing, and translation. In particular, the logic of experimental design and data analysis are emphasized.

**BIOL 4213 Advanced Cell Signaling (3 Credits)**

Students in this course investigate a large array of cellular signal transduction cascades. Specific signaling pathways to be covered include growth factor receptors, cytokine receptors, steroid receptors, integrin-extracellular matrix, heterotrimeric G-protein coupled receptors, monomeric G-proteins, transcription factors, lipids, cytoskeleton, cell cycle, and apoptosis. Each of these topics is examined in the context of normal cell physiology as well as their roles in specific disease processes. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students.

**BIOL 4220 Grad Sem: Ecology & Evolution (2 Credits)**

A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.

**BIOL 4231 Responsible Conduct in Rsrch (1 Credit)**

This course covers several topics regarding guidelines for ethical practices in research. Topics include: data ownership, conflict of interest and commitments, human subjects, animal welfare, research misconduct, authorship, mentoring, peer review, and collaboration. The course includes an online training component and meets one hour each week to discuss these topics.

**BIOL 4310 Foundations in Literature: Cell and Molecular Biology (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Cell and Molecular Biology.

**BIOL 4330 Foundations in Literature: Ecology (2 Credits)**

Students participate in a weekly discuss group that focuses on recent papers from the primary literature in Ecology.

**BIOL 4331 Foundations in Literature: Evolution (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Evolution.

**BIOL 4500 Clinical Exercise Physiology (5 Credits)**

This graduate course in clinical physiology will provide an understanding of fundamental practices and assessments within clinical settings. We will combine knowledge from various backgrounds in physiology and tie theoretical and practical concepts together for assessing body function and developing methods for improving health and performance. We will connect the physiological concepts related to the cardiovascular, respiratory, and muscle systems as well as develop projects that require combining knowledge of the assessment skills and evaluation for clear communication and exercise prescription to special populations.

**BIOL 4510 Exercise Testing & Prescription (4 Credits)**

The purpose of this graduate course is to develop knowledge combined with hands-on skills for integration of exercise testing and prescription concepts. Material in this course will be applicable for performance as well as clinical considerations. This is an active course which will require your participation as both the subject and technician, giving perspective and understanding of methods and protocols along with their justification for various purposes. Prerequisite: BIOL 4500.

**BIOL 4515 Research Techniques in Exercise Physiology (4 Credits)**

This graduate level course is designed to provide exposure to several methods of research within the area of exercise physiology. This is a hands-on course that combines theory and literature with practical research experiences in physiology. In this course, students will perform data collection and analysis of differing topics. These may include the following topics: pulse and tissue oxygenation, signaling (heart rate variability, oxygen kinetics), respiratory loops, Doppler ultrasound (blood flow and tissue structure), etc. Our aims will focus on understanding how and why the method works, how to collect data, as well as the analysis and reporting of variables for proper interpretation.

**BIOL 4520 Advanced Nutrition and Exercise (4 Credits)**

This is a one quarter course intended for graduate students and advanced biology and physiology majors. This course builds upon the prerequisite introductory nutrition course. The course will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of nutrition related to exercise, physical activity and health. Starting with a review of nutritional biochemistry and exercise, major macromolecule and micronutrient metabolism will be addressed in depth. Applications of nutritional science to various types of exercise (endurance, power, speed) will be explored, as well as nutrition and exercise specific to age and sex across the lifespan. In addition to didactic content, students will complete evaluation of primary literature and propose a nutritional program for a specific population of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 3260 Nutrition or the equivalent.

**BIOL 4530 Advanced Cardiovascular and Pulmonary Physiology (4 Credits)**

This course is developed to provide a deeper level of physiological knowledge of the cardiac, vascular, circulatory, and pulmonary systems and their functions. With both lecture materials as well as in-class discussion of concepts and research articles, we will go deep into the basic levels of composition and function and facilitate the understanding of mechanisms that limit disease populations, elderly, etc. How can we adapt our lifestyles to improve our cardiovascular health? Prerequisite: BIOL 3250.

**BIOL 4540 Electrocardiogram Interpretation (2 Credits)**

This course is an advanced course in cardiac physiology for those interested in understanding principles associated with cardiac function, electrical physiology of the heart, and interpretation of the electrocardiogram. As the functions related to our heart drive our cardiovascular system, we will find ways to relate our experiences of daily life to the concepts and principles learned throughout this course to deepen our knowledge and retain this information. We will explore the physiological mechanisms related to the cardiac system as well as develop projects that require combining knowledge of the electrical pathways and of use of electrocardiography for proper interpretation.



**BIOL 4550 Cardiopulmonary Rehabilitation (2 Credits)**

This course focuses specifically on cardiopulmonary rehabilitation. Students will gain an understanding of (1) the impact of lung and heart disease on daily physical activity levels, (2) common mechanisms limiting exercise tolerance, and (3) risks and benefits of exercise for patients with lung and heart disease. Students will learn guidelines for exercise prescription and rehabilitation programs for patients with cardiovascular and pulmonary diseases. Practical application of knowledge and skills gained in BIOL 4530 will be emphasized. Prerequisite: BIOL 4530 Advanced Cardiovascular & Pulmonary Physiology.

**BIOL 4570 Advanced Human Pharmacology (2 Credits)**

This class will focus on how drugs and other therapeutics can be used to treat and prevent diseases. Students will develop a deep understanding of pharmacokinetics/ pharmacodynamics, the major classes of drugs, how and why they are used, drug side effects, and drug interactions. Specific emphasis will relate to effects of drugs utilized for disease prevention or treatment on physical activity and exercise.

**BIOL 4580 Physical Activity for Management of Chronic Diseases (3 Credits)**

This one quarter course is intended for graduate students in the clinical exercise physiology program or other related programs. This course builds upon previous coursework in clinical exercise physiology. It will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of exercise management for persons with chronic diseases and disabilities. Starting with an overview of the concept of "exercise as medicine," the principles of safe exercise as a method for improving health outcomes will be applied to individuals with chronic diseases. Various chronic disease states and their associated medical challenges will be explored, and the recommendations for modified exercise activities, durations and outcomes to support healthy and safe outcomes will be addressed. In addition to didactic content, students will complete evaluation of primary literature in the field. Prerequisite BIOL 4500/4510 Clinical Exercise Physiology I and II.

**BIOL 4870 Medical Ethics (4 Credits)**

This course presents knowledge and discussion of ethical issues that arise from advances in the biomedical sciences and medicine. Several specific ethical issues and policies related to methodologies and procedures, emerging medical technologies, treatment decisions, doctor-patient relationship, informed consent, medical experimentation/clinical research, and health care reform.

**BIOL 4880 Capstone in Biomedical Sciences (4 Credits)**

This is the capstone course for students enrolled in the Professional Science Master's program. In this course, students integrate advanced knowledge in science and math along with courses taken outside traditional science and math courses as their electives. This course incorporates lectures, guest speakers, and class discussions focusing on current issues or concerns in the chosen concentration. PSM students only. Requires instructor approval.

**BIOL 4980 Internship in Biomedical Sciences (1-4 Credits)**

The internship course provides individualized opportunities to gain experience and professional skills. This course includes a structured practical and productive internship experience that allows for the integration and application of disciplinary knowledge in a professional setting. The internship can be administrative, clinical, programmatic, or research focused. Students will work with a professional from healthcare, pharmaceutical and biotech companies, or private and public health services to identify the student's specific project focus.

**BIOL 4991 Independent Study (1-17 Credits)****BIOL 4995 Independent Research (1-8 Credits)****BIOL 5991 Independent Study (1-17 Credits)****BIOL 5995 Independent Research (1-8 Credits)**

## Health Sciences (HLTH)

**HLTH 3000 Seminar in Health Science (1-2 Credits)**

This seminar is the capstone course for the Human Health Science & Systems program. This class will focus on the current understanding of several topics in human health. Emphasis will be on critical reading and discussion of current scientific literature related to human health and health care. Students will learn to recognize and appreciate different approaches and methods of health-related research. Students will utilize and integrate knowledge from previous courses to understand to present effective discussions on current topics in health. For students' continued development of strong oral communication skills, student presentations of primary literature will generate the basis of discussion. Prerequisites: HLTH 2000 and 2010.

**HLTH 3600 Cultural Responsiveness in Health Care (2 Credits)**

To contribute to reducing health inequities and improving health outcomes, this course will promote an improved understanding and responsiveness to the realities of social and structural impacts that influence the health of an individual or community. Topics will include health care delivery and access, political economy of health care, implicit biases, professionalism, relational leadership, dealing with patients in difficult situations, and health equity. The course will help students learn to provide more informed and effective care and promote a more culturally sensitive and responsive future workforce in healthcare, while also serving community needs. Prerequisite: HLTH 2000 or equivalent.

**HLTH 3700 Topics in Health (1-4 Credits)**

Topics in the area of, but are not limited to, human health and disease, environmental or social impacts on health, healthcare delivery, evidence-based medicine. Students will gain knowledge of a specific topic in human health and/or health care through discussion of current literature and research. May be repeated for credit. Prerequisites: HLTH 2000 or 2010.

**HLTH 4210 Advanced Health Education and Promotion (2 Credits)**

This course will provide students foundational knowledge about how to deliver health education and promote healthy behaviors to patients and community. This course will provide students with the practical skills and best practices for communicating and educating others about health, clinical tests and results, and clinical plans of action. Students will gain practical skills for encouraging goal setting and behavioral change and will develop an understanding of motivational considerations especially for patients with mental health challenges or psychosocial concerns related to acute and chronic physical disorders. Students will focus on integrating evidence-based research and strategies for the purpose of leading culturally sensitive discussions and/or difficult conversations and encouraging healthy behaviors.

**HLTH 4300 Basic Legal Consideration in Healthcare (2 Credits)**

This course will provide a basic understanding of legal issues that may affect care providers and business owners. Basic legal terminology and concepts will be presented, in addition to basic court processes and procedures. A goal of establishing this basic understanding is to prevent or reduce the consequences of lawsuits. Professionalism and the code of ethics will also be discussed.

**Biology Courses****BIOL 3005 Science Communication (4 Credits)**

Science communication has shaped, and continues to shape, the world in which we live (e.g., why you wash your hands, why we don't feed bears in U.S. national parks anymore, and why some students imagine themselves becoming scientists or not). Sharing how science is conducted and how new knowledge is generated through the scientific method also plays a critical role in our future: creating engaged citizens, shaping the next generation of scientists, increasing diversity and diverse perspectives in the sciences, informing policy-makers and lawyers, combatting misconceptions, increasing trust of scientists, and guiding our own individual behaviors. But, like any other complex skillset, science communication takes practice. This course provides students with a range of resources and skills for effective, ethical, and evidence-based communication of complex socio-scientific issues. It provides a supportive environment in which students will practice and refine their science communication through peer feedback and engagement with real audiences. The focus is on cultivating practical communication skills, with emphasis on effective speaking, writing and exhibition of scientific topics with the variety of audiences students will encounter in their future careers. Course readings, activities, and final projects also examine how identity shapes both the science we do and the lenses we and other stakeholders bring to communication tasks. The course is hybrid, highly interactive, and writing-intensive. This course is restricted to Junior or Senior Standing UG majoring in the College of Natural Sciences and Mathematics.

**BIOL 3025 Science and the Law (2,4 Credits)**

This course will focus on the intersection of science and US law. Four major areas of focus that will be covered are the admissibility of expert witnesses / scientific evidence in court; how advances in forensic genetics and national DNA databases raise legal issues pertaining to expectations of privacy and the standards for reaching a verdict; the impact of US Supreme Court opinions on the patenting of genes used as diagnostic markers for human disease and the legal landscape surrounding issues of evolution and creationism/intelligent design. Students will then explore how the law impacts their own areas of scientific interest. The goal of this course is to increase our understanding as scientists of how advances in science impact and are impacted by the US judicial system. PREREQUISITES: BIOL 1010 AND BIOL 1011.

**BIOL 3035 Invasive Species Ecology (4 Credits)**

This course investigates those plants and animal species that have dramatically expanded their ranges and cause ecological harm. Topics covered include the mechanisms of ecological impacts across the globe, how invasive species are used to test basic ecological theory, the application of this research for managing real species, and related issues such as the debate within the scientific community about the term "invasive." We use a case-study approach, and students have the opportunity to go into the field as a class to observe the real invasions and learn sampling methods.

**BIOL 3044 Coral Reef Ecology (3 Credits)**

Ecology of coral reefs; organization and distribution of reefs; review of reef organisms and their interactions with each other and their physical environment; threats to coral reef conservation. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisite: (BIOL 2010 or BIOL 2050) OR (GEOG 1201, GEOG 1202, and GEOG 1203).

**BIOL 3045 Coral Reef Ecology Lab (1 Credit)**

Ecology of coral reefs laboratory to supplement lecture material; travel to the Caribbean over spring break to observe coral reefs firsthand; introduction to research methods. SCUBA certification and permission of instructor required. A travel and dive fee is associated with this course.

**BIOL 3055 Ecology of the Rockies (4 Credits)**

A week in residence at the Mt. Evans Field Station prior to the start of fall quarter includes field projects dealing with ecology and environmental issues. On campus classes involve data analysis and interpretation and formal scientific communication. Themes include terrestrial and aquatic ecosystems, taxonomic groups ranging from conifer stands to aquatic insects and mountain goats. Lab fee associated with this course. Prerequisite: BIOL 2010 or permission of instructor.

**BIOL 3070 Ecological Field Methods (4 Credits)**

Series of field exercises for students to learn principles and procedures of field methodology, data analysis and technical writing in ecology; problems drawn from population, community and ecosystem ecology. Lab fee associated with this course. Prerequisite: BIOL 2010.

**BIOL 3074 Forest Ecology (4 Credits)**

This course provides an overview of the distribution, structure, function, and dynamics of forest ecosystems. Topics include: paleoecology, ecophysiology, disturbance, succession, community analysis, forest hydrology, primary productivity, and nutrient cycling. Throughout, we maintain an emphasis on the scientific process and how it is used to study the controls on the distribution and abundance of organisms.

**BIOL 3085 Insect Ecology (4 Credits)**

A general introduction to insect biology and the science of entomology. Arthropods are the most diverse group of animals on Earth and insects account for more than half of all known living organisms. This course explores the biodiversity of insects on Earth, insect morphology and physiology. The evolutionary history and taxonomy of key orders of insects is emphasized as well as the importance of insects to our everyday lives. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisites: BIOL 1010, BIOL 1011, and BIOL 2010.

**BIOL 3090 Microbial Ecology (4 Credits)**

Interactions among microorganisms and their environment. Impact of ecological principles on microbial diseases, pollutant degradation, nutrient cycles and global change. Prerequisites: BIOL 1010, BIOL 1020, AND BIOL 2510.

**BIOL 3095 Global Change Ecology (4 Credits)**

Over the past century, the mean surface temperature of our planet has increased slightly less than 1°C. While this may seem like a small increment, this change is already profoundly affecting Earth's organisms and ecological communities, and predictions for the impacts of continued change range from severe to catastrophic. Humans are also changing the environment through alteration of nutrient and water regimes. Topics include cause of climate change, comparison to past climatic change, human contribution to change and effect on organisms, communities and ecosystems. Prerequisites: BIOL 1010, BIOL 1011, AND BIOL 2010. RECOMMENDED PREREQUISITES/COREQUISITES: BIOL 2090.

**BIOL 3110 Special Topics: Biology (1-5 Credits)**

Topics of special interest to teaching/research faculty of department presented as needed to complement and expand existing curriculum. May be repeated for credit. PREREQUISITES: BIOL 1010.

**BIOL 3120 General Microbiology (4 Credits)**

Fundamental principles of microorganisms in the world and in disease; role of bacteria in biological phenomena. Includes laboratory. Lab fee associated with this course. Counts as a category elective for Ecology and Biodiversity majors. Prerequisite: BIOL 2120.

**BIOL 3145 Cellular and Molecular Biology of Cancer (4 Credits)**

This course examines the mechanisms that underlie the development and progression of cancer. The cellular and molecular events that drive uncontrolled cell proliferation and eventual metastasis of tumors are discussed. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3150 Intracellular Dynamics (4 Credits)**

Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3160 Biophysics: Ion Channels & Disease (4 Credits)**

Examines ion channel structure and function and the ways in which this information provides insight into human disease. The focus is on the use of biophysical techniques in combination with molecular and genetic analysis of channel genes. General Physics recommended. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3230 Nutrition (3 Credits)**

Investigation of metabolism, all nutrients and various applications of nutrition to sports and healthy living. Prerequisite: BIOL 3250.

**BIOL 3241 Anatomy and Physiology of the Skeletal, Nervous and Muscular systems (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Skeletal, Muscular, and Nervous system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3242 Human Anatomy and Physiology - Systems of homeostasis (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Cardiovascular, Respiratory, Urinary, Digestive, Immune and Reproductive system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3251 Exercise Physiology (4 Credits)**

This course will cover exercise physiology topics included but not limited to: energy systems, physiological response to exercise/training, and exercise programming. A strong background in human physiology is recommended. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 1010.

**BIOL 3252 High Altitude Physiology (4 Credits)**

This course is an advanced course in physiology for those interested in both the impacts of altitude exposure on health and athletic performance. We live at altitude in Denver, and in fact there are many factors affecting our bodies (which we may or may not realize) that impact our daily lives. This course aims to provide insight on the acute and chronic physiological responses of altitude as well as to provide a deeper understanding into the use of hypoxic environments for improving health and benefiting athletic performance. We will explore the physiological mechanisms related to these reduced oxygen environments as well as develop projects that contribute to the understanding of using this environment as a stimulus. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 3242.

**BIOL 3253 Environmental Physiology of Animals (4 Credits)**

By studying species across the animal kingdom, we will learn about the vast array of physiological strategies that have evolved to help animals maintain homeostasis in the face of varied environmental challenges. We will cover foundational principals of animal physiological ecology and evolution, as well as new and exciting discoveries through weekly discussions of primary literature. We will focus primary literature discussions on "extreme environments," as Earth's harshest landscapes provide exciting and powerful examples of adaptations of physiological systems. This course will be delivered through a combination of lectures, active learning assignments, readings from the scientific literature, and group discussions. By the end of this course, you will develop a new perspective on the ecological and evolutionary factors that shape physiological similarities and differences among the animals of our planet (including humans). This course counts as a category elective for the Ecology and Biodiversity major and Physiology in Health and Disease major. Prerequisites: BIOL 1010 and BIOL 1011.

**BIOL 3256 Advanced Human Anatomy & Physiology (0-5 Credits)**

This one quarter course is intended for advanced biology and physiology majors with an interest in the anatomical structure and physiological functioning of body systems. This course builds upon the Human Anatomy and Human Physiology courses that are prerequisites. This advanced course will explore in greater depth understanding mechanisms of action of major body systems and elaborate on the relationship between structure and function. In addition to didactic content, students will complete evaluation of primary literature and design laboratory experiments to test hypotheses of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, models, dissections, inquiry-based learning, experimentation and a variety of assessments. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. Please note that the lab portion of this course requires dissection. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisites: BIOL 3241 and BIOL 3242.

**BIOL 3260 Nutritional Physiology (4 Credits)**

This course is designed to introduce the fundamental concepts, content and scientific bases of nutritional physiology at the levels. This course will examine the scientific structure and properties of carbohydrates, proteins and lipids as the major macronutrients required for human health. In addition, it includes exploration of the digestion, absorption and metabolism of both macronutrients and micronutrients. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 2120.

**BIOL 3280 Intro to Pathophysiology (4 Credits)**

This course is designed as an introduction of the mechanisms and consequences of disease based on physiological dysfunction in the major organ systems. The course will focus on the fundamental concepts and processes of human pathophysiology through exploration of the unique physiological roles of several body systems, how these systems have important integrative relationships that underlie the overall physiological functioning of healthy humans, and how system function is altered in disease and the clinical manifestations of these changes. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 2120. A course in human physiology is recommended.

**BIOL 3410 Animal Behavior (4 Credits)**

This class examines animal behavior from an evolutionary and ecological perspective. The course provides the background needed to understand behavioral evolution, including a focus on the inheritance of behavior, natural selection, sexual selection, and kin selection. This class studies the evolution of a variety of behaviors, including communication and displays, mate choice, parental care, cooperation, mating systems, social behavior, habitat selection, foraging, and anti-predator behavior. The emphasis is on theoretical principles, design of experiments, and interpretation of data. This course counts as a category elective for the Ecology and Biodiversity major. Prerequisites: BIOL 1010 and BIOL 1011, and BIOL 2010. Recommended Prerequisite: BIOL 2090.

**BIOL 3560 Molecular Biology Laboratory (4 Credits)**

Laboratory based course that covers techniques in gene excision, cloning and reinsertion and gene sequencing. Lab fee associated with this course. Prerequisite: BIOL 2510, or permission of instructor.

**BIOL 3570 Proteins in Biological Systems (4 Credits)**

Proteins considered in their biological setting; protein synthesis and degradation; survey of protein functions in vivo; introduction to protein biotechnology. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3610 Developmental Biology (4 Credits)**

Processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of microbial model systems. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120 and 2510.

**BIOL 3615 Blood Vessel Development and Disease (4 Credits)**

This course details the underlying biological programs during blood vessel development and mechanisms that lead to vascular pathologies. The class will incorporate aspects embryology, signaling transduction, and genetics as well as current techniques in developmental biology to comprehensively cover how blood vessels are formed embryonically. Additionally, we will discuss in detail how defects in blood vessel-related signaling programs later manifest into disease. Prerequisite for this course is Cell Structure and Function (BIOL2120/2121).

**BIOL 3630 Cell Biology of Development (4 Credits)**

Every organism has a stereotypical shape, but how does this shape arise? This course examines the cellular and molecular mechanisms that direct the forming of body and tissue shape. This course counts a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3640 Introductory Neurobiology (4 Credits)**

Organization and function of vertebrate central nervous system; nature of action potential, biochemistry of neurotransmitters, neuropeptides, functional anatomy of nervous system, phylogeny of nervous system. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3641 Systems Neuroscience (4 Credits)**

Structure and function of the brain and spinal cord, emphasis on functional systems including sensory perception, motor control and consciousness. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 3640 or 3241.

**BIOL 3642 Neuropharmacology (4 Credits)**

How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120. Recommended prerequisites: BIOL 3640.

**BIOL 3644 Neuromuscular Pathophysiology (4 Credits)**

Cellular and molecular basis for normal nerve and muscle functions and the alteration of these functions by toxins, trauma and diseases of the brain, nerves and muscles; how specific insults produce clinical symptoms and pathology. Prerequisite: BIOL 2120.

**BIOL 3646 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is the capstone course for the neuroscience portion of the cognitive neuroscience program. Seminar topics include but are not limited to neurological disorders, model systems in neuroscience and sensory systems.

**BIOL 3647 Neuroscience of Movement (4 Credits)**

Producing the vast array of movements that humans (and many animals) use everyday represents one of the body's greatest challenges and greatest successes. These various movements require that the nervous, muscular, and skeletal systems work in concert to achieve a common goal. This course will explore the scientific basis of movement production, with particular emphasis on the neuroscience of motor control. We will explore how the nervous system drives the development of movement strategies at an early age, modifies movement strategies to adapt to changing demands throughout life, and how injury, dysfunction, and/or aging can lead to movement challenges. This course counts as a category elective for the Physiology in Health and Disease major and Cognitive Neuroscience concentration. Required prerequisite: Cell Structure & Function (BIOL 2120); Recommended prerequisite (1 or more of the following): Introduction to Neuroscience (BIOL 3640) or permission of instructor.

**BIOL 3648 Molecular Mechanisms of Neurological Disease (4 Credits)**

This course will be an in-depth study into some of the key molecular mechanisms involved in the pathogenesis of human neurological disease. A particular emphasis will be placed on the role of RNA regulation and metabolism. The primary focus will be on five devastating diseases: 1. Spinal Muscular Atrophy (SMA) 2. Fragile X Syndrome (FXS) and Fragile X Tremor Ataxia Syndrome (FXTAS) 3. Myotonic Dystrophy type 1 and 2 (DM1 and DM2) 4. Spinocerebellar Ataxia type 2 (SCA2) 5. Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal Dementia (FTD) This course will cover a variety of topics including disease pathophysiology and pathogenesis. However, readings will be assigned from the recent primary literature discussing cellular and molecular mechanisms. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2510 Genetics.

**BIOL 3649 Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics (4 Credits)**

Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics covers the following disorders: Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxia, Creutzfeldt-Jakob disease, multiple sclerosis, traumatic brain injury and spinal cord injury. Course literature includes primary journal articles and review papers describing the etiology and pathophysiological mechanisms of these disorders. Potential therapeutic approaches to treatment are also investigated. The course format typically includes a lecture reviewing the basic biology, symptoms, and current treatments for each disorder, followed by a thorough analysis of primary research papers focused on novel molecular mechanisms and new targets for therapeutic development. Grading is based on 3 exams throughout the academic quarter and participation in discussing journal articles in class. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 2120 Cell Structure and Function. Recommended: BIOL 3640 Introductory Neurobiology. For Graduate Students: an additional term paper is required with the exact topic to be agreed upon by the student and instructor.

**BIOL 3650 Endocrinology (4 Credits)**

Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3656 Cellular Aspects of Diabetes and Obesity (4 Credits)**

This course focuses on specific cellular and molecular events key to the understanding of the pathological conditions of diabetes and obesity. Topics include the endocrine pancreas, adipose tissue and neuroendocrine control energy expenditure and feeding behavior. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3670 Molecular Immunology (4 Credits)**

The ability to distinguish self from non-self is crucial to all organisms. In humans Organs, cells and other higher animals, this task fall to the immune system. Suppression of this system is key to numerous pathogenic viruses including Ebola and human immunodeficiency virus. The failure to adequately regulate immune response underlies allergic reactions, arthritis and diabetes. This course will introduce students to the organs, cells and molecules that underlie mammalian immune response; immunogenetics and the fundamental mechanisms of cell mediated and humoral immune response; and the relationship of immune system to human disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510.

**BIOL 3675 Virology (4 Credits)**

Viruses are the ultimate cell biologists. They usurp essential cellular components to create new virus progeny leading to pathological cellular physiology. This course will delve into the genetic and cellular principles that govern virus entry, replication, and assembly and cover a broad range of DNA and RNA-based virus families. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3700 Topics in Ecology (1-4 Credits)**

Topics vary; may include plant, animal, biochemical, alpine or aquatic; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: one quarter of undergraduate ecology and/or instructor's permission.

**BIOL 3701 Topics in Genetics (1-4 Credits)**

Topics vary; may include genetic methods, molecular genetics, human genetics, chromosomes or population genetics; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510 and/or instructor's permission.

**BIOL 3702 Advanced Topics in Regulatory Biology (1-4 Credits)**

Topics vary; may include endocrinology, physiology or immunology; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor's permission usually required.

**BIOL 3703 Advanced Topics in Developmental Biology (1-4 Credits)**

Topics vary; may include gene expression in development, developmental immunogenetics, developmental biochemistry or aging; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: instructor's permission.

**BIOL 3704 Advanced Topics in Cell Biology (1-4 Credits)**

Topics vary; may include supramolecular structure, microscopy, membranes and techniques. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3705 Advanced Topics in Molecular Biology (1-4 Credits)**

Topics vary, but may include biochemistry, supramolecular structure and function, molecular genetics, membrane biology. May be taken more than once for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: varies with course and instructor; instructor's permission usually required.

**BIOL 3706 Topics in Evolution (1-4 Credits)**

Topics vary, but may include molecular evolution, plant evolution and animal evolution. Prerequisite: BIOL 2120 and BIOL 2510.

**BIOL 3707 Advanced Topics in Conservation Biology (1-4 Credits)****BIOL 3708 Topics in Integrative Physiology (2-4 Credits)**

Topics for this course include, but are not limited to, human physiology and disease, integrative physiology, environmental or social impacts on human physiology and health, and comparative physiology. Students will gain knowledge of a specific topic in physiology and/or pathophysiology through discussion of current literature and research. May be repeated for credit. Prerequisite: BIOL 2120.

**BIOL 3800 Human Molecular Biology (4 Credits)**

Medical Genetics is the 24th member of the American Board of Medical Specialties. This course will introduce students to the fundamentals of molecular biology with an emphasis on understanding of how the field is applied in the context of medical diagnostics, personalized/precision medicine and other commercial applications. Students will be introduced to published research reports and provided with opportunities to critically examine the application of molecular biology to central questions in such areas as oncology, inherited diseases and genetically engineered organisms. Prerequisite: BIOL 2510.

**BIOL 3850 Genetic Engineering (4 Credits)**

This course will cover principles in gene manipulation and its application in research, medicine and industry. More specifically, this course will explain emerging technologies in genetic engineering and its practical and ethical implications. Topics will incorporate historical and emerging aspects of developmental biology, chemistry, and genetics as well as current techniques in genetic manipulation that are related to genomic editing. Additionally, students will be trained to interface with genomic databases and employ DNA sequence editing software to manipulate DNA sequences to achieve novel cloned products. This course counts as a category elective for the Molecular Biology major. Prerequisite for this course is Genetics BIOL 2510.

**BIOL 3855 Genetic Model Organisms in Health & Disease (4 Credits)**

This course is focused on how basic science studies using genetic model organisms have had a major impact on human health and disease in addition to helping us understand fundamental aspects of biology. We will cover clinically relevant recent advances from bacterial studies (i.e. CRISPR/Cas9-mediated genome editing) to how studies in fruit flies revealed insights into immune disease. Students will gain a better appreciation for why researchers using model organisms were awarded Nobel prizes as well as why major medical funding organizations like the National Institutes of Health, American Cancer Society, and American Heart Association support research using non-human systems. This course will prepare students to understand health-relevant research from varied model systems. Students will learn practical aspects for determining which model systems are best suited to answer which types of questions. They will also practice designing experiments and defending their importance in grant abstract-style essays. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3910 Viruses & Infectious Human Diseases (4 Credits)**

From sexually transmitted viruses to bacterial pneumonia, infectious pathogens are the number one threat to human health. This course will introduce students to prions, viruses and bacterial pathogens with an emphasis on those commonly encountered in clinical medical practice. Through the use of technical/scientific research journals students will be encouraged to investigate the etiology, pathogenesis and treatment of human infectious disease with an emphasis on the clinical, molecular diagnostic and therapeutic aspects of the disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510. Recommended prerequisite: BIOL 3800.

**BIOL 3950 Undergraduate Research (1-10 Credits)**

Participation in faculty research programs by agreement between student and faculty member. Maximum of 5 quarter hours of BIOL 3950 and/or BIOL 3991 may be applied to the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3991 Independent Study (1-10 Credits)**

Topic in biology studied under faculty supervision. Student's responsibility to identify faculty supervisor before registering for class. Maximum of 5 quarter hours of BIOL 3991 and/or BIOL 3950 may be applied toward the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3995 Independent Research (1-10 Credits)****BIOL 4050 Topics in Plant Biology (2 Credits)**

Varying topics; areas of plant-animal interactions, co-evolution, plant ecology, plant biochemistry/physiology.

**BIOL 4085 Accelerated Biostatistics (2 Credits)**

This is an accelerated online statistics course for graduate students in Biology. Basic probability and hypothesis testing is the foundation of teaching applied statistics, including simple statistics (t-tests, F-tests, and chi square) and more advanced procedures (regression, correlation, analysis of variance). In addition, students learn more complex tools (multiple regression, multi-classification ANOVA, Student-Newman-Keuls tests), including non-parametric Tests (Mann-Whitney U, Sign test, Wilcoxon Rank Sum).

**BIOL 4090 Biostatistics (4 Credits)**

Statistic on biological research; emphasis on procedures, applications of regression, correlation, analysis of variance, and nonparametric tests. Include instruction on computer aided (Mac and PC) statistical analysis and presentation of results. Cross listed with BIOL 2090.

**BIOL 4095 Research Methods and Analysis (4 Credits)**

The purpose of this course is to introduce you to topics of applying statistical knowledge to real data, including specific tests/models as well as issues related to project design such as adequate sample size, avoiding confounding variables, unexplained error, and other common challenges. It is geared toward both field and lab-based projects, but the topics covered are relevant to research generally. Each week we will discuss the reading for that week with the objective of clarifying points and where possible, applying the concepts to real data from our own work. Prerequisites: BIOL 4090 or permission of instructor. Prerequisites: BIOL 4090.

**BIOL 4150 Special Topics in Adv Biology (1-4 Credits)**

Topics of special interests to teaching and research faculty presented as needed to complement and expand existing curriculum. May be taken more than once for credit.

**BIOL 4155 Leadership in Science (1 Credit)**

This course addresses the basic leadership skills necessary to succeed in the dynamic professional environment of the biomedical sciences. Topics covered include leadership strategies and professional negotiation, conflict resolution, and team-building. Students will determine leadership strengths and weaknesses and use case studies to strengthen their leadership practices.

**BIOL 4211 Advanced Cell Biology (4 Credits)**

Students study the subcellular structure and organization of the cell. Organelle structure and function are examined in detail as well as biogenesis and degradation (turnover) of these subcellular structures. Cytoskeletal dynamics are also a major focus. Specific topics covered include cell division, macromolecular synthesis, membrane transport, cell-matrix and cell-cell communication, cell migration, cell differentiation, and mechanisms of cell death. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students. Cross listed with BIOP 4150.

**BIOL 4212 Advanced Molecular Biology (3 Credits)**

This course focuses on a detailed analysis of regulated gene expression. The topics include lectures and readings of relevant literature in areas covering gene regulation at multiple steps, including transcription, RNA processing, and translation. In particular, the logic of experimental design and data analysis are emphasized.

**BIOL 4213 Advanced Cell Signaling (3 Credits)**

Students in this course investigate a large array of cellular signal transduction cascades. Specific signaling pathways to be covered include growth factor receptors, cytokine receptors, steroid receptors, integrin-extracellular matrix, heterotrimeric G-protein coupled receptors, monomeric G-proteins, transcription factors, lipids, cytoskeleton, cell cycle, and apoptosis. Each of these topics is examined in the context of normal cell physiology as well as their roles in specific disease processes. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students.

**BIOL 4220 Grad Sem: Ecology & Evolution (2 Credits)**

A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.

**BIOL 4231 Responsible Conduct in Rsrch (1 Credit)**

This course covers several topics regarding guidelines for ethical practices in research. Topics include: data ownership, conflict of interest and commitments, human subjects, animal welfare, research misconduct, authorship, mentoring, peer review, and collaboration. The course includes an online training component and meets one hour each week to discuss these topics.

**BIOL 4310 Foundations in Literature: Cell and Molecular Biology (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Cell and Molecular Biology.

**BIOL 4330 Foundations in Literature: Ecology (2 Credits)**

Students participate in a weekly discuss group that focuses on recent papers from the primary literature in Ecology.

**BIOL 4331 Foundations in Literature: Evolution (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Evolution.

**BIOL 4500 Clinical Exercise Physiology (5 Credits)**

This graduate course in clinical physiology will provide an understanding of fundamental practices and assessments within clinical settings. We will combine knowledge from various backgrounds in physiology and tie theoretical and practical concepts together for assessing body function and developing methods for improving health and performance. We will connect the physiological concepts related to the cardiovascular, respiratory, and muscle systems as well as develop projects that require combining knowledge of the assessment skills and evaluation for clear communication and exercise prescription to special populations.

**BIOL 4510 Exercise Testing & Prescription (4 Credits)**

The purpose of this graduate course is to develop knowledge combined with hands-on skills for integration of exercise testing and prescription concepts. Material in this course will be applicable for performance as well as clinical considerations. This is an active course which will require your participation as both the subject and technician, giving perspective and understanding of methods and protocols along with their justification for various purposes. Prerequisite: BIOL 4500.

**BIOL 4515 Research Techniques in Exercise Physiology (4 Credits)**

This graduate level course is designed to provide exposure to several methods of research within the area of exercise physiology. This is a hands-on course that combines theory and literature with practical research experiences in physiology. In this course, students will perform data collection and analysis of differing topics. These may include the following topics: pulse and tissue oxygenation, signaling (heart rate variability, oxygen kinetics), respiratory loops, Doppler ultrasound (blood flow and tissue structure), etc. Our aims will focus on understanding how and why the method works, how to collect data, as well as the analysis and reporting of variables for proper interpretation.

**BIOL 4520 Advanced Nutrition and Exercise (4 Credits)**

This is a one quarter course intended for graduate students and advanced biology and physiology majors. This course builds upon the prerequisite introductory nutrition course. The course will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of nutrition related to exercise, physical activity and health. Starting with a review of nutritional biochemistry and exercise, major macromolecule and micronutrient metabolism will be addressed in depth. Applications of nutritional science to various types of exercise (endurance, power, speed) will be explored, as well as nutrition and exercise specific to age and sex across the lifespan. In addition to didactic content, students will complete evaluation of primary literature and propose a nutritional program for a specific population of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 3260 Nutrition or the equivalent.

**BIOL 4530 Advanced Cardiovascular and Pulmonary Physiology (4 Credits)**

This course is developed to provide a deeper level of physiological knowledge of the cardiac, vascular, circulatory, and pulmonary systems and their functions. With both lecture materials as well as in-class discussion of concepts and research articles, we will go deep into the basic levels of composition and function and facilitate the understanding of mechanisms that limit disease populations, elderly, etc. How can we adapt our lifestyles to improve our cardiovascular health? Prerequisite: BIOL 3250.

**BIOL 4540 Electrocardiogram Interpretation (2 Credits)**

This course is an advanced course in cardiac physiology for those interested in understanding principles associated with cardiac function, electrical physiology of the heart, and interpretation of the electrocardiogram. As the functions related to our heart drive our cardiovascular system, we will find ways to relate our experiences of daily life to the concepts and principles learned throughout this course to deepen our knowledge and retain this information. We will explore the physiological mechanisms related to the cardiac system as well as develop projects that require combining knowledge of the electrical pathways and of use of electrocardiography for proper interpretation.

**BIOL 4550 Cardiopulmonary Rehabilitation (2 Credits)**

This course focuses specifically on cardiopulmonary rehabilitation. Students will gain an understanding of (1) the impact of lung and heart disease on daily physical activity levels, (2) common mechanisms limiting exercise tolerance, and (3) risks and benefits of exercise for patients with lung and heart disease. Students will learn guidelines for exercise prescription and rehabilitation programs for patients with cardiovascular and pulmonary diseases. Practical application of knowledge and skills gained in BIOL 4530 will be emphasized. Prerequisite: BIOL 4530 Advanced Cardiovascular & Pulmonary Physiology.

**BIOL 4570 Advanced Human Pharmacology (2 Credits)**

This class will focus on how drugs and other therapeutics can be used to treat and prevent diseases. Students will develop a deep understanding of pharmacokinetics/ pharmacodynamics, the major classes of drugs, how and why they are used, drug side effects, and drug interactions. Specific emphasis will relate to effects of drugs utilized for disease prevention or treatment on physical activity and exercise.



**BIOL 4580 Physical Activity for Management of Chronic Diseases (3 Credits)**

This one quarter course is intended for graduate students in the clinical exercise physiology program or other related programs. This course builds upon previous coursework in clinical exercise physiology. It will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of exercise management for persons with chronic diseases and disabilities. Starting with an overview of the concept of "exercise as medicine," the principles of safe exercise as a method for improving health outcomes will be applied to individuals with chronic diseases. Various chronic disease states and their associated medical challenges will be explored, and the recommendations for modified exercise activities, durations and outcomes to support healthy and safe outcomes will be addressed. In addition to didactic content, students will complete evaluation of primary literature in the field. Prerequisite: BIOL 4500/4510 Clinical Exercise Physiology I and II.

**BIOL 4870 Medical Ethics (4 Credits)**

This course presents knowledge and discussion of ethical issues that arise from advances in the biomedical sciences and medicine. Several specific ethical issues and policies related to methodologies and procedures, emerging medical technologies, treatment decisions, doctor-patient relationship, informed consent, medical experimentation/clinical research, and health care reform.

**BIOL 4880 Capstone in Biomedical Sciences (4 Credits)**

This is the capstone course for students enrolled in the Professional Science Master's program. In this course, students integrate advanced knowledge in science and math along with courses taken outside traditional science and math courses as their electives. This course incorporates lectures, guest speakers, and class discussions focusing on current issues or concerns in the chosen concentration. PSM students only. Requires instructor approval.

**BIOL 4980 Internship in Biomedical Sciences (1-4 Credits)**

The internship course provides individualized opportunities to gain experience and professional skills. This course includes a structured practical and productive internship experience that allows for the integration and application of disciplinary knowledge in a professional setting. The internship can be administrative, clinical, programmatic, or research focused. Students will work with a professional from healthcare, pharmaceutical and biotech companies, or private and public health services to identify the student's specific project focus.

**BIOL 4991 Independent Study (1-17 Credits)****BIOL 4995 Independent Research (1-8 Credits)****BIOL 5991 Independent Study (1-17 Credits)****BIOL 5995 Independent Research (1-8 Credits)****Health Sciences Courses****HLTH 3000 Seminar in Health Science (1-2 Credits)**

This seminar is the capstone course for the Human Health Science & Systems program. This class will focus on the current understanding of several topics in human health. Emphasis will be on critical reading and discussion of current scientific literature related to human health and health care. Students will learn to recognize and appreciate different approaches and methods of health-related research. Students will utilize and integrate knowledge from previous courses to understand to present effective discussions on current topics in health. For students' continued development of strong oral communication skills, student presentations of primary literature will generate the basis of discussion. Prerequisites: HLTH 2000 and 2010.

**HLTH 3600 Cultural Responsiveness in Health Care (2 Credits)**

To contribute to reducing health inequities and improving health outcomes, this course will promote an improved understanding and responsiveness to the realities of social and structural impacts that influence the health of an individual or community. Topics will include health care delivery and access, political economy of health care, implicit biases, professionalism, relational leadership, dealing with patients in difficult situations, and health equity. The course will help students learn to provide more informed and effective care and promote a more culturally sensitive and responsive future workforce in healthcare, while also serving community needs. Prerequisite: HLTH 2000 or equivalent.

**HLTH 3700 Topics in Health (1-4 Credits)**

Topics in the area of, but are not limited to, human health and disease, environmental or social impacts on health, healthcare delivery, evidence-based medicine. Students will gain knowledge of a specific topic in human health and/or health care through discussion of current literature and research. May be repeated for credit. Prerequisites: HLTH 2000 or 2010.

**HLTH 4210 Advanced Health Education and Promotion (2 Credits)**

This course will provide students foundational knowledge about how to deliver health education and promote healthy behaviors to patients and community. This course will provide students with the practical skills and best practices for communicating and educating others about health, clinical tests and results, and clinical plans of action. Students will gain practical skills for encouraging goal setting and behavioral change and will develop an understanding of motivational considerations especially for patients with mental health challenges or psychosocial concerns related to acute and chronic physical disorders. Students will focus on integrating evidence-based research and strategies for the purpose of leading culturally sensitive discussions and/or difficult conversations and encouraging healthy behaviors.

**HLTH 4300 Basic Legal Consideration in Healthcare (2 Credits)**

This course will provide a basic understanding of legal issues that may affect care providers and business owners. Basic legal terminology and concepts will be presented, in addition to basic court processes and procedures. A goal of establishing this basic understanding is to prevent or reduce the consequences of lawsuits. Professionalism and the code of ethics will also be discussed.

# Chemistry and Biochemistry

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Mail Code: 2190 E. Iliff Ave., Denver, CO 80208

Phone: 303-871-2435

Email: [cheminfo@du.edu](mailto:cheminfo@du.edu)

Web Site: <https://science.du.edu/chemistry> (<https://science.du.edu/chemistry/>)

## Why study chemistry at the University of Denver?

Consider the advantages:

- Excellent, research-active faculty
- Small classes, personal attention
- First-rate teaching facilities
- Modern, state-of-the-art equipment

At the University of Denver, we offer the training and activities to energize your graduate experience and help you develop into a professional scientist.

The Department of Chemistry and Biochemistry at the University of Denver offers programs leading to MA, MS or PhD degree in chemistry.

Our faculty members actively involve students in research programs supported with more than \$1.5 million in annual funding from federal agencies, state governments and private industries. In our programs, you will enjoy the benefits of a friendly, personalized learning environment that offers nationally competitive and extremely productive research opportunities.

The Department of Chemistry and Biochemistry has much to offer a graduate student: close and frequent student-faculty interaction; an integrated program of courses; and excellent equipment and facilities including 500 MHz NMR, 600 MHz NMR, multiple custom-built and commercial EPR spectrometers, ICP-mass spectrometer and OES, Raman microscope, photon counting lifetime fluorescence, nanosecond laser flash photolysis, atmospheric aerosol particle monitoring and collection equipment, circular dichroism, fluorescence microscopy, and multiple gloveboxes, HPLCs and FPLCs.

Faculty research interests encompass biophysical, organic, analytical and environmental chemistry, and biochemistry. The department's relatively small size allows a broader, more interdisciplinary approach than in large departments. Collaboration between research groups is very common. Our instructional format merges traditional disciplines into interdisciplinary courses that more closely reflect current trends in chemistry.

The department of Chemistry and Biochemistry also participates in an interdepartmental PhD program in Molecular and Cellular Biophysics at the University of Denver. See the molecular and cellular biophysics bulletin (p. 880) for more specific details.

## Doctor of Philosophy in Chemistry

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in chemistry, biochemistry or a related field from a regionally accredited institution prior to beginning graduate coursework at DU.

### Additional Requirements

- Applicants may be contacted to schedule an admissions interview.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master of Arts in Chemistry

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Additional Requirements

- Applicants may be contacted to schedule an admissions interview.

### English Language Proficiency Test Score Requirements

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- Minimum TOEFL Score (Internet-based test): 80
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## Master of Science in Chemistry

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
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- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- Applicants must earn and submit proof of earning the equivalent of a baccalaureate degree in chemistry, biochemistry or a related field from a regionally accredited institution prior to beginning graduate coursework at DU.

### Additional Requirements

- Applicants may be contacted to schedule an admissions interview.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

# Doctoral Program

## Doctor of Philosophy in Chemistry

The PhD is the highest degree awarded and is intended for students seeking a career in scientific research. The ultimate aim of this degree is to train a scientist who can independently design and supervise a research project. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student's progress.

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
<b>Chemical systems (three-quarter sequence)</b>		
CHEM 3110	Chemical Systems I	3
CHEM 3120	Chemical Systems II	3
CHEM 3130	Chemical Systems III	3
<b>Molecular structure and energetics (two-quarter sequence)</b>		
CHEM 3310	Structure and Energetics I	3
CHEM 3320	Structure and Energetics II	3
<b>Biochemistry (two-quarter sequence)</b>		
CHEM 3831	Advanced Protein Biochemistry	3
CHEM 3705	Topics in Biochemistry	3
<b>Analytical</b>		
CHEM 3220	Advanced Analytical Chemistry	3
<b>Independent research (repeats allowed)</b>		<b>62-66</b>
CHEM 4995	Independent Research	1-8
<b>Additional Coursework</b>		<b>0-4</b>
Advanced topics		
CHEM 3XXX or 4XXX or others if pre-approved by the graduate committee		
<b>Total Credits</b>		<b>90</b>

Minimum credits required for degree: 90 (of which a minimum of 75 hours must be earned at the University of Denver)

Because a PhD in chemistry is primarily a degree in which competence in research is learned and demonstrated, a large percentage of these hours are earned as credit for research (CHEM 4995 Independent Research). A minimum of 70 graduate level quarter hours must be in CHEM courses; a maximum of 20 quarter hours may be outside of CHEM courses, but must remain within natural sciences (e.g., courses with BIOL, MATH, GEOG and/or PHYS prefixes). The formal or classroom course requirements are the same as those for the MS degree.

The graduate core curriculum must be completed with a GPA of 3.0 or better.

#### Non-coursework Requirements

- Cumulative Examinations

The PhD candidate must complete the cumulative examination requirement by the seventh quarter in residence. These examinations are prepared from topics appearing in the current literature and fundamental materials found in review articles.

- Research Proposal Examination

By the end of the eighth quarter in residence, the student should give an oral presentation of a scholarly proposal developed by the student concerning a topic that is within the scope of the adviser's research program. It is possible to propose a topic that is unrelated to the research program, but only with the prior approval of the adviser. After the public presentation, the student will defend the proposal before a committee of four faculty members (the advisory committee and one additional member). A written version of the proposal will also be required one week prior to the public presentation.

- Dissertation

A dissertation of publishable quality based on the student's original research must be completed. A summary of the dissertation is presented in a public seminar and later defended in a private oral examination. The dissertation examination committee will consist of the three members of the student's advisory committee, one additional member of the chemistry faculty to be selected by the advisory committee and an outside chair.

- Seminars

All students in the PhD program are expected to present a departmental “non-thesis” seminar. This seminar should be presented fairly early in the degree program. In addition, the student must present public seminars as part of the proposition oral exam and final thesis defense. The student is also expected to attend Departmental seminars.

## Master's Programs

### Master of Arts in Chemistry

The MA degree is intended primarily to meet the needs of students, such as those working full time in local industry or secondary education, who are seeking an advance degree with only a small research component. The primary difference between the MA degree and the MS degree is that a research thesis is required for the MS degree. The research required for the MS degree is often not feasible for students who work full time or is not of interest to those preparing for a career, for example, in secondary education. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student's progress.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
<b>Chemical systems (three-quarter sequence)</b>		
CHEM 3110	Chemical Systems I	3
CHEM 3120	Chemical Systems II	3
CHEM 3130	Chemical Systems III	3
<b>Molecular structure and energetics (two-quarter sequence)</b>		
CHEM 3310	Structure and Energetics I	3
CHEM 3320	Structure and Energetics II	3
<b>Biochemistry (two-quarter sequence)</b>		
CHEM 3811 or CHEM 3831	Biochemistry-Proteins Advanced Protein Biochemistry	3
CHEM 3812 or CHEM 3705	Biochemistry-Membranes/Metabolism Topics in Biochemistry	3
<b>Analytical</b>		
CHEM 3220	Advanced Analytical Chemistry	3
<b>Seminar</b>		
<b>Independent study or independent research (repeats allowed)</b>		<b>6</b>
CHEM 4991	Independent Study	
CHEM 4995	Independent Research	
<b>Additional Coursework</b>		<b>15</b>
One advanced topic course or additional research credits		
CHEM 4XXX or others if pre-approved by the graduate committee		
<b>Total Credits</b>		<b>45</b>

Minimum credits required for degree: 45 (of which a minimum of 35 credit hours must be earned at the University of Denver)

The graduate core curriculum must be completed with a GPA of 3.0 or better. If it is appropriate, and approved by the graduate committee, other graduate courses may be substituted for part of the graduate core curriculum.

#### Independent Study and/or Research

A minimum of six credit hours of independent study and/or independent research approved by the student's advisory committee must be completed.

#### Courses in Other Departments

A minimum of 35 credit hours must be taken in courses offered by the Department of Chemistry and Biochemistry. As many as 10 credit hours may be taken in science-related 3000- to 4000- graduate level courses approved by the student's advisory committee.

#### Seminars

All students in the MA degree program must present a technical seminar and attend Departmental seminars.

## Master of Science in Chemistry

The MS degree is intended for students who wish an advanced degree in chemistry primarily for the purpose of better preparation to conduct research work in chemistry or biochemistry. To facilitate the educational process, each student has an advisory committee that functions to both advise the student and monitor the student's progress.

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
<b>Chemical systems (three-quarter sequence)</b>		
CHEM 3110	Chemical Systems I	3
CHEM 3120	Chemical Systems II	3
CHEM 3130	Chemical Systems III	3
<b>Molecular structure and energetics (two-quarter sequence)</b>		
CHEM 3310	Structure and Energetics I	3
CHEM 3320	Structure and Energetics II	3
<b>Biochemistry (two-quarter sequence)</b>		
CHEM 3831	Advanced Protein Biochemistry	3
CHEM 3705	Topics in Biochemistry	3
<b>Analytical</b>		
CHEM 3220	Advanced Analytical Chemistry	3
<b>Independent research (repeats allowed)</b>		
CHEM 4995	Independent Research	1-10
<b>Additional Coursework</b>		<b>11-20</b>
Advanced topics or additional research		
CHEM 4XXX or others if pre-approved by the graduate committee		
<b>Total Credits</b>		<b>45</b>

#### Minimum credits required for degree: 45 (of which a minimum of 35 credit hours must be earned at the University of Denver)

The graduate core curriculum must be completed with a GPA of 3.0 or better.

#### Seminars

All students in the MS program must present one departmental "non-thesis" seminar, in addition to the thesis seminar and attend Departmental seminars.

#### Non-coursework Requirements

Thesis- A thesis of publishable quality must be completed. A summary of the thesis is presented in an oral defense. The thesis defense committee will consist of a minimum of two faculty members from the Department of Chemistry and Biochemistry and an outside chair.

##### CHEM 3110 Chemical Systems I (3 Credits)

Advanced discussion of modern concepts of organic chemistry; bonding, stereochemistry, reaction mechanisms. Prerequisites: CHEM 2453 and equivalent of one year of physical chemistry.

##### CHEM 3120 Chemical Systems II (3 Credits)

Interpretation of trends in the chemistry of the elements in terms of orbital interactions. Most examples will be taken from the third row transition metals and the boron and carbon groups. Prerequisites: CHEM 2131, CHEM 3310 and CHEM 3110.

##### CHEM 3130 Chemical Systems III (3 Credits)

Advanced-level physical biochemistry course intended for advanced-level undergraduates and graduate students. Focuses on kinetic, thermodynamic and dynamic aspects of biopolymers; delineates the relationship of these properties to the mechanism and function of biological macromolecules. Prerequisites: CHEM 3811, CHEM 3812, CHEM 3813, CHEM 3610 or the equivalent.

##### CHEM 3220 Advanced Analytical Chemistry (3 Credits)

Principles of chemical instrumentation applied to analytical measurements; principles, instrumentation and applications of spectrometric and chromatographic measurements. Prerequisites: CHEM 3210 and CHEM 3621, or the equivalent.

##### CHEM 3310 Structure and Energetics I (3 Credits)

Fundamentals of quantum chemistry, and introduction to symmetry and molecular structure of small and large systems. Prerequisite: one year of physical chemistry.

**CHEM 3320 Structure and Energetics II (3 Credits)**

Computational methods in chemistry. Prerequisites: CHEM 3310, one year of physical chemistry.

**CHEM 3410 Atmospheric Chemistry (3 Credits)**

The concepts of equilibrium thermodynamics, kinetics, and photochemistry will be applied to understanding atmospheric processes. Covers urban air pollution in detail with focus on primary pollutants. Also covers stratospheric chemistry with focus on ozone chemistry and the chemistry of climate change. Prerequisites: (CHEM 2270 and CHEM 2453) OR CHEM 2240.

**CHEM 3411 Aquatic Chemistry (3 Credits)**

The circulation of the oceans and their chemical make-up. 'Classical water pollution problems' like biological oxygen demand and turbidity are discussed. Also presented: aquifer structure and flow, ground water chemistry, pollutant partitioning between stationary and mobile phases, heterogeneous surface chemistry, and the detection of trace contaminants. Prerequisites: (CHEM 2270 and CHEM 2453) or CHEM 2240.

**CHEM 3412 Environmental Chemistry & Toxicology (3 Credits)**

A survey of environmental toxicology concepts: animal testing, dose-response data, epidemiology, risk assessment. The course includes ecotoxicology, focusing on the alteration of biological and chemical systems beyond the simple response of an individual to an environmental chemical. Prerequisites: CHEM 2270 and CHEM 2453.

**CHEM 3413 Aerosol Science (3 Credits)**

CHEM 3413 is an introductory course that presents fundamental concepts associated with atmospheric aerosols in both natural and human environments. The course will focus on the sources, behavior, and effects of atmospheric aerosols, or particulate matter (PM) within the contexts of the natural environment and climate, human health, and industrial applications. The course will provide an overview of the chemical and physical characteristics of particulate matter and measurement methods, including chemical reactions that lead to aerosol formation and transformation. Examples and demonstrations will discuss applications to medical science, public health, clouds and climate, air pollution, colors in the sky, the built environment, mechanical engineering, chemical industry, and many other topics that stimulate curiosity. Aerosols affect almost every aspect of the environment and human health and are an important part of countless industrial processes or commercial products. The course is designed to provide a background to students interested in further study or careers broadly in (a) the environmental sciences, (b) medical or health sciences, or (c) many chemical or other scientific or engineering fields where aerosol processes are involved. CHEM 3413 will be taught at an upper-division (3000) level, but with enough flexibility to expect all environmental science, chemistry, biochemistry, biology, ecology, or engineering majors with the prerequisite year of chemistry to have fun and be able to learn effectively and succeed. The course is lecture-only; no lab is required, although demonstrations and hands on activities will be involved. The course fulfills requirements for the Environmental Chemistry B.S. major or minor, elective credit toward the Environmental Science B.S. or B.A. majors, and elective credit toward graduate programs in Chemistry. Prerequisite: CHEM 2240 or CHEM 2131.

**CHEM 3610 Physical Chemistry I (3 Credits)**

Fundamentals of thermodynamics, including phase and reaction equilibria, properties of solutions, and electrochemistry needed for advanced study in life sciences and for Physical Chemistry II and III. May be taken for graduate credit by nonchemistry majors. Prerequisites: CHEM 2453, calculus and physics.

**CHEM 3620 Physical Chemistry II (3 Credits)**

Fundamentals of quantum chemistry, including theories of atomic and molecular structure and spectroscopy. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3610.

**CHEM 3621 Physical Chemistry III (3 Credits)**

Fundamentals of kinetic theory and statistical mechanics. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3620.

**CHEM 3703 Topics in Organic Chemistry (3 Credits)**

May include organic photochemistry, organic synthesis, organic electrochemistry or natural products. May be repeated for credit. Prerequisites: CHEM 3110 or equivalent and others depending on topic.

**CHEM 3705 Topics in Biochemistry (3,4 Credits)**

May include physical techniques for exploring biological structure, biological catalysis, and selected fields within biochemistry taught from original literature. May be repeated for credit. Prerequisites: CHEM 3831 and 3813.

**CHEM 3811 Biochemistry-Proteins (3 Credits)**

Protein structure and function, starting with the building blocks and forces that drive the formation of protein structure and the basic concepts of protein structure, and continuing with enzyme catalysis, kinetics, and regulation. Prerequisites: CHEM 2453 or instructor permission.

**CHEM 3812 Biochemistry-Membranes/Metabolism (3 Credits)**

Membranes and membrane mediated cellular processes, energy and signal transduction, and metabolic/biosynthetic pathways. Prerequisite: CHEM 3811 or CHEM 3831.

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Molecular processes underlying heredity, gene expression and gene regulation in prokaryotes and eukaryotes. Prerequisites: CHEM 2453 and CHEM 3811.

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**CHEM 3991 Independent Study (1-10 Credits)**

May be repeated for credit.

**CHEM 3995 Independent Research (1-10 Credits)**

Research project conducted under guidance of a faculty member. Credit hours and projects arranged on an individual basis. May be repeated for credit.

**CHEM 4900 Chemistry Seminar (0 Credits)**

A weekly presentations of research in progress and of current literature by outside speakers. faculty and graduate students.

**CHEM 4980 Internship-Graduate (0 Credits)**

The work will have a well-defined chemistry or biochemistry component that will enhance the student's understanding of the field and provide hands-on real-world experience.

**CHEM 4991 Independent Study (1-10 Credits)****CHEM 4995 Independent Research (1-10 Credits)****CHEM 5991 Independent Study (1-10 Credits)****CHEM 5995 Independent Research (1-10 Credits)**

## Courses

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A weekly presentations of research in progress and of current literature by outside speakers. faculty and graduate students.

**CHEM 4980 Internship-Graduate (0 Credits)**

The work will have a well-defined chemistry or biochemistry component that will enhance the student's understanding of the field and provide hands-on real-world experience.

CHEM 4991 Independent Study (1-10 Credits)

CHEM 4995 Independent Research (1-10 Credits)

CHEM 5991 Independent Study (1-10 Credits)

CHEM 5995 Independent Research (1-10 Credits)

## Geography and the Environment

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### Why study geography at the University of Denver?

Consider these advantages:

- Engaged and research-active faculty
- Small classes and personal attention
- State-of-the-art geospatial technology laboratories
- Strong and exciting field orientation
- Excellent location for applied research in physical and human geography

Situated at the foot of the Rocky Mountains in the dynamic city of Denver, the University of Denver is an ideal laboratory for physical and human geographers, as well as those studying human-environment interaction and geographic information science.

Since it was founded in 1945, the University of Denver's department of geography has offered excellent opportunities for graduate students in teaching, research, academia, government and the private sector.

We have state-of-the-art facilities and resources:

- Fully networked labs with frequent upgrades in hardware, specialized equipment and software
- Four Geographic Information Science (GIS) labs which include most industry standard GIS software (All ESRI products, ERDAS Imagine, E-cognition, ENVI, Web Mapping and Geovisualization products)
- USDA-approved soil and sediment lab and the Hoyt Mineral Collection
- Multimedia teaching classrooms
- National and international field trips
- The Mount Evans field station (elevation 10,600 feet), is just 45 minutes from campus

Come visit our facilities, meet our faculty and students and see the advantages for yourself.

The Department of Geography and the Environment at the University of Denver offers programs leading to the MA in Geography, MS in Geographic Information Science (GISc) (on-campus and online programs) and PhD in Geography. Areas of teaching and research include biogeography, climatology, computer-assisted cartography, cultural geography, development, economic geography, environmental geology, geographic information science, geovisualization, geomorphology, global change, hydrology, land use/land cover analysis, Latin America, natural resources, paleoenvironmental change, political ecology, Quaternary studies, remote sensing, soils, spatial analysis, sustainability, transportation, and urban geography and planning. With 12 tenure-line faculty and five full-time teaching faculty, our faculty is very active in research, publishing numerous journal articles and presenting many conference papers every year. Our faculty members also are known for their excellence as instructors, with several faculty having earned major teaching awards.

### Doctor of Philosophy in Geography

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Master's degree: This program requires a master's degree as well as the baccalaureate.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

## Master of Arts in Geography

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Geographic Information Science

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Geographic Information Science (Online Program)

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Program

### Doctor of Philosophy in Geography

#### Degree Requirements

#### Coursework Requirements

A minimum of 117 quarter hours of credit is required for the doctoral degree, up to 45 hours of which may be transferred from an earned master's degree from a regionally accredited university.

Code	Title	Credits
<b>Core coursework requirements</b>		<b>12</b>
Complete the following courses or work with your advisor if the equivalent of the following courses were taken as part of your MA or MS program.		
GEOG 3000	Advanced Geographic Statistics	
GEOG 4000	Fundamental Geographic Perspectives	
GEOG 4020	Geographic Research Design	
GEOG 4900	Graduate Colloquium in Geog	
<b>Geography courses</b>		<b>32</b>
Complete at least 32 additional credits in geography courses (at least 3000 or higher level) directed toward the dissertation research		
<b>Cognate courses</b>		<b>12</b>
Complete at least 12 additional credits in cognate coursework in a related field		
<b>Additional coursework</b>		<b>0-16</b>
Complete 2 graduate seminar courses and 2 research tools to reach the number of minimum credits required for the degree		
<b>Transfer Credit</b>		<b>0-45</b>
A maximum of 45 credits may be accepted as transferred in from a MA or MS program, including credits substituting core coursework requirements		
<b>Total Credits</b>		<b>117</b>

Minimum number of credits required for the degree: 117 credits

#### Non-coursework requirements:

- Two Research Tools Requirement
- PhD Research Proposal Presentation
- Comprehensive Examination
- Dissertation
- Oral Defense

### Two Research Tools Requirement

The options to meet the tool requirement include languages, geographic information systems, computer cartography, remote sensing and geographic statistics.

### PhD Research Proposal Presentation

Each student is required to prepare and present a dissertation proposal and have it formally approved by the student's faculty committee. This should be completed by the end of the second year for a full-time PhD student.

### Comprehensive Exam

This exam, which includes both written and oral parts, is designed to evaluate the student's work at the University of Denver.

This exam is usually scheduled after all substantive course work has been completed and the dissertation proposal has been approved. It must be taken at least three quarters prior to expected graduation. Students should consult with their adviser and committee members to achieve a greater understanding of what will be on the exam. The written portion of the exam can be taken in one of two formats: a written examination conducted in the department usually taken over two days, lasting four hours each day, or a take-home examination in which the student has five days to complete the exam. An oral examination is held two weeks after the written exam has been completed. A candidate who fails one or all parts of the comprehensive exam may petition the department for re-examination. Re-examination, if granted by the department, may not be scheduled until the succeeding quarter and cannot be retaken more than once.

### Dissertation and Oral Defense

Upon completion of course work, approved proposal, comprehensive exam and the dissertation, each student will undergo a final oral defense. An oral defense may not be scheduled until at least the second quarter following the quarter in which the comprehensive exam was successfully completed (the summer may count as a quarter, though no examinations should be scheduled during the summer). The final oral defense is to be conducted at least two weeks before the end of the quarter in which the degree is to be awarded. This defense is usually about two hours in length, and is composed of a 20–25 minute presentation by the student followed by questions from the committee. The examining committee is comprised of at least four members: an advisor and three other committee members. The advisor must be a full-time tenure-line faculty member in the Department of Geography & the Environment with a research record and interest appropriate to the student's proposed research area of specialization. All members of the committee must be full-time appointed faculty at DU and have research records appropriate to the student's area of specialization. Faculty from appropriately-related units who hold the terminal degree in their field may serve on the committee as long as the candidate's graduate unit has the majority representation and a two-thirds majority of the committee hold the earned doctorate. There is also a non-voting Oral Defense Committee Chair who must be a tenured faculty member from another department at the University of Denver serving as the university representative for the final oral defense.

For doctoral programs, research areas are limited to the fields of biogeography, climatology, cultural geography, economic geography, geographic information science, geomorphology, global change, human environment interaction, Latin America, paleoenvironmental change, Quaternary studies, transportation geography and urban geography in accordance with current faculty expertise.

## Master's Programs

### Master of Arts in Geography

#### Requirements for students with prior degrees in geography:

For the MA degree, 45 quarter hours of course work and a thesis are required. Students can specialize in subfields within physical geography, human geography or human-environment interaction (please see the Department of Geography and the Environment Graduate Student Handbook for detailed information).

#### Degree requirements

##### Coursework requirements

Code	Title	Credits
Core coursework requirements:		
GEOG 3000	Advanced Geographic Statistics	4
GEOG 4000	Fundamental Geographic Perspectives	4
GEOG 4020	Geographic Research Design	4
GEOG 4900	Graduate Colloquium in Geog	0
Additional transfer, departmental, and other university courses		0-33
<b>Total Credits</b>		<b>45</b>
Note: Students must take a minimum of 33 credits in GEOG courses		

Minimum number of credits required for degree: 45 credits

**Non-coursework requirements:**

- Research proposal presentation
- Thesis
- Final Oral Defense

**Research Proposal Presentation**

Each student is required to prepare and present a thesis proposal and have it formally approved by the student's faculty committee.

**Thesis Requirement**

Original research of a geographic topic is required, the scope of which is determined by the thesis committee. The thesis should be of publishable quality.

**Final Oral Defense**

Upon completion of required course work, proposal approval and the thesis, each student will undergo a final oral defense. This defense is usually about two hours in length. The defense will address both course work and the thesis research. The final oral defense is to be conducted at least two weeks before the end of the quarter in which the degree is to be awarded. The oral defense committee is comprised of at least three members: an advisor and two other committee members. The advisor must be a full-time tenure-line faculty member in the Department of Geography & the Environment with a research record and interest appropriate to the student's proposed research area of specialization. All members of the committee must be full-time appointed faculty at DU and have research records appropriate to the student's area of specialization. DU faculty from appropriately related units who hold the terminal degree in their field may serve on the committee as long as the candidate's graduate unit has the majority representation. There is also a non-voting Oral Defense Committee Chair who must be a tenure-line faculty member from another department at the University of Denver serving as the university representative for the final oral defense.

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## Master of Science in Geographic Information Science

**Degree requirements****Coursework requirements**

Code	Title	Credits
<b>Core coursework requirements</b>		<b>28</b>
GEOG 3000	Advanced Geographic Statistics	
GEOG 3010	Geographic Information Analysis	
GEOG 3140	GIS Database Design	
GEOG 3150	GIS Project Management	
or GEOG 4170	Geospatial Analysis and Project Management	
GEOG 3200	Remote Sensing	
GEOG 4020	Geographic Research Design	
GEOG 4900	Graduate Colloquium in Geog	
GEOG 4993	Capstone or Project	

**Electives** **8-20**

A minimum of 8 quarter hours of electives must be taken in geography from any of the GEOG courses at 3000 level or above. It is strongly recommended that students take GEOG 4000 Fundamental Geographic Perspectives as one of their elective courses.

**Total Credits** **48**

Note: At least 24 quarter hours must be completed in courses taken within the Department of Geography & the Environment at the University of Denver. No more than 24 credits will be accepted in transfer from the GIS certificate program.

Minimum number of credits required for degree: 48 credits

**Non-coursework requirements:**

- Capstone project
- Capstone project presentation

**Capstone Project**

Students will be required to produce a final project of professional quality demonstrating their ability to apply geographic information science to their chosen area of specialization. The project is done for, and with, a company, agency, nongovernmental organization or faculty member who is referred to as the client. The project must be used by the client and may be predominantly technical in nature or may include a research component. The project must demonstrate a mastery of one or more of the several geospatial technologies. It must require the student to engage in all facets of a project, from design to implementation. At the completion of the project, students will present their work to their peers.

## Master of Science in Geographic Information Science (Online Program)

This option is designed for people wishing to complete the degree via an online format.

### Degree requirements

#### Coursework requirements

Code	Title	Credits
<b>Core coursework requirements</b>		<b>20</b>
Complete all of the following courses:		
GEOG 3000	Advanced Geographic Statistics	
GEOG 3010	Geographic Information Analysis	
GEOG 3140	GIS Database Design	
GEOG 3150 or GEOG 4170	GIS Project Management Geospatial Analysis and Project Management	
GEOG 3200 or GIS 4700	Remote Sensing (Remote Sensing is elective in GIS certificate program) Remote Sensing I	
<b>Geography/GIS Elective Courses</b>		<b>20</b>
Complete a minimum of five elective courses from any University College GIS certificate program course and not already used to meet a required course, or choose from the courses below.		
GEOG 3040	GPS for Resource Mapping	
GEOG 3410	Urban Applications in GIS	
GEOG 3860	GIS Applications and Natural Resources	
GEOG 3130	GIS Programming with Python	
Acceptable University College GIS certificate electives can be found at the University College GIS certificate program website. <sup>1</sup>		
<b>Capstone courses</b>		<b>8</b>
Complete both of the following courses:		
GEOG 4020	Geographic Research Design	
GEOG 4993	Capstone or Project	
<b>Total Credits</b>		<b>48</b>

Note: At least 24 credits counted towards the degree must be taken within the Department of Geography & the Environment at the University of Denver. No more than 24 credits will be accepted in transfer from the GIS certificate program.

Minimum number of credits required for degree: 48 credits

#### Non-coursework requirements:

- Capstone project

<sup>1</sup> <http://universitycollege.du.edu/gis/degree/certificate/geographic-information-systems-online/degreeid/31#courses> (<http://universitycollege.du.edu/gis/degree/certificate/geographic-information-systems-online/degreeid/31/#courses>)

#### GEOG 3000 Advanced Geographic Statistics (4 Credits)

The second in a sequence of two courses that address general statistical applications particular to geography, environmental science and other disciplines dealing with a spatial dimension in the data they work with. The focus of this second course is on the more advanced multivariate statistical techniques. The course has a strong applied orientation as particular attention is given to which technique is the most appropriate to use for a given type of problem and how to interpret and apply the resulting statistics. Extensive use is made of computer statistics packages. Homework exercises involving such statistical techniques as multiple correlation and regression analysis, principle components analysis, discriminate analysis and canonical correlation. Prerequisite: GEOG 2000.

#### GEOG 3010 Geographic Information Analysis (4 Credits)

Reviews many basic statistical methods and applies them to various spatial datasets. In addition, several spatial statistical methods are applied to spatial datasets. This course is an in-depth study of the interface between GIS, spatial data, and statistical analysis. Preferred prerequisite: GEOG 2000. Prerequisite: GEOG 2100.

#### GEOG 3030 Advanced Field Methods (4 Credits)

Various field methods used by researchers in physical geography; techniques include field mapping, laboratory analyses, geologic field methods. Prerequisite: GEOG 1201 or equivalent.

**GEOG 3040 GPS for Resource Mapping (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Hands-on lab exercises include navigation, mission planning for a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, differential correction, and data integration into a GIS and map production.

**GEOG 3100 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 3110 GIS Modeling (4 Credits)**

This course focuses on the concepts and procedures used in discovering and applying relationships within and among maps. It extends the mapping and geo-query capabilities of GIS to map analysis and construction of spatial models. The course establishes a comprehensive framework that addresses a wide range of applications from natural resources to retail marketing. Topics include the nature of spatial data introduction to spatial statistics and surface modeling in the first five weeks followed by spatial analysis operations and modeling techniques in the second five weeks. The lectures, discussions and independent exercises provide a foundation for creative application of GIS technology in spatial reasoning and decision making.

**GEOG 3120 Environmental/GIS Modeling (4 Credits)**

Facing challenges brought by the dramatically changing global environment, environmental modeling is increasingly used to support geographical and environmental decision making (e.g., spatial conservation prioritization). Environmental modeling is concerned with the characterization, modeling and simulation of environmental phenomena and processes using conceptual and mathematical models. Environmental phenomena and processes taking place in the geographic space are regulated by spatial principles. They also interact with other phenomena or processes in the attribute space. For example, species distribution is not only constrained by spatial factors such as proximity to other species, but also influenced by environmental factors such as terrain and climatic conditions. Due to its superior capabilities of handling spatial data and modeling spatial and attribute relationships, geographic information system (GIS) provides the ideal tools for environmental modeling. This upper-level undergraduate/graduate-level course surveys the concepts and techniques of GIS supported environmental modeling in three general categories: 1) Modeling in the spatial domain where the focus is on modeling spatial principles (e.g., spatial autocorrelation); 2) Modeling in the attribute domain where the emphasis is on environmental correlations (e.g., environmental niche modeling); 3) Modeling in the combined spatial and attribute domain where both spatial principles and environmental correlations are exploited (e.g., geographically weighted regression). Throughout this course, several real-world applications are used to demonstrate the ideas, concepts, and techniques of GIS supported environmental modeling, including crime spatial pattern modeling, species distribution modeling, and soil-landscape modeling and mapping. Prerequisites: GEOG 2000 and GEOG 2100.

**GEOG 3130 GIS Programming with Python (4 Credits)**

This advanced course explores the more technical aspects of GIS functions and data structures. Students have hands-on access to both raster (grid-cell) and vector-based software packages in the form of lab exercises that culminate in a small student-designed GIS project. Prerequisite: GEOG 2100.

**GEOG 3140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products. Prerequisite: GEOG 2100 or GEOG 3100.

**GEOG 3150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.



**GEOG 3160 Web GIS (4 Credits)**

With the development of internet technologies, the architecture of Geographic Information System (GIS) has evolved from the centralized desktop architecture to the distributed web architecture. Numerous web GIS applications are available (e.g., Google Map, Earth Explorer, and National Map). A web GIS application allows GIS analysts to access, manipulate, and visualize geospatial data from the web without the installation of GIS software. To facilitate the development of web GIS applications, geospatial technology vendors have provided application programming interfaces (APIs) through which GIS professionals can build customized web applications. This course focuses on the concepts and the development of web based GIS applications using industry-relevant geospatial APIs and core web technologies of HTML, CSS, and JavaScript. This is an upper-level undergraduate, to graduate-level course in GIS that introduces fundamental Web GIS concepts, applications and development kits. Concepts and techniques to be covered in this course include: • Web GIS concepts: system architecture, components, and workflow • Web programming languages: Hypertext Transfer Markup Language (HTML), Cascading Style Sheet (CSS) and JavaScript • Web mapping tools: ArcGIS online, Leaflet and their APIs. Prerequisites: GEOG 2100 and GEOG 3130.

**GEOG 3190 Lidar. Theory and Applications (4 Credits)**

Overview: Lidar (Light Detection and Ranging) is an active remote sensing system that uses laser pulses to measure the distance between the sensor and a surface or objects. Lidar has become an established method for collecting very dense and accurate elevation values, as well as for characterizing the three-dimensional structure of vegetation and urban land cover. In this course, we will build an understanding of the physical principles behind lidar, develop experience working with Lidar datasets, and survey a wide array of lidar applications for mapping and natural resource management. The course will culminate with a student-directed final project. Prerequisites: GEOG 2100 or GEOG 3200.

**GEOG 3200 Remote Sensing (4 Credits)**

This course acquaints students with the basic techniques of the collection, processing and interpretation of information about the character of the earth's surface from remote locations. Students become familiar with the use of the visible, infrared, thermal and microwave portions of the electromagnetic spectrum as a means of determining land cover and/or land use. Both manual and computer-assisted techniques are discussed and include hands-on applications.

**GEOG 3230 Advanced Remote Sensing (4 Credits)**

This course will build on the basic remote sensing concepts presented in GEOG 3200. Students will explore more in-depth concepts relevant to satellite and airborne remote sensing, including radiative transfer and information extraction. In addition, students will be introduced to two cutting-edge sources of data about the Earth's surface: hyperspectral and lidar (Light Detection and Ranging) sensors. Students will study specific applications of advanced digital image processing techniques for environmental monitoring, natural resource management, and land-use planning. Finally, students will integrate remote sensing and other spatial datasets in the context of Geographic Information System (GIS) analysis. Prerequisite: GEOG 3200.

**GEOG 3300 Cultural Geography (4 Credits)**

Themes and methods of cultural geography including cultural area, landscape, history and ecology.

**GEOG 3310 Culture/Nature/Economics-Human Ecology (4 Credits)**

Cultural adaptation, livelihood strategies and environmental modification among subsistence and peasant societies: responses of such groups to technological change and economic integration.

**GEOG 3330 Political Geography (4 Credits)****GEOG 3340 Geographies of Migration (4 Credits)**

This course explores contemporary movement of people across international borders and the social, cultural, political, economic, and environmental repercussions of such movements. The class looks at the global flow of people across national boundaries and the ways in which these dispersed peoples build and maintain social networks across national borders. While doing so, we address the role of globalization in international migration processes. What motivates people to move long distances, often across several international borders and at considerable financial and psychological cost? How do migrants change—and how in turn do they bring change, social as well as economic, to new destinations as well as places left behind? This course examines politics and patterns of migration, transnational migration, and immigration to the United States.

**GEOG 3350 Qualitative Methods in Geography (4 Credits)**

This course focuses upon qualitative methods in the production of geographic knowledge. Qualitative methods are widely employed by geographers to understand patterns and underlying processes of human and human-environment issues in society. The course is designed to expose participants to the theories, purpose, scope, and procedures of qualitative research. Specific topics include: epistemological theories (ways of knowing); ethics and power in research; research design; data collection techniques in interviewing, participant observation and landscape interpretation, discourse and archive analysis, and case studies; data analysis; and writing and disseminating qualitative findings.

**GEOG 3400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 3410 Urban Applications in GIS (4 Credits)**

This course uses the tools of geographic information systems (GIS) to explore concepts of traditional urban geography, including defining cities/metropolis, internal urban structures, urban systems, industrial location, social and residential patterns, urban form, environmental problems, and urban planning. The course allows students to practice fundamental skills in GIS (e.g., working with attribute tables, spatial analysis, spatial queries) and cartography (map design, color theory, display of information). Depending on the quarter, students pursue individual projects of interest or client-based projects. Prerequisite: GEOG 2100 or GEOG 3100 or equivalent.

**GEOG 3420 Urban and Regional Planning (4 Credits)**

Historical evolution of planning theory and practices; comprehensive planning process; legal, political, economic, social, environmental aspects of urban planning; urban design; urban renewal and community development; transportation planning; economic development planning; growth management; environmental and energy planning; planning for metropolitan regions; national planning.

**GEOG 3425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city.' Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course explores what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course focuses on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 3440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 3445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 3450 Transportation and Mobilities (4 Credits)**

The geographical study of transport has grown considerably and become more diverse, encompassing new areas of inquiry generated from economic, urban, environmental, political, social, and cultural geography, as well as from transport geography itself. The most notable expansion has been in the area of 'mobilities' research, which is focused on the social aspects of mobility, including both the large-scale movements of people, objects, capital, and information across the world, as well as the more local processes of daily transportation, movement through public space and the travel of material things within everyday life.

**GEOG 3500 Reconstructing Quaternary Environments (4 Credits)**

Nature, magnitude, sequence and causes of Pleistocene and Holocene climatic changes; effects of climatic change on plant/animal distributions and human populations; paleoclimatic research methods. Laboratory and field trips. Prerequisites: GEOG core, ENVI 3000.

**GEOG 3510 Biogeography (4 Credits)**

Biogeography focuses on present and past distributions of plants and animals. In this course we consider a number of themes central to biogeography, including plate tectonics and biogeography, the effects of climate change of plant and animal distributions, biogeographic realms, island biogeography, biodiversity, human impacts on plants and animals, and the origins of agriculture.

**GEOG 3520 Geography of Soils (4 Credits)**

Spatial variation in soil characteristics; soil processes, soil morphology, their application in soil studies. Prerequisite: GEOG 1201-1203 Environmental Systems or instructor's permission.

**GEOG 3550 Topics in Physical Geography (1-5 Credits)**

Investigations into various aspects of physical environment.

**GEOG 3560 Fluvial Geomorphology (4 Credits)**

Examines how water and sediment interact at Earth's surface to create a variety of landforms ranging from small rills to continental-scale river systems. Introduces fundamental fluvial processes or channel hydraulics and sediment transport. Examines common fluvial landforms including alluvial streams, bedrock streams, floodplains and alluvial fans. Combines traditional lectures and in-class discussions with numerous field excursions to rivers in the Rocky Mountains and Great Plains. Prerequisite: GEOG 1203, GEOG 1218, or GEOG 1266.

**GEOG 3600 Meteorology (4 Credits)**

The basic theory and skills of weather forecasting. Topics include thorough coverage of atmosphere dynamics and thermodynamics, the evolution of various weather types, the mechanics of storm systems (cyclones, severe storms, hurricanes), creation and interpretation of weather maps, and forecasting techniques.

**GEOG 3610 Climatology (4 Credits)**

Climatology is the study of the processes that result in spatial and temporal variation of weather. This course introduces the student to the processes responsible for the transfer of matter and energy between the Earth's surface and the atmosphere and the average weather conditions that result. In addition, topics of global concern, such as greenhouse effect, El Nino, urban heat islands and acid rain, are discussed. Laboratory exercises provide an opportunity to investigate climate variation and climatic change through the use of a variety of computer simulations. Prerequisites: GEOG 1201, GEOG 1216, & GEOG 1264.

**GEOG 3620 Applied Climatology (4 Credits)**

Climatic impact on environmental systems and human behavior; techniques to investigate climatic characteristics of environmental extremes (floods, blizzards), urban climatology and socioeconomic impacts of climate. Prerequisite: GEOG 1201. Recommended Prerequisite: GEOG 3600 or GEOG 3610.

**GEOG 3630 Dendroclimatology (2-4 Credits)**

Systematic variations in tree ring width and/or density can be used to reconstruct changes in precipitation or temperature well before humans were around to record the variability. This class utilizes hands on methods to introduce the fundamental principles of dendroclimatology. Through readings and lectures, students will learn how tree ring growth can be correlated to climate change. Students will then undertake several research projects to reconstruct past climate variability in the Denver metro area using tree rings. Prerequisite: permission of instructor.

**GEOG 3640 Climate Change and Society (4 Credits)**

The science of anthropogenic climate change will be presented with an emphasis on critical evaluation of the evidence of climate change and future scenarios and migration strategies. Students will be introduced to the latest climate change research, including the Intergovernmental Panel on Climate Change report, and the most recent literature from the field. The societal and cultural implications of climate change will also be discussed. Prerequisites: GEOG 1201, GEOG 1216, or GEOG 1264.

**GEOG 3701 Topics in Geographic Information Science (1-4 Credits)**

Topics vary by instructor.

**GEOG 3720 Mountain Environments and Sustainability (4 Credits)**

Mountain Environments and Sustainability explores the unique physical and cultural aspects of high relief and/or high altitude environments. Covering one quarter of the Earth's land surface, mountains directly or indirectly impact the lives of millions of people. We examine the significance of mountains to climate, water resources, and human activities, and discuss the sustainability of these environments and communities in light of rapid changes in many mountain regions resulting from anthropogenic factors and global change. GEOG 1201, 1202, and 1203 or instructor approval.

**GEOG 3750 Topics in Human-Environment Interactions (1-4 Credits)**

This course investigates various aspects of the relationships between human societies and the natural environment.

**GEOG 3755 Geography of Health (4 Credits)**

The geography of health is a thriving area of study that considers the impact of natural, built, and social environments on human health. This course introduces students to three geographical contributions to health studies. First, it emphasizes the importance of ecological approaches to health, which consider interactions between humans and their environments, including topics such as how climate change might influence disease distributions, and how the built environment can influence patterns of physical activity. A second focus is social theory, exploring how aspects such as race, socioeconomic status, and identity play a critical role in influencing human health. A third section of the course considers how spatial methods (cartography, GIS, and spacial statistics) can help answer health-related questions.

**GEOG 3800 Geography of Colorado (4 Credits)**

This course focuses on the physical and human geography of Colorado, a state that includes the western Great Plains, the southern Rocky Mountains, and the eastern Colorado Plateau. Colorado's varied natural landscapes provide equally varied settings for human settlement and resource use. Recommended Prerequisites: GEOG 1201, GEOG 1202, and GEOG 1203.

**GEOG 3820 Kiwis and Kauris: Sustainability in New Zealand (4 Credits)**

With its tourist tagline of "100% Pure New Zealand," New Zealand prides itself as a world leader in sustainability, with great efforts made towards sustainable use of resources and renewable energy, conservation of indigenous species, and integration of indigenous Maori understandings of the land into sustainability approaches. At the same time, New Zealand faces significant sustainability challenges, particularly related to climate change, invasive species, continued reliance on extractive industries, and histories of oppression/exploitation of native peoples. This class uses a field-based case study approach to unpick some of these complex issues, as we visit local sites and explore topics such as preserving native species, sustainable resource use, ecotourism, and indigeneity.

**GEOG 3840 Water Resource Analysis (4 Credits)**

The focus of this course is on complex policy, economic and local, national and international, and political issues surrounding resource use in the western U.S. Issues include exploitation of nonrenewable and renewable energy and mineral resources; and flexible responses to changing public policy.

**GEOG 3860 GIS Applications and Natural Resources (4 Credits)**

In this course we will use a case study approach to examine domestic and international natural resources such as oil, coal, timber, minerals, and recycled materials. We will use a case study approach to look at resource distribution, and the environmental impacts of extraction, production, and disposal, as well as the legal and economic context. We will use GIS data and analysis to enhance our understanding of these case studies, and students will do a project and paper using GIS data and image analysis at a local, regional or global scale. Prerequisite: Introduction to GIS or Introduction to GIS Modeling.

**GEOG 3870 Water Resources & Sustainability (4 Credits)**

In this course, we look at water as both a local and global resource and examine what sustainability means for human and ecological realms. After an overview of the physical processes that drive the hydrologic cycle, surface and groundwater hydrology, we examine how we humans have harnessed water for our use and how we both alter and treat its quality. We examine the legal aspects of water allocation in the U.S. and the groups and agencies that are most involved in managing and overseeing water issues. Finally, we examine the most pressing water "issues" related to wildlife, development, scarcity and conflict. We look forward to imagining the power of both the individual and the collective in meeting our future, global water needs.

**GEOG 3890 Ecological Economics (4 Credits)**

Ecological Economics is an emerging transdisciplinary endeavor that reintegrates the natural and social sciences toward the goal of developing a united understanding of natural and human-dominated ecosystems and designing a sustainable and desirable future for humans on a materially finite planet. In this course we start with a basic overview and summary of the neo-classical economic perspective with a particular focus on the recognized market failures of public goods, common property, and externalities. We begin with a reconceptualization of economic theory by imposing scientific constraints (e.g. conservation of mass and energy, the laws of thermodynamics, evolutionary theory, etc.). Using the ideas developed in this reconceptualization of economic theory we explore the implications for international trade and myriad public policies associated with the ethical, environmental, and economic aspects of sustainability.

**GEOG 3910 Geomorphology (4 Credits)**

An advanced course that examines how Earth's landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor's permission.

**GEOG 3920 Remote Sensing Seminar (4 Credits)**

Special topics in advanced remote sensing.

**GEOG 3930 Cultural Geography Seminar (4 Credits)**

Topics, methods and current research in cultural geography.

**GEOG 3940 Urban Geography Seminar (4 Credits)**

International comparison of economic and social, positive and negative aspects of urban systems.

**GEOG 3950 Physical Geography Seminar (2-4 Credits)****GEOG 3955 Pollen Analysis Seminar (3 Credits)**

Pollen grains preserved in sediment provide long-term records of vegetation conditions. Changing proportions of pollen types may reflect climatic fluctuation or human impacts. We review important recent research in pollen analysis (palynology), pollen sampling, laboratory techniques and pollen identification. Students are responsible for counting a number of samples and contributing data for a pollen diagram.

**GEOG 3990 Undergraduate Research Seminar (1 Credit)**

This course is designed to prepare students who will participate in faculty-supervised summer research projects. Students are introduced to research design, use of the scientific method, research expectations and reporting of results. Preparation of formal research proposal with adviser.

**GEOG 3991 Independent Study (1-5 Credits)****GEOG 3995 Independent Research (1-5 Credits)****GEOG 4000 Fundamental Geographic Perspectives (4 Credits)**

A foundation course for persons in the community, without a degree in geography, who want to pursue an education in or make use of computer-based geographic technology but who need a foundation in geographic concepts and perspectives.

**GEOG 4020 Geographic Research Design (4 Credits)**

This class prepares you to undertake creative geographic research leading to the generation of new knowledge. You will produce a NSF-style proposal by the end of the class. In this class, we focus on your idea generation and proposal writing rather than philosophy or specific methods. Specific objectives of the course include providing you the following skills: 1. The ability to create and communicate scholarly work in writing and orally 2. The ability to critique your own work and the work of other in a constructive fashion 3. Incorporation of the core ideas of geography and your field into your research 4. An understanding and appreciation of the various research methods in geography and other cognate disciplines. This understanding includes a discussion of ethics in research. 5. Ability to write an effective vita, statement of area of specialization, literature review, problem statement, and research proposal.

**GEOG 4030 Advanced Field Research (1-5 Credits)****GEOG 4040 Research Topic Identification (0-5 Credits)****GEOG 4110 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 4140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products.

**GEOG 4150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.

**GEOG 4170 Geospatial Analysis and Project Management (4 Credits)**

This course provides an opportunity for students to apply geospatial data analysis to real-world applications. Students will work as a team to develop a project that requires GIS analysis and/or application development, design a project work flow and management plan, and implement a solution. Students will demonstrate competence in GIS techniques, geospatial data analysis, and project management at a professional level. This course may substitute for GEOG 3150 - GIS Project Management. Prerequisites: Completion of a minimum of two GISc courses.

**GEOG 4400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 4410 Economic Geography (4 Credits)**

The study of the location and spatial organization of economic activities at the local, national, and global scales. Concerned with the spatial configuration of firms, networks, industries, and regions within the emerging global economy. Cross listed with INTS 4410.

**GEOG 4420 Urban and Regional Planning (4 Credits)**

The field of urban and regional planning is concerned with the future of cities, neighborhoods, metropolitan areas, and extended regions. How do local governments (cities, counties) and metropolitan planning organizations (regional planning agencies, councils of governments) work with community stakeholders (neighborhood associations, chambers of commerce, businesses, citizens, non-governmental organizations) to formulate plans that will guide the future development of a city and its region? Cities and their regions face numerous challenges including population and employment growth or decline, economic development, neighborhood vitality, housing availability and affordability, urban design, land use, transportation, sustainability, access to parks and open space, air quality, floodplain management, water resources, and social equity among many others. How places address these challenges is critical to the future health and livability of our cities, neighborhoods, metropolitan areas, and extended regions. This course will have a community-engaged service learning component. Community-engaged scholarship and teaching comprise intellectually and methodologically rigorous work that is grounded in the norms of democratic education: inclusiveness, participation, task sharing, reciprocity in public problem solving, and an equality of respect for the knowledge and experience that everyone involved contributes to education and community building. The specific service learning project for the class will be to assist the Metropolitan Denver Nature Alliance (Metro DNA) with its goal to increase the community's engagement with nearby nature by reviewing, analyzing, and collecting data from park/ open space plans of cities and counties in the Denver metropolitan area. Cross-listed with GEOG 3420.

**GEOG 4425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city'. Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course will explore what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course will focus on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include: cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 4440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 4445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current and future mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 4460 Air Transportation, High-Speed Rail and Tourism (4 Credits)**

This course delves into the world of commercial air passenger transportation, studying the foundations of the industry, its role in the travel and tourism, and strategies for the future. Foundational topics include the history and geography of air transportation, air travel and tourism, the geography of tourism, airline corporate cultures, the role of government, aviation law, regulation, deregulation, and globalization. Study of the principal elements of airline economics, finance, planning, management, operations, pricing, promotion, cost containment, marketing, and policy provide the opportunity for consideration of strategic options within the contemporary airline industry. Further discussion focuses on the planning and management of airport and airway system infrastructure, the issue of sustainable air transportation, and the role of the airline industry within the context of intermodalism. Cross listed with GEOG 3460.

**GEOG 4701 Topics in Geography (4 Credits)**

Topics vary by instructor.

**GEOG 4810 Geography of Latin America (4 Credits)**

In this course, we examine how past and present cultural preferences and political economies effect changes in Latin American landscapes. Cross listed with GEOG 2810.

**GEOG 4815 Geographies of Conquest: Christian, Jewish, and Islamic societies in Andalusia (4 Credits)**

This course introduces students to the cultural landscapes, former and current, of the different societies that converged in Iberia. The class will focus on medieval Al-Andalus, the Islamic kingdoms that flourished there. During medieval times, Christian, Islamic, and Jewish societies lived side by side in an environment that oscillated between tolerance and open persecution. Science, art, scholarship, and political strategy motivated tolerance while religious fundamentalism and geopolitical considerations motivated persecution. This class will cover the human-environment interactions in the landscapes medieval and modern Andalusia through an immersive field study and travel experience. This field class equals 4 academic credits. Over a period of 8 days we will visit the cities and surroundings of Madrid, Cordoba, Seville, and Granada in Spain where we will examine and compare cultural geographic, historical, religious, and anthropological issues surrounding the communities that interacted in Al-Andalus/Andalusia (past and present). Through observations, lectures, discussions, readings, assignments, and immersion, the course will stress the development of in-situ critical thinking skills and the promotion of cultural diversity, tolerance, and global awareness. This class fulfills geography, sustainability minor, and intercultural global studies minor requirements.

**GEOG 4825 Geographies of International Development in Africa (4 Credits)**

What are the historical roots of (under)development in sub-Saharan Africa? How is sub-Saharan Africa typically depicted in the media? How can we explain the fact that the Niger Delta provides the bulk of Nigeria's revenue, and yet, it remains the poorest part of the country? Is climate change the major cause of persistent food insecurity in the drylands of Ethiopia and Burkina Faso? How can we make sense of the uneven geography of poverty in Ghana? What explains urban food insecurity in Cape Town, or land struggles in rural South Africa? What are the social processes underlying the spatial disparity in health status in Malawi, or gender differences in HIV rates in Nyanza province, Kenya? And why do land users often resist state conservation efforts in Tanzania? These are some of the critical questions explored in this course. The primary aim is to provide a critical introduction to the geography of sub-Saharan Africa. We will begin by exploring how "the Africa story" is told by the media, scholars and policymakers. Attention will then shift to understanding the key historical processes that shape (under)development in the region. We will cover a broad range of topics, including governance, colonial history, debt and structural adjustment, foreign aid, food and agriculture, gender, climate change, land grabbing, health, population growth, migration, remittances, and resource extraction. We cannot possibly cover all these topics in greater detail; indeed, some are too vast and complex. We will however use specific case studies to illustrate and discuss each of the topics.

**GEOG 4880 Geographies of South Africa (4 Credits)**

This travel course is designed to give students a first-hand look at the physical and cultural landscapes of South Africa. We will study the varied natural landscapes that produce the commodities (e.g., gold, diamonds, wine, and agriculture) that have attracted the interest of outsiders for centuries and that have influenced the cultural landscapes particular to South Africa. A systematic presentation of the geology of South Africa, and its human history, will unfold throughout our travels.

**GEOG 4900 Graduate Colloquium in Geog (0 Credits)**

Solid foundation in history and philosophy of the discipline of geography; basis for further exploration of major research specialization.

**GEOG 4930 Nicaragua: Development Dilemmas (4 Credits)**

This class takes students to post-revolutionary Nicaragua to examine the consequences of recent land grabs by foreigners and transnational companies. Students learn to operate in a country with minimal "western" infrastructure. They learn to examine developing landscapes (that is, resorts and tourism infrastructure) with new eyes and from the perspective of locals who have been left out of the development loop. By the end of the class, students begin to understand the "development game", begin to question the role of tourism in developing economies, begin to know how to interact with other cultures, and finally learn to question the landscapes we "see" and begin to peel back the layers to understand the social and physical evolution of the landscape before their eyes. This class takes an experiential approach and requires students to participate in a service learning experience. Service learning is defined as a course-based, credit bearing educational experience in which faculty, students, and community members participate in an organized service activity that addresses a self-identified community need. We work with several community-based and non-governmental organizations to ensure a good fit between community needs and student expertise.

**GEOG 4950 Advanced Field Research (1-17 Credits)****GEOG 4991 Independent Study (1-5 Credits)****GEOG 4993 Capstone or Project (1-4 Credits)**

Includes technical design and development for MA geotechnical track project and MS-GIS capstone project.

**GEOG 4994 Report (1-5 Credits)****GEOG 4995 Independent Research (1-5 Credits)**

Includes field research for doctoral dissertation.

**GEOG 4999 Geographic Internship (0-5 Credits)**

Supervised internship in a government office at local, state or federal level or within private sector. Prerequisite: Permission of instructor.

**GEOG 5991 Independent Study (1-5 Credits)****GEOG 5995 Independent Research (1-10 Credits)****Geography Courses****GEOG 3000 Advanced Geographic Statistics (4 Credits)**

The second in a sequence of two courses that address general statistical applications particular to geography, environmental science and other disciplines dealing with a spatial dimension in the data they work with. The focus of this second course is on the more advanced multivariate statistical techniques. The course has a strong applied orientation as particular attention is given to which technique is the most appropriate to use for a given type of problem and how to interpret and apply the resulting statistics. Extensive use is made of computer statistics packages. Homework exercises involving such statistical techniques as multiple correlation and regression analysis, principle components analysis, discriminate analysis and canonical correlation. Prerequisite: GEOG 2000.

**GEOG 3010 Geographic Information Analysis (4 Credits)**

Reviews many basic statistical methods and applies them to various spatial datasets. In addition, several spatial statistical methods are applied to spatial datasets. This course is an in-depth study of the interface between GIS, spatial data, and statistical analysis. Preferred prerequisite: GEOG 2000. Prerequisite: GEOG 2100.

**GEOG 3030 Advanced Field Methods (4 Credits)**

Various field methods used by researchers in physical geography; techniques include field mapping, laboratory analyses, geologic field methods. Prerequisite: GEOG 1201 or equivalent.

**GEOG 3040 GPS for Resource Mapping (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Hands-on lab exercises include navigation, mission planning for a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, differential correction, and data integration into a GIS and map production.

**GEOG 3100 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 3110 GIS Modeling (4 Credits)**

This course focuses on the concepts and procedures used in discovering and applying relationships within and among maps. It extends the mapping and geo-query capabilities of GIS to map analysis and construction of spatial models. The course establishes a comprehensive framework that addresses a wide range of applications from natural resources to retail marketing. Topics include the nature of spatial data introduction to spatial statistics and surface modeling in the first five weeks followed by spatial analysis operations and modeling techniques in the second five weeks. The lectures, discussions and independent exercises provide a foundation for creative application of GIS technology in spatial reasoning and decision making.

**GEOG 3120 Environmental/GIS Modeling (4 Credits)**

Facing challenges brought by the dramatically changing global environment, environmental modeling is increasingly used to support geographical and environmental decision making (e.g., spatial conservation prioritization). Environmental modeling is concerned with the characterization, modeling and simulation of environmental phenomena and processes using conceptual and mathematical models. Environmental phenomena and processes taking place in the geographic space are regulated by spatial principles. They also interact with other phenomena or processes in the attribute space. For example, species distribution is not only constrained by spatial factors such as proximity to other species, but also influenced by environmental factors such as terrain and climatic conditions. Due to its superior capabilities of handling spatial data and modeling spatial and attribute relationships, geographic information system (GIS) provides the ideal tools for environmental modeling. This upper-level undergraduate/graduate-level course surveys the concepts and techniques of GIS supported environmental modeling in three general categories: 1) Modeling in the spatial domain where the focus is on modeling spatial principles (e.g., spatial autocorrelation); 2) Modeling in the attribute domain where the emphasis is on environmental correlations (e.g., environmental niche modeling); 3) Modeling in the combined spatial and attribute domain where both spatial principles and environmental correlations are exploited (e.g., geographically weighted regression). Throughout this course, several real-world applications are used to demonstrate the ideas, concepts, and techniques of GIS supported environmental modeling, including crime spatial pattern modeling, species distribution modeling, and soil-landscape modeling and mapping. Prerequisites: GEOG 2000 and GEOG 2100.

**GEOG 3130 GIS Programming with Python (4 Credits)**

This advanced course explores the more technical aspects of GIS functions and data structures. Students have hands-on access to both raster (grid-cell) and vector-based software packages in the form of lab exercises that culminate in a small student-designed GIS project. Prerequisite: GEOG 2100.

**GEOG 3140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products. Prerequisite: GEOG 2100 or GEOG 3100.

**GEOG 3150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.

**GEOG 3160 Web GIS (4 Credits)**

With the development of internet technologies, the architecture of Geographic Information System (GIS) has evolved from the centralized desktop architecture to the distributed web architecture. Numerous web GIS applications are available (e.g., Google Map, Earth Explorer, and National Map). A web GIS application allows GIS analysts to access, manipulate, and visualize geospatial data from the web without the installation of GIS software. To facilitate the development of web GIS applications, geospatial technology vendors have provided application programming interfaces (APIs) through which GIS professionals can build customized web applications. This course focuses on the concepts and the development of web based GIS applications using industry-relevant geospatial APIs and core web technologies of HTML, CSS, and JavaScript. This is an upper-level undergraduate, to graduate-level course in GIS that introduces fundamental Web GIS concepts, applications and development kits. Concepts and techniques to be covered in this course include: • Web GIS concepts: system architecture, components, and workflow • Web programming languages: Hypertext Transfer Markup Language (HTML), Cascading Style Sheet (CSS) and JavaScript • Web mapping tools: ArcGIS online, Leaflet and their APIs. Prerequisites: GEOG 2100 and GEOG 3130.

**GEOG 3190 Lidar: Theory and Applications (4 Credits)**

Overview: Lidar (Light Detection and Ranging) is an active remote sensing system that uses laser pulses to measure the distance between the sensor and a surface or objects. Lidar has become an established method for collecting very dense and accurate elevation values, as well as for characterizing the three-dimensional structure of vegetation and urban land cover. In this course, we will build an understanding of the physical principles behind lidar, develop experience working with Lidar datasets, and survey a wide array of lidar applications for mapping and natural resource management. The course will culminate with a student-directed final projects. Prerequisites: GEOG 2100 or GEOG 3200.

**GEOG 3200 Remote Sensing (4 Credits)**

This course acquaints students with the basic techniques of the collection, processing and interpretation of information about the character of the earth's surface from remote locations. Students become familiar with the use of the visible, infrared, thermal and microwave portions of the electromagnetic spectrum as a means of determining land cover and/or land use. Both manual and computer-assisted techniques are discussed and include hands-on applications.

**GEOG 3230 Advanced Remote Sensing (4 Credits)**

This course will build on the basic remote sensing concepts presented in GEOG 3200. Students will explore more in-depth concepts relevant to satellite and airborne remote sensing, including radiative transfer and information extraction. In addition, students will be introduced to two cutting-edge sources of data about the Earth's surface: hyperspectral and lidar (Light Detection and Ranging) sensors. Students will study specific applications of advanced digital image processing techniques for environmental monitoring, natural resource management, and land-use planning. Finally, students will integrate remote sensing and other spatial datasets in the context of Geographic Information System (GIS) analysis. Prerequisite: GEOG 3200.

**GEOG 3300 Cultural Geography (4 Credits)**

Themes and methods of cultural geography including cultural area, landscape, history and ecology.

**GEOG 3310 Culture/Nature/Economics-Human Ecology (4 Credits)**

Cultural adaptation, livelihood strategies and environmental modification among subsistence and peasant societies: responses of such groups to technological change and economic integration.

**GEOG 3330 Political Geography (4 Credits)****GEOG 3340 Geographies of Migration (4 Credits)**

This course explores contemporary movement of people across international borders and the social, cultural, political, economic, and environmental repercussions of such movements. The class looks at the global flow of people across national boundaries and the ways in which these dispersed peoples build and maintain social networks across national borders. While doing so, we address the role of globalization in international migration processes. What motivates people to move long distances, often across several international borders and at considerable financial and psychological cost? How do migrants change—and how in turn do they bring change, social as well as economic, to new destinations as well as places left behind? This course examines politics and patterns of migration, transnational migration, and immigration to the United States.



**GEOG 3350 Qualitative Methods in Geography (4 Credits)**

This course focuses upon qualitative methods in the production of geographic knowledge. Qualitative methods are widely employed by geographers to understand patterns and underlying processes of human and human-environment issues in society. The course is designed to expose participants to the theories, purpose, scope, and procedures of qualitative research. Specific topics include: epistemological theories (ways of knowing); ethics and power in research; research design; data collection techniques in interviewing, participant observation and landscape interpretation, discourse and archive analysis, and case studies; data analysis; and writing and disseminating qualitative findings.

**GEOG 3400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 3410 Urban Applications in GIS (4 Credits)**

This course uses the tools of geographic information systems (GIS) to explore concepts of traditional urban geography, including defining cities/metropolis, internal urban structures, urban systems, industrial location, social and residential patterns, urban form, environmental problems, and urban planning. The course allows students to practice fundamental skills in GIS (e.g., working with attribute tables, spatial analysis, spatial queries) and cartography (map design, color theory, display of information). Depending on the quarter, students pursue individual projects of interest or client-based projects. Prerequisite: GEOG 2100 or GEOG 3100 or equivalent.

**GEOG 3420 Urban and Regional Planning (4 Credits)**

Historical evolution of planning theory and practices; comprehensive planning process; legal, political, economic, social, environmental aspects of urban planning; urban design; urban renewal and community development; transportation planning; economic development planning; growth management; environmental and energy planning; planning for metropolitan regions; national planning.

**GEOG 3425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city.' Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course explores what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course focuses on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 3440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 3445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 3450 Transportation and Mobilities (4 Credits)**

The geographical study of transport has grown considerably and become more diverse, encompassing new areas of inquiry generated from economic, urban, environmental, political, social, and cultural geography, as well as from transport geography itself. The most notable expansion has been in the area of 'mobilities' research, which is focused on the social aspects of mobility, including both the large-scale movements of people, objects, capital, and information across the world, as well as the more local processes of daily transportation, movement through public space and the travel of material things within everyday life.

**GEOG 3500 Reconstructing Quaternary Environments (4 Credits)**

Nature, magnitude, sequence and causes of Pleistocene and Holocene climatic changes; effects of climatic change on plant/animal distributions and human populations; paleoclimatic research methods. Laboratory and field trips. Prerequisites: GEOG core, ENVI 3000.

**GEOG 3510 Biogeography (4 Credits)**

Biogeography focuses on present and past distributions of plants and animals. In this course we consider a number of themes central to biogeography, including plate tectonics and biogeography, the effects of climate change of plant and animal distributions, biogeographic realms, island biogeography, biodiversity, human impacts on plants and animals, and the origins of agriculture.

**GEOG 3520 Geography of Soils (4 Credits)**

Spatial variation in soil characteristics; soil processes, soil morphology, their application in soil studies. Prerequisite: GEOG 1201-1203 Environmental Systems or instructor's permission.

**GEOG 3550 Topics in Physical Geography (1-5 Credits)**

Investigations into various aspects of physical environment.

**GEOG 3560 Fluvial Geomorphology (4 Credits)**

Examines how water and sediment interact at Earth's surface to create a variety of landforms ranging from small rills to continental-scale river systems. Introduces fundamental fluvial processes or channel hydraulics and sediment transport. Examines common fluvial landforms including alluvial streams, bedrock streams, floodplains and alluvial fans. Combines traditional lectures and in-class discussions with numerous field excursions to rivers in the Rocky Mountains and Great Plains. Prerequisite: GEOG 1203, GEOG 1218, or GEOG 1266.

**GEOG 3600 Meteorology (4 Credits)**

The basic theory and skills of weather forecasting. Topics include thorough coverage of atmosphere dynamics and thermodynamics, the evolution of various weather types, the mechanics of storm systems (cyclones, severe storms, hurricanes), creation and interpretation of weather maps, and forecasting techniques.

**GEOG 3610 Climatology (4 Credits)**

Climatology is the study of the processes that result in spatial and temporal variation of weather. This course introduces the student to the processes responsible for the transfer of matter and energy between the Earth's surface and the atmosphere and the average weather conditions that result. In addition, topics of global concern, such as greenhouse effect, El Nino, urban heat islands and acid rain, are discussed. Laboratory exercises provide an opportunity to investigate climate variation and climatic change through the use of a variety of computer simulations. Prerequisites: GEOG 1201, GEOG 1216, & GEOG 1264.

**GEOG 3620 Applied Climatology (4 Credits)**

Climatic impact on environmental systems and human behavior; techniques to investigate climatic characteristics of environmental extremes (floods, blizzards), urban climatology and socioeconomic impacts of climate. Prerequisite: GEOG 1201. Recommended Prerequisite: GEOG 3600 or GEOG 3610.

**GEOG 3630 Dendroclimatology (2-4 Credits)**

Systematic variations in tree ring width and/or density can be used to reconstruct changes in precipitation or temperature well before humans were around to record the variability. This class utilizes hands on methods to introduce the fundamental principles of dendroclimatology. Through readings and lectures, students will learn how tree ring growth can be correlated to climate change. Students will then undertake several research projects to reconstruct past climate variability in the Denver metro area using tree rings. Prerequisite: permission of instructor.

**GEOG 3640 Climate Change and Society (4 Credits)**

The science of anthropogenic climate change will be presented with an emphasis on critical evaluation of the evidence of climate change and future scenarios and migration strategies. Students will be introduced to the latest climate change research, including the Intergovernmental Panel on Climate Change report, and the most recent literature from the field. The societal and cultural implications of climate change will also be discussed. Prerequisites: GEOG 1201, GEOG 1216, or GEOG 1264.

**GEOG 3701 Topics in Geographic Information Science (1-4 Credits)**

Topics vary by instructor.

**GEOG 3720 Mountain Environments and Sustainability (4 Credits)**

Mountain Environments and Sustainability explores the unique physical and cultural aspects of high relief and/or high altitude environments. Covering one quarter of the Earth's land surface, mountains directly or indirectly impact the lives of millions of people. We examine the significance of mountains to climate, water resources, and human activities, and discuss the sustainability of these environments and communities in light of rapid changes in many mountain regions resulting from anthropogenic factors and global change. GEOG 1201, 1202, and 1203 or instructor approval.

**GEOG 3750 Topics in Human-Environment Interactions (1-4 Credits)**

This course investigates various aspects of the relationships between human societies and the natural environment.

**GEOG 3755 Geography of Health (4 Credits)**

The geography of health is a thriving area of study that considers the impact of natural, built, and social environments on human health. This course introduces students to three geographical contributions to health studies. First, it emphasizes the importance of ecological approaches to health, which consider interactions between humans and their environments, including topics such as how climate change might influence disease distributions, and how the built environment can influence patterns of physical activity. A second focus is social theory, exploring how aspects such as race, socioeconomic status, and identity play a critical role in influencing human health. A third section of the course considers how spatial methods (cartography, GIS, and spacial statistics) can help answer health-related questions.

**GEOG 3800 Geography of Colorado (4 Credits)**

This course focuses on the physical and human geography of Colorado, a state that includes the western Great Plains, the southern Rocky Mountains, and the eastern Colorado Plateau. Colorado's varied natural landscapes provide equally varied settings for human settlement and resource use. Recommended Prerequisites: GEOG 1201, GEOG 1202, and GEOG 1203.

**GEOG 3820 Kiwis and Kauris: Sustainability in New Zealand (4 Credits)**

With its tourist tagline of "100% Pure New Zealand," New Zealand prides itself as a world leader in sustainability, with great efforts made towards sustainable use of resources and renewable energy, conservation of indigenous species, and integration of indigenous Maori understandings of the land into sustainability approaches. At the same time, New Zealand faces significant sustainability challenges, particularly related to climate change, invasive species, continued reliance on extractive industries, and histories of oppression/exploitation of native peoples. This class uses a field-based case study approach to unpick some of these complex issues, as we visit local sites and explore topics such as preserving native species, sustainable resource use, ecotourism, and indigeneity.

**GEOG 3840 Water Resource Analysis (4 Credits)**

The focus of this course is on complex policy, economic and local, national and international, and political issues surrounding resource use in the western U.S. Issues include exploitation of nonrenewable and renewable energy and mineral resources; and flexible responses to changing public policy.

**GEOG 3860 GIS Applications and Natural Resources (4 Credits)**

In this course we will use a case study approach to examine domestic and international natural resources such as oil, coal, timber, minerals, and recycled materials. We will use a case study approach to look at resource distribution, and the environmental impacts of extraction, production, and disposal, as well as the legal and economic context. We will use GIS data and analysis to enhance our understanding of these case studies, and students will do a project and paper using GIS data and image analysis at a local, regional or global scale. Prerequisite: Introduction to GIS or Introduction to GIS Modeling.

**GEOG 3870 Water Resources & Sustainability (4 Credits)**

In this course, we look at water as both a local and global resource and examine what sustainability means for human and ecological realms. After an overview of the physical processes that drive the hydrologic cycle, surface and groundwater hydrology, we examine how we humans have harnessed water for our use and how we both alter and treat its quality. We examine the legal aspects of water allocation in the U.S. and the groups and agencies that are most involved in managing and overseeing water issues. Finally, we examine the most pressing water "issues" related to wildlife, development, scarcity and conflict. We look forward to imagining the power of both the individual and the collective in meeting our future, global water needs.

**GEOG 3890 Ecological Economics (4 Credits)**

Ecological Economics is an emerging transdisciplinary endeavor that reintegrates the natural and social sciences toward the goal of developing a united understanding of natural and human-dominated ecosystems and designing a sustainable and desirable future for humans on a materially finite planet. In this course we start with a basic overview and summary of the neo-classical economic perspective with a particular focus on the recognized market failures of public goods, common property, and externalities. We begin with a reconceptualization of economic theory by imposing scientific constraints (e.g. conservation of mass and energy, the laws of thermodynamics, evolutionary theory, etc.). Using the ideas developed in this reconceptualization of economic theory we explore the implications for international trade and myriad public policies associated with the ethical, environmental, and economic aspects of sustainability.

**GEOG 3910 Geomorphology (4 Credits)**

An advanced course that examines how Earth's landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor's permission.

**GEOG 3920 Remote Sensing Seminar (4 Credits)**

Special topics in advanced remote sensing.

**GEOG 3930 Cultural Geography Seminar (4 Credits)**

Topics, methods and current research in cultural geography.

**GEOG 3940 Urban Geography Seminar (4 Credits)**

International comparison of economic and social, positive and negative aspects of urban systems.

**GEOG 3950 Physical Geography Seminar (2-4 Credits)****GEOG 3955 Pollen Analysis Seminar (3 Credits)**

Pollen grains preserved in sediment provide long-term records of vegetation conditions. Changing proportions of pollen types may reflect climatic fluctuation or human impacts. We review important recent research in pollen analysis (palynology), pollen sampling, laboratory techniques and pollen identification. Students are responsible for counting a number of samples and contributing data for a pollen diagram.

**GEOG 3990 Undergraduate Research Seminar (1 Credit)**

This course is designed to prepare students who will participate in faculty-supervised summer research projects. Students are introduced to research design, use of the scientific method, research expectations and reporting of results. Preparation of formal research proposal with adviser.

**GEOG 3991 Independent Study (1-5 Credits)****GEOG 3995 Independent Research (1-5 Credits)****GEOG 4000 Fundamental Geographic Perspectives (4 Credits)**

A foundation course for persons in the community, without a degree in geography, who want to pursue an education in or make use of computer-based geographic technology but who need a foundation in geographic concepts and perspectives.

**GEOG 4020 Geographic Research Design (4 Credits)**

This class prepares you to undertake creative geographic research leading to the generation of new knowledge. You will produce a NSF-style proposal by the end of the class. In this class, we focus on your idea generation and proposal writing rather than philosophy or specific methods. Specific objectives of the course include providing you the following skills: 1. The ability to create and communicate scholarly work in writing and orally 2. The ability to critique your own work and the work of other in a constructive fashion 3. Incorporation of the core ideas of geography and your field into your research 4. An understanding and appreciation of the various research methods in geography and other cognate disciplines. This understanding includes a discussion of ethics in research. 5. Ability to write an effective vita, statement of area of specialization, literature review, problem statement, and research proposal.

**GEOG 4030 Advanced Field Research (1-5 Credits)****GEOG 4040 Research Topic Identification (0-5 Credits)****GEOG 4110 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 4140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products.

**GEOG 4150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.

**GEOG 4170 Geospatial Analysis and Project Management (4 Credits)**

This course provides an opportunity for students to apply geospatial data analysis to real-world applications. Students will work as a team to develop a project that requires GIS analysis and/or application development, design a project work flow and management plan, and implement a solution. Students will demonstrate competence in GIS techniques, geospatial data analysis, and project management at a professional level. This course may substitute for GEOG 3150 - GIS Project Management. Prerequisites: Completion of a minimum of two GISc courses.

**GEOG 4400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 4410 Economic Geography (4 Credits)**

The study of the location and spatial organization of economic activities at the local, national, and global scales. Concerned with the spatial configuration of firms, networks, industries, and regions within the emerging global economy. Cross listed with INTS 4410.

**GEOG 4420 Urban and Regional Planning (4 Credits)**

The field of urban and regional planning is concerned with the future of cities, neighborhoods, metropolitan areas, and extended regions. How do local governments (cities, counties) and metropolitan planning organizations (regional planning agencies, councils of governments) work with community stakeholders (neighborhood associations, chambers of commerce, businesses, citizens, non-governmental organizations) to formulate plans that will guide the future development of a city and its region? Cities and their regions face numerous challenges including population and employment growth or decline, economic development, neighborhood vitality, housing availability and affordability, urban design, land use, transportation, sustainability, access to parks and open space, air quality, floodplain management, water resources, and social equity among many others. How places address these challenges is critical to the future health and livability of our cities, neighborhoods, metropolitan areas, and extended regions. This course will have a community-engaged service learning component. Community-engaged scholarship and teaching comprise intellectually and methodologically rigorous work that is grounded in the norms of democratic education: inclusiveness, participation, task sharing, reciprocity in public problem solving, and an equality of respect for the knowledge and experience that everyone involved contributes to education and community building. The specific service learning project for the class will be to assist the Metropolitan Denver Nature Alliance (Metro DNA) with its goal to increase the community's engagement with nearby nature by reviewing, analyzing, and collecting data from park/ open space plans of cities and counties in the Denver metropolitan area. Cross-listed with GEOG 3420.

**GEOG 4425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city'. Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course will explore what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course will focus on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include: cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 4440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 4445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current and future mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 4460 Air Transportation, High-Speed Rail and Tourism (4 Credits)**

This course delves into the world of commercial air passenger transportation, studying the foundations of the industry, its role in the travel and tourism, and strategies for the future. Foundational topics include the history and geography of air transportation, air travel and tourism, the geography of tourism, airline corporate cultures, the role of government, aviation law, regulation, deregulation, and globalization. Study of the principal elements of airline economics, finance, planning, management, operations, pricing, promotion, cost containment, marketing, and policy provide the opportunity for consideration of strategic options within the contemporary airline industry. Further discussion focuses on the planning and management of airport and airway system infrastructure, the issue of sustainable air transportation, and the role of the airline industry within the context of intermodalism. Cross listed with GEOG 3460.

**GEOG 4701 Topics in Geography (4 Credits)**

Topics vary by instructor.

**GEOG 4810 Geography of Latin America (4 Credits)**

In this course, we examine how past and present cultural preferences and political economies effect changes in Latin American landscapes. Cross listed with GEOG 2810.

**GEOG 4815 Geographies of Conquest: Christian, Jewish, and Islamic societies in Andalusia (4 Credits)**

This course introduces students to the cultural landscapes, former and current, of the different societies that converged in Iberia. The class will focus on medieval Al-Andalus, the Islamic kingdoms that flourished there. During medieval times, Christian, Islamic, and Jewish societies lived side by side in an environment that oscillated between tolerance and open persecution. Science, art, scholarship, and political strategy motivated tolerance while religious fundamentalism and geopolitical considerations motivated persecution. This class will cover the human-environment interactions in the landscapes medieval and modern Andalusia through an immersive field study and travel experience. This field class equals 4 academic credits. Over a period of 8 days we will visit the cities and surroundings of Madrid, Cordoba, Seville, and Granada in Spain where we will examine and compare cultural geographic, historical, religious, and anthropological issues surrounding the communities that interacted in Al-Andalus/Andalusia (past and present). Through observations, lectures, discussions, readings, assignments, and immersion, the course will stress the development of in-situ critical thinking skills and the promotion of cultural diversity, tolerance, and global awareness. This class fulfills geography, sustainability minor, and intercultural global studies minor requirements.

**GEOG 4825 Geographies of International Development in Africa (4 Credits)**

What are the historical roots of (under)development in sub-Saharan Africa? How is sub-Saharan Africa typically depicted in the media? How can we explain the fact that the Niger Delta provides the bulk of Nigeria's revenue, and yet, it remains the poorest part of the country? Is climate change the major cause of persistent food insecurity in the drylands of Ethiopia and Burkina Faso? How can we make sense of the uneven geography of poverty in Ghana? What explains urban food insecurity in Cape Town, or land struggles in rural South Africa? What are the social processes underlying the spatial disparity in health status in Malawi, or gender differences in HIV rates in Nyanza province, Kenya? And why do land users often resist state conservation efforts in Tanzania? These are some of the critical questions explored in this course. The primary aim is to provide a critical introduction to the geography of sub-Saharan Africa. We will begin by exploring how "the Africa story" is told by the media, scholars and policymakers. Attention will then shift to understanding the key historical processes that shape (under)development in the region. We will cover a broad range of topics, including governance, colonial history, debt and structural adjustment, foreign aid, food and agriculture, gender, climate change, land grabbing, health, population growth, migration, remittances, and resource extraction. We cannot possibly cover all these topics in greater detail; indeed, some are too vast and complex. We will however use specific case studies to illustrate and discuss each of the topics.

**GEOG 4880 Geographies of South Africa (4 Credits)**

This travel course is designed to give students a first-hand look at the physical and cultural landscapes of South Africa. We will study the varied natural landscapes that produce the commodities (e.g., gold, diamonds, wine, and agriculture) that have attracted the interest of outsiders for centuries and that have influenced the cultural landscapes particular to South Africa. A systematic presentation of the geology of South Africa, and its human history, will unfold throughout our travels.

**GEOG 4900 Graduate Colloquium in Geog (0 Credits)**

Solid foundation in history and philosophy of the discipline of geography; basis for further exploration of major research specialization.

**GEOG 4930 Nicaragua: Development Dilemmas (4 Credits)**

This class takes students to post-revolutionary Nicaragua to examine the consequences of recent land grabs by foreigners and transnational companies. Students learn to operate in a country with minimal "western" infrastructure. They learn to examine developing landscapes (that is, resorts and tourism infrastructure) with new eyes and from the perspective of locals who have been left out of the development loop. By the end of the class, students begin to understand the "development game", begin to question the role of tourism in developing economies, begin to know how to interact with other cultures, and finally learn to question the landscapes we "see" and begin to peel back the layers to understand the social and physical evolution of the landscape before their eyes. This class takes an experiential approach and requires students to participate in a service learning experience. Service learning is defined as a course-based, credit bearing educational experience in which faculty, students, and community members participate in an organized service activity that addresses a self-identified community need. We work with several community-based and non-governmental organizations to ensure a good fit between community needs and student expertise.

**GEOG 4950 Advanced Field Research (1-17 Credits)****GEOG 4991 Independent Study (1-5 Credits)****GEOG 4993 Capstone or Project (1-4 Credits)**

Includes technical design and development for MA geotechnical track project and MS-GIS capstone project.

**GEOG 4994 Report (1-5 Credits)****GEOG 4995 Independent Research (1-5 Credits)**

Includes field research for doctoral dissertation.

**GEOG 4999 Geographic Internship (0-5 Credits)**

Supervised internship in a government office at local, state or federal level or within private sector. Prerequisite: Permission of instructor.

**GEOG 5991 Independent Study (1-5 Credits)****GEOG 5995 Independent Research (1-10 Credits)**

## Geology Courses

**GEOL 3100 Environmental Geology (4 Credits)**

Environmental geology examines geologic hazards, both natural and those attributable to human impacts on the environment from urban and regional development. Specific topics may include disposal of municipal solid waste and radioactive waste; flood, earthquake, volcanic hazards; groundwater pollution and withdrawal; mass-wasting phenomena; and energy-related issues. Prerequisite: GEOL 1010, GEOG 1203 or instructor's permission.

**GEOL 3200 Sedimentology/Stratigraphy (4 Credits)**

This course reviews the origin, geologic history, and depositional environments of sediments and sedimentary rocks. Course work concentrates on the identification of sedimentary rocks and depositional environments by first-hand observations of rocks in the Denver area. Prerequisite: GEOL 1010, GEOG 1203 or instructor's permission.

**GEOL 3540 Hydrology (4 Credits)**

This course provides an overview of the hydrologic cycle with emphasis placed on the study of applied hydrology. Discussions include the fundamental characteristics of precipitation, runoff processes, calculation of flood hazards, aquifers (porosity and permeability), the geologic settings of groundwater, the basic physics of groundwater flow, and water supply and use. Prerequisite: GEOL 1010, GEOG 1203 or instructor's permission. Recommended prerequisite: one introductory statistics course.

**GEOL 3900 Geomorphology Seminar (1-5 Credits)**

Hill slopes comprise the vast majority of the Earth's land surface. It is upon these surfaces that nearly all of the human population must exist and, hopefully, flourish. Hill slopes assume various forms, and their shape influences their utility for various human endeavors. Numerous geomorphic processes operate upon hill slopes to determine their form, and human activities strongly influence the frequency and magnitude of these geomorphic processes. Consequently, hill slopes are an interface between the Earth and the human population. Prerequisite: GEOL 3010 or permission of instructor.

**GEOL 3991 Independent Study (1-5 Credits)**

## Mathematics

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The Department of Mathematics at the University of Denver offers MA, MS and PhD degrees in mathematics. Our graduate programs enroll about 30 students and provide a personalized, congenial and rewarding educational atmosphere where you will interact with faculty from the start. We have an extraordinarily active faculty of accomplished teachers and researchers with expertise in algebraic logic, computational geometry, dynamical systems, functional analysis, nonassociative mathematics, ordered structures, probabilistic combinatorics, quantum structures, and set theory.

The MS and MA degrees prepare students for careers in which mathematics plays a central role. The PhD is a research degree that prepares students to advance the frontiers of knowledge within a specific area of mathematics.

Our graduates are highly sought, not only for their knowledge of mathematics, but also for their ability to solve problems, to think abstractly, to see the big picture, and to articulate their ideas with clarity and precision. Our graduates have been successful in a remarkably diverse collection of careers, including industry, business, education and academia.

## Doctor of Philosophy in Mathematics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

## Master of Arts in Mathematics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5

- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

## Master of Science in Mathematics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.
- If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Acceptance Offered: No, this program does not offer English Conditional Admission.

## Doctoral Program

### Doctor of Philosophy in Mathematics

This degree requires completion of at least 135 graduate-level credits beyond the BA or BS degree; passing of preliminary examinations; completion of a tool requirement; and completion of a written dissertation.

Although a master's degree is not a prerequisite for acceptance into the PhD program, each student is required to obtain a master's degree in mathematics before completing 80 credits in the PhD program.

### Degree Requirements

#### Course Requirements

Students are required to pass both of the sequences MATH 3161, MATH 4165, MATH 4110 and MATH 3170, MATH 4166, MATH 4176 in their first year. Based on performance in preliminary examinations or other considerations, students may be allowed to replace some courses in a sequence by other offerings.

Every student's course of study must be approved in consultation with a designated departmental advisor.

Code	Title	Credits
MATH 4XXX courses	(minimum of 36 credits)	
Additional Coursework (Chosen in consultation with the student's academic advisor.)		
Up to 35 credits may be taken in other relevant disciplines, as approved by the mathematics department graduate committee.		
<b>Total Credits</b>		<b>135</b>

Minimum credits required for degree: 135



**Non-coursework Requirements**

- Preliminary Examinations

Every student admitted to the PhD program is expected to pass a written preliminary examination in analysis and a written preliminary examination in algebra. Both preliminary examinations are designed to test whether students in the PhD program have the adequate undergraduate preparation to continue in the program with a reasonable chance of success.

Both examinations are offered twice per year: during the week immediately preceding the first week of the fall quarter, and during the first week of the winter quarter. A student must pass both exams by no later than the end of the winter quarter of his/her second year in the program unless the graduate committee grants an extension of this deadline for exceptional and documented reasons.

- Tool Requirement

It is strongly recommended that students satisfy their tool requirement by demonstrating the ability to use a modern computer typesetting system. Other options include: reading competency in two languages selected from French, German and Russian; a series of outside courses in another discipline; a significant laboratory experience involving mathematics.

- Dissertation and Oral Defense

The dissertation must make a significant contribution to the research literature in mathematics.

After the dissertation has been completed, the student must defend it in a final examination, as specified by the Office of Graduate Education.

## Master's Programs

### Master of Arts in Mathematics

**Degree Requirements****Coursework Requirements**

Every student's course of study must be approved in consultation with a designated departmental advisor.

Code	Title	Credits
Approved MATH 4XXX courses (minimum 12 credits)		
Approved cognate area (up to 15 credits)		
Additional graduate-level MATH courses		
<b>Total Credits</b>		<b>45</b>

Minimum credits required for degree: 45

This degree requires completion of 45 credits of graduate-level MATH courses, including at least 12 credits of approved MATH courses at the 4000 level. Students are required to pass at least one of the sequences MATH 3161, MATH 4165, MATH 4110 or MATH 3170, MATH 4166, MATH 4176.

Up to 15 credits may be in an approved cognate area. At most 10 credits from another university may count toward the degree, and such credits must be approved in writing by an advisor from the Mathematics faculty.

**Non-coursework Requirements**

- Students are required to give an oral presentation in mathematics. This will typically occur after the completion of at least 24 credits of coursework, and should be scheduled after approval from a Mathematics faculty advisor.

No thesis is required.

### Master of Science in Mathematics

**Degree Requirements****Coursework Requirements**

Every student's course of study must be approved in consultation with a designated departmental advisor.

Code	Title	Credits
Approved MATH 4XXX courses (minimum 12 credits)		
Approved cognate area (up to 15 credits)		

Additional graduate-level MATH courses

**Total Credits**

**45**

Minimum credits required for degree: 45

This degree requires completion of 45 credits of graduate-level MATH courses, including at least 12 credits of approved MATH courses at the 4000 level. Students are required to pass both of the sequences MATH 3161, MATH 4165, MATH 4110 and MATH 3170, MATH 4166, MATH 4176.

Up to 15 credits may be in an approved cognate area. At most 10 credits from another university may count toward the degree, and such credits must be approved in writing by an advisor from the Mathematics faculty.

**Non-coursework Requirements**

- Tool requirement- Demonstrated competency in a tool is required and may be chosen from among the following: proficiency in the use of a modern computing typesetting system; approved outside courses; laboratory experience; or reading competency in French, German or Russian.
- Students are required to give an oral presentation in mathematics. This will typically occur after the completion of at least 24 credits of coursework, and should be scheduled after approval from a Mathematics faculty advisor.

No thesis is required.

**MATH 3000 The Real World Seminar (1 Credit)**

Lectures by alumni and others on surviving culture shock when leaving the University and entering the job world. Open to all students regardless of major. Cross listed with COMP 3000.

**MATH 3040 Lattices and Order (4 Credits)**

Ordered sets, lattices as relational and as algebraic structures, ideals and filters, complete lattices, distributive and modular lattices, Boolean algebras, duality for finite distributive lattices. Prerequisite: MATH 2200.

**MATH 3050 Set Theory (4 Credits)**

Zermelo-Fraenkel axioms, axiom of choice, Zorn's Lemma, ordinals, cardinals, cardinal arithmetic. Prerequisite: MATH 2200.

**MATH 3060 Mathematical Logic (4 Credits)**

Classical propositional calculus (deductive systems and truth-table semantics), first-order logic (axiomatization and completeness), elements of recursion theory, introduction to nonclassical logics. Prerequisite: MATH 2200.

**MATH 3090 Mathematical Probability (4 Credits)**

Limit theorems for independent random variables, multivariate distributions, generating functions. Prerequisites: MATH 2080 and MATH 3080.

**MATH 3151 Advanced Linear Algebra (4 Credits)**

Vector spaces, linear mappings, matrices, inner product spaces, eigenvalues and eigenvectors. Prerequisite: MATH 2060 and MATH 2200.

**MATH 3161 Introduction to Real Analysis (4 Credits)**

A theoretical introduction to the structure of real numbers, to convergence of sequences and series, and to the topology of the real line, including limits and continuity. Prerequisites: MATH 2080 and MATH 2200.

**MATH 3162 Introduction to Real Analysis II (4 Credits)**

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3161.

**MATH 3166 Group Theory (4 Credits)**

Groups and homomorphisms, isomorphism theorems, symmetric groups and  $G$ -sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 4166. Prerequisite: MATH 3170.

**MATH 3170 Introduction to Abstract Algebra (4 Credits)**

Examples of groups, permutations, subgroups, cosets, Lagrange theorem, normal subgroups, factor groups, homomorphisms, isomorphisms, rings, integral domains, quaternions, rings of polynomials, Euclid algorithm, ideals, factor rings, maximal ideals, principal ideals, fields, construction of finite fields. Prerequisite: MATH 2060 and MATH 2200.

**MATH 3260 Metric Spaces (4 Credits)**

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 4260. Prerequisite: MATH 3161 or equivalent.

**MATH 3311 Linear Programming (4 Credits)**

Linear optimization models, simplex algorithm, sensitivity analysis and duality, network models, dynamic programming, applications to physical, social and management sciences. Prerequisite: MATH 2060.

**MATH 3312 Markov Chains (4 Credits)**

Discrete-time and continuous Markov Chains, ergodic theorems, random processes, elementary queueing theory, applications. Prerequisite: MATH 2060 and MATH 3080.

**MATH 3351 Introduction to Dynamical Systems (4 Credits)**

Dynamical systems (one-parameter families such as circle rotations/tent maps, shift spaces); global properties (transitivity/mixing/sensitivity); behavior of trajectories (chaos, long-term averages, periodicity). Prerequisite: MATH 3161.

**MATH 3400 Introduction to Geometry (4 Credits)**

Specific geometrical systems including finite, Euclidean, non-Euclidean and projective geometries. Prerequisite: MATH 2200.

**MATH 3451 Chaos, Dynamics & Fractals (4 Credits)**

Introduction to one-dimensional dynamical systems, fractals; fixed and periodic points; sources and sinks; period doubling and tangent node bifurcations; chaotic dynamical systems; Sarkovskii's Theorem. Prerequisite: MATH 3161.

**MATH 3550 Introduction to Theory of Numbers (4 Credits)**

Concepts of nonanalytic number theory and its history; prime numbers, divisibility, continued fractions, modular arithmetic, Diophantine equations and unsolved conjectures. Prerequisites: MATH 2200.

**MATH 3651 Ordinary Differential Equations (4 Credits)**

Modeling of phenomena by ordinary differential equations; techniques of analysis and solution of such equations; oscillation theory and boundary value problems, power series methods, special functions, Laplace transforms and difference equations. Prerequisites: MATH 2060 and MATH 2070.

**MATH 3661 Partial Differential Equations (4 Credits)**

First and second order linear equations, Fourier series, the wave equation, the Cauchy problem, the heat equation, maximum principles, Laplace's equation, Green's functions. Prerequisites: MATH 2070 and MATH 2080.

**MATH 3701 Combinatorics (4 Credits)**

The principle of inclusion and exclusion, elementary counting techniques, systems of distinct representatives, partitions, recursion and generating functions, Latin squares, designs and projective planes. Prerequisite: MATH 2200.

**MATH 3705 Topics in Mathematics (4 Credits)**

Varying selected advanced topics in mathematics, depending on student demand and instructor interest.

**MATH 3710 Graph Theory (4 Credits)**

Paths, cycles, trees, Euler tours and Hamilton cycles, bipartite graphs, matchings, basic connectivity theorems, planar graphs, Kuratowski's theorem, chromatic number,  $n$ -color theorems, introduction to Ramsey theory. Prerequisite: MATH 2200.

**MATH 3720 Coding Theory (4 Credits)**

Goals of coding theory and information theory, instantaneous and Huffman codes, Shannon theorems, block and linear codes, generating and parity-check matrices, Hamming codes, perfect codes, binary Golay code, Reed-Muller codes, cyclic codes, BCH codes, Reed-Solomon codes, ideas of convolutional and turbo codes. Prerequisite: MATH 3170.

**MATH 3851 Functions Complex Variable (4 Credits)**

Complex numbers, analytic functions, complex integration, series expansions, residue theory, conformal maps, advanced topics and applications. Prerequisites: MATH 2060 and MATH 2080 and MATH 2200.

**MATH 3900 Mathematics Internship (0-1 Credits)**

Graduate students in mathematics may receive elective credit for mathematically related work performed for employers with the approval of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned.

**MATH 3988 Study Abroad Resident Credit (0-18 Credits)****MATH 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in regular course schedule for that particular year.

**MATH 4050 Combinatorial Set Theory (4 Credits)**

Beginning with a quick review of ZFC, the standard axioms of set theory, the course covers advanced ordinal and cardinal arithmetic and infinitary combinatorics, including Ramsey theory. Additional axioms such as the Continuum Hypothesis, Martin's Axiom, and combinatorial principles such as Diamond and their consequences for mathematics are studied. Prerequisite: MATH 3050.

**MATH 4060 Descriptive Set Theory (4 Credits)**

Descriptive Set Theory is one of the main branches of modern set theory. Set theory provides techniques for the precise study of real analysis. This course covers trees as tools for analyzing sets of real numbers, Polish spaces, the Borel hierarchy, Baire-measurability, extensions of continuous functions, separation theorems, and more. Prerequisite: MATH 3050.

**MATH 4070 Proof Theory (4 Credits)**

Hilbert-style systems, Natural deduction, (simply typed) lambda calculus, combinatory logic, the Curry-Howard correspondence, normalization, cartesian closed categories, Sequent calculi, cut elimination and applications, structural rules; logical systems: classical, intuitionistic, relevance, linear; algebraic semantics. Recommended prerequisite: MATH 2200.

**MATH 4080 Algebraic Logic (4 Credits)**

Elements of universal algebra, lattice theory and first-order logic; elements of abstract algebraic logic (deductive systems, algebraization, deduction filters, deduction theorems, matrix semantics); sequent calculi for substructural logics, residuated lattices, structure theory for congruences and deductive filters; subvariety lattices (atomic varieties, axiomatizations of joins, translations); algebraic cut elimination; (un)decidability and finite model property. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4110 Topology (4 Credits)**

Point set topology including topological spaces, connectedness, compactness and separate axioms; preparation for advanced courses in analysis. Prerequisite: MATH 3161. Cross listed with MATH 3110.

**MATH 4120 Algebraic Topology (4 Credits)**

Fundamental groups, simplicial homology, Euler characteristic classification of surfaces, manifolds. Prerequisites: MATH 3170 and MATH 3110/4110.

**MATH 4162 Rings and Modules (4 Credits)**

Ideals, left and right R-modules, simple modules, totally decomposable modules, Wedderburn-Artin theorems, Artinian and Noetherian rings and modules, Hopkins theorem, Hilbert basis theorem, free modules, projective and injective modules, Kaplanski theorem. Prerequisites: MATH 3176 or MATH 4176.

**MATH 4163 Universal Algebra (4 Credits)**

Universal algebras, congruences, lattices, distributive lattices, modular lattices, Boolean algebras, subdirectly irreducible algebras, Mal'cev theorems, varieties, Birkhoff theorem. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4164 Galois Theory (4 Credits)**

The fundamental theorem of algebra, field extensions, ruler and compass constructions, normal and separable extensions, field automorphisms, Galois correspondence, solvability and simplicity, calculating Galois groups. Prerequisite: MATH 3176/MATH 4176 and MATH 3166/MATH 4166.

**MATH 4165 Introduction to Real Analysis II (4 Credits)**

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisites: MATH 3161.

**MATH 4166 Group Theory (4 Credits)**

Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 3166. Prerequisite: MATH 3170.

**MATH 4168 Lie Groups and Lie Algebras (4 Credits)**

Lie groups and Lie algebras, fundamental theorems of Lie, general structure theory; compact, nilpotent, solvable, semisimple Lie groups; classification of semisimple Lie algebras; representation theory of compact and semisimple Lie algebras and Lie groups. Additional topics as time permits: universal enveloping algebras, symmetric spaces. Prerequisites: MATH 3161 and MATH 3170.

**MATH 4176 Rings and Fields (4 Credits)**

Rings, domains, fields; ideals, quotient rings, polynomials; PIDs, UFDs, Euclidean domains; maximal and prime ideals, chain conditions; extensions of fields, splitting fields, algebraic and transcendental extensions; brief introduction to Galois theory. Cross listed with MATH 3176. Prerequisite: MATH 3170 or equivalent.

**MATH 4181 Loop Theory (4 Credits)**

Quasigroups, loops, latin squares, 3-nets, isotopy, multiplication groups, inner mapping groups, nuclei, commutant, center, associator subloop, inverse properties, power-associative loops, Bruck loops, Bol loops, Moufang loops, octonions. Prerequisites: MATH 3166 or MATH 4166.

**MATH 4260 Metric Spaces (4 Credits)**

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 3260. Prerequisite: MATH 3161 or equivalent.

**MATH 4270 Hilbert Spaces (4 Credits)**

Schwarz and triangle inequalities, Riesz lemma, subspaces and orthogonal projections, orthonormal bases, spectrum of bounded linear operators, compact, self-adjoint, normal and unitary operators, spectral theorem and, if time permits, unbounded operators. Also, if time permits, applications to partial differential equations, physics and engineering. Prerequisites: MATH 3260 or MATH 4260 or MATH 3110 or MATH 4110.

**MATH 4280 Measure Theory and Applications (4 Credits)**

Definition of Measure spaces; Lebesgue measure; limit theorems; Raydon-Nikodym Theorem; introduction to  $L_p$  spaces. Prerequisite: (MATH 3260 with a minimum grade of D- or MATH 4260 with a minimum grade of C-) or (MATH 3110 with a minimum grade of D- or MATH 4110 with a minimum grade of C-).

**MATH 4290 Dynamical Systems (4 Credits)**

Topological and measure theoretic dynamical systems; properties and invariants of systems; symbolic dynamics; Ergodic Theorems; applications. Prerequisites: MATH 3110/4110 or MATH 3260/4260.

**MATH 4300 Graduate Seminar (1-4 Credits)**

Students research a topic of their choosing with the aid of a faculty member, and then prepare and present a formal lecture on the subject. Prerequisite: graduate standing or consent of the instructor.

**MATH 4400 Differential Geometry (4 Credits)**

Planar and spatial curves, global properties of curves, surfaces in three dimensions, the first fundamental form, curvature of surfaces, Gaussian curvatures, geodesics, Theorema Egregium, hyperbolic geometry. Prerequisites: MATH 3170 and either MATH 3110/4110 or MATH 3260/4260.

**MATH 4501 Functional Analysis (4 Credits)**

Advanced topics in structure of linear spaces; Banach spaces; Hahn-Banach Theorem and Duality; Uniform Boundedness Theorem; Open Mapping and Closed Graph Theorems; Stone-Weierstrass Theorem; Topics in Hilbert Spaces. Prerequisite: MATH 4280.

**MATH 4700 Special Topics in Mathematics (1-4 Credits)****MATH 4701 Combinatorial Algorithms (4 Credits)**

Basic enumeration techniques; representations of combinatorial objects; algorithms for searching, sorting, generating combinatorial objects, graph algorithms. Prerequisites: MATH 3701 or MATH 3710.

**MATH 4705 Special Topics Applied Math (1-5 Credits)**

Varying selected advanced topics in mathematics, depending on student demand. Possible alternatives include of variations, partial differential equations, algebraic topology, differential manifolds, special functions.

**MATH 4991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in course schedule for that particular year.

**MATH 4995 Independent Research (1-10 Credits)**

Research projects undertaken in conjunction with a faculty member.

**MATH 5000 Doctoral Seminar (3 Credits)**

Techniques, methods used in mathematical, computing research. Includes proofs, bibliographic searching, writing styles, what constitutes an acceptable dissertation.

**MATH 5991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**MATH 5995 Independent Research (1-10 Credits)**

Research leading to a dissertation.

## Courses

**MATH 3000 The Real World Seminar (1 Credit)**

Lectures by alumni and others on surviving culture shock when leaving the University and entering the job world. Open to all students regardless of major. Cross listed with COMP 3000.

**MATH 3040 Lattices and Order (4 Credits)**

Ordered sets, lattices as relational and as algebraic structures, ideals and filters, complete lattices, distributive and modular lattices, Boolean algebras, duality for finite distributive lattices. Prerequisite: MATH 2200.

**MATH 3050 Set Theory (4 Credits)**

Zermelo-Fraenkel axioms, axiom of choice, Zorn's Lemma, ordinals, cardinals, cardinal arithmetic. Prerequisite: MATH 2200.

**MATH 3060 Mathematical Logic (4 Credits)**

Classical propositional calculus (deductive systems and truth-table semantics), first-order logic (axiomatization and completeness), elements of recursion theory, introduction to nonclassical logics. Prerequisite: MATH 2200.

**MATH 3090 Mathematical Probability (4 Credits)**

Limit theorems for independent random variables, multivariate distributions, generating functions. Prerequisites: MATH 2080 and MATH 3080.

**MATH 3151 Advanced Linear Algebra (4 Credits)**

Vector spaces, linear mappings, matrices, inner product spaces, eigenvalues and eigenvectors. Prerequisite: MATH 2060 and MATH 2200.

**MATH 3161 Introduction to Real Analysis (4 Credits)**

A theoretical introduction to the structure of real numbers, to convergence of sequences and series, and to the topology of the real line, including limits and continuity. Prerequisites: MATH 2080 and MATH 2200.

**MATH 3162 Introduction to Real Analysis II (4 Credits)**

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3161.

**MATH 3166 Group Theory (4 Credits)**

Groups and homomorphisms, isomorphism theorems, symmetric groups and  $G$ -sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 4166. Prerequisite: MATH 3170.

**MATH 3170 Introduction to Abstract Algebra (4 Credits)**

Examples of groups, permutations, subgroups, cosets, Lagrange theorem, normal subgroups, factor groups, homomorphisms, isomorphisms, rings, integral domains, quaternions, rings of polynomials, Euclid algorithm, ideals, factor rings, maximal ideals, principal ideals, fields, construction of finite fields. Prerequisite: MATH 2060 and MATH 2200.

**MATH 3260 Metric Spaces (4 Credits)**

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 4260. Prerequisite: MATH 3161 or equivalent.

**MATH 3311 Linear Programming (4 Credits)**

Linear optimization models, simplex algorithm, sensitivity analysis and duality, network models, dynamic programming, applications to physical, social and management sciences. Prerequisite: MATH 2060.

**MATH 3312 Markov Chains (4 Credits)**

Discrete-time and continuous Markov Chains, ergodic theorems, random processes, elementary queueing theory, applications. Prerequisite: MATH 2060 and MATH 3080.

**MATH 3351 Introduction to Dynamical Systems (4 Credits)**

Dynamical systems (one-parameter families such as circle rotations/tent maps, shift spaces); global properties (transitivity/mixing/sensitivity); behavior of trajectories (chaos, long-term averages, periodicity). Prerequisite: MATH 3161.

**MATH 3400 Introduction to Geometry (4 Credits)**

Specific geometrical systems including finite, Euclidean, non-Euclidean and projective geometries. Prerequisite: MATH 2200.

**MATH 3451 Chaos, Dynamics & Fractals (4 Credits)**

Introduction to one-dimensional dynamical systems, fractals; fixed and periodic points; sources and sinks; period doubling and tangent node bifurcations; chaotic dynamical systems; Sarkovskii's Theorem. Prerequisite: MATH 3161.

**MATH 3550 Introduction to Theory of Numbers (4 Credits)**

Concepts of nonanalytic number theory and its history; prime numbers, divisibility, continued fractions, modular arithmetic, Diophantine equations and unsolved conjectures. Prerequisites: MATH 2200.

**MATH 3651 Ordinary Differential Equations (4 Credits)**

Modeling of phenomena by ordinary differential equations; techniques of analysis and solution of such equations; oscillation theory and boundary value problems, power series methods, special functions, Laplace transforms and difference equations. Prerequisites: MATH 2060 and MATH 2070.

**MATH 3661 Partial Differential Equations (4 Credits)**

First and second order linear equations, Fourier series, the wave equation, the Cauchy problem, the heat equation, maximum principles, Laplace's equation, Green's functions. Prerequisites: MATH 2070 and MATH 2080.

**MATH 3701 Combinatorics (4 Credits)**

The principle of inclusion and exclusion, elementary counting techniques, systems of distinct representatives, partitions, recursion and generating functions, Latin squares, designs and projective planes. Prerequisite: MATH 2200.

**MATH 3705 Topics in Mathematics (4 Credits)**

Varying selected advanced topics in mathematics, depending on student demand and instructor interest.

**MATH 3710 Graph Theory (4 Credits)**

Paths, cycles, trees, Euler tours and Hamilton cycles, bipartite graphs, matchings, basic connectivity theorems, planar graphs, Kuratowski's theorem, chromatic number,  $n$ -color theorems, introduction to Ramsey theory. Prerequisite: MATH 2200.

**MATH 3720 Coding Theory (4 Credits)**

Goals of coding theory and information theory, instantaneous and Huffman codes, Shannon theorems, block and linear codes, generating and parity-check matrices, Hamming codes, perfect codes, binary Golay code, Reed-Muller codes, cyclic codes, BCH codes, Reed-Solomon codes, ideas of convolutional and turbo codes. Prerequisite: MATH 3170.

**MATH 3851 Functions Complex Variable (4 Credits)**

Complex numbers, analytic functions, complex integration, series expansions, residue theory, conformal maps, advanced topics and applications. Prerequisites: MATH 2060 and MATH 2080 and MATH 2200.

**MATH 3900 Mathematics Internship (0-1 Credits)**

Graduate students in mathematics may receive elective credit for mathematically related work performed for employers with the approval of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned.

**MATH 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in regular course schedule for that particular year.

**MATH 4050 Combinatorial Set Theory (4 Credits)**

Beginning with a quick review of ZFC, the standard axioms of set theory, the course covers advanced ordinal and cardinal arithmetic and infinitary combinatorics, including Ramsey theory. Additional axioms such as the Continuum Hypothesis, Martin's Axiom, and combinatorial principles such as Diamond and their consequences for mathematics are studied. Prerequisite: MATH 3050.

**MATH 4060 Descriptive Set Theory (4 Credits)**

Descriptive Set Theory is one of the main branches of modern set theory. Set theory provides techniques for the precise study of real analysis. This course covers trees as tools for analyzing sets of real numbers, Polish spaces, the Borel hierarchy, Baire-measurability, extensions of continuous functions, separation theorems, and more. Prerequisite: MATH 3050.

**MATH 4070 Proof Theory (4 Credits)**

Hilbert-style systems, Natural deduction, (simply typed) lambda calculus, combinatory logic, the Curry-Howard correspondence, normalization, cartesian closed categories, Sequent calculi, cut elimination and applications, structural rules; logical systems: classical, intuitionistic, relevance, linear; algebraic semantics. Recommended prerequisite: MATH 2200.

**MATH 4080 Algebraic Logic (4 Credits)**

Elements of universal algebra, lattice theory and first-order logic; elements of abstract algebraic logic (deductive systems, algebraization, deduction filters, deduction theorems, matrix semantics); sequent calculi for substructural logics, residuated lattices, structure theory for congruences and deductive filters; subvariety lattices (atomic varieties, axiomatizations of joins, translations); algebraic cut elimination; (un)decidability and finite model property. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4110 Topology (4 Credits)**

Point set topology including topological spaces, connectedness, compactness and separate axioms; preparation for advanced courses in analysis. Prerequisite: MATH 3161. Cross listed with MATH 3110.

**MATH 4120 Algebraic Topology (4 Credits)**

Fundamental groups, simplicial homology, Euler characteristic classification of surfaces, manifolds. Prerequisites: MATH 3170 and MATH 3110/4110.

**MATH 4162 Rings and Modules (4 Credits)**

Ideals, left and right R-modules, simple modules, totally decomposable modules, Wedderburn-Artin theorems, Artinian and Noetherian rings and modules, Hopkins theorem, Hilbert basis theorem, free modules, projective and injective modules, Kaplanski theorem. Prerequisites: MATH 3176 or MATH 4176.

**MATH 4163 Universal Algebra (4 Credits)**

Universal algebras, congruences, lattices, distributive lattices, modular lattices, Boolean algebras, subdirectly irreducible algebras, Mal'cev theorems, varieties, Birkhoff theorem. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4164 Galois Theory (4 Credits)**

The fundamental theorem of algebra, field extensions, ruler and compass constructions, normal and separable extensions, field automorphisms, Galois correspondence, solvability and simplicity, calculating Galois groups. Prerequisite: MATH 3176/MATH 4176 and MATH 3166/MATH 4166.

**MATH 4165 Introduction to Real Analysis II (4 Credits)**

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisites: MATH 3161.

**MATH 4166 Group Theory (4 Credits)**

Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 3166. Prerequisite: MATH 3170.

**MATH 4168 Lie Groups and Lie Algebras (4 Credits)**

Lie groups and Lie algebras, fundamental theorems of Lie, general structure theory; compact, nilpotent, solvable, semisimple Lie groups; classification of semisimple Lie algebras; representation theory of compact and semisimple Lie algebras and Lie groups. Additional topics as time permits: universal enveloping algebras, symmetric spaces. Prerequisites: MATH 3161 and MATH 3170.

**MATH 4176 Rings and Fields (4 Credits)**

Rings, domains, fields; ideals, quotient rings, polynomials; PIDs, UFDs, Euclidean domains; maximal and prime ideals, chain conditions; extensions of fields, splitting fields, algebraic and transcendental extensions; brief introduction to Galois theory. Cross listed with MATH 3176. Prerequisite: MATH 3170 or equivalent.

**MATH 4181 Loop Theory (4 Credits)**

Quasigroups, loops, latin squares, 3-nets, isotopy, multiplication groups, inner mapping groups, nuclei, commutant, center, associator subloop, inverse properties, power-associative loops, Bruck loops, Bol loops, Moufang loops, octonions. Prerequisites: MATH 3166 or MATH 4166.

**MATH 4260 Metric Spaces (4 Credits)**

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 3260. Prerequisite: MATH 3161 or equivalent.

**MATH 4270 Hilbert Spaces (4 Credits)**

Schwarz and triangle inequalities, Riesz lemma, subspaces and orthogonal projections, orthonormal bases, spectrum of bounded linear operators, compact, self-adjoint, normal and unitary operators, spectral theorem and, if time permits, unbounded operators. Also, if time permits, applications to partial differential equations, physics and engineering. Prerequisites: MATH 3260 or MATH 4260 or MATH 3110 or MATH 4110.

**MATH 4280 Measure Theory and Applications (4 Credits)**

Definition of Measure spaces; Lebesgue measure; limit theorems; Raydon-Nikodym Theorem; introduction to  $L_p$  spaces. Prerequisite: (MATH 3260 with a minimum grade of D- or MATH 4260 with a minimum grade of C-) or (MATH 3110 with a minimum grade of D- or MATH 4110 with a minimum grade of C-).

**MATH 4290 Dynamical Systems (4 Credits)**

Topological and measure theoretic dynamical systems; properties and invariants of systems; symbolic dynamics; Ergodic Theorems; applications. Prerequisites: MATH 3110/4110 or MATH 3260/4260.

**MATH 4300 Graduate Seminar (1-4 Credits)**

Students research a topic of their choosing with the aid of a faculty member, and then prepare and present a formal lecture on the subject.

Prerequisite: graduate standing or consent of the instructor.

**MATH 4400 Differential Geometry (4 Credits)**

Planar and spatial curves, global properties of curves, surfaces in three dimensions, the first fundamental form, curvature of surfaces, Gaussian curvatures, geodesics, Theorema Egregium, hyperbolic geometry. Prerequisites: MATH 3170 and either MATH 3110/4110 or MATH 3260/4260.

**MATH 4501 Functional Analysis (4 Credits)**

Advanced topics in structure of linear spaces; Banach spaces; Hahn-Banach Theorem and Duality; Uniform Boundedness Theorem; Open Mapping and Closed Graph Theorems; Stone-Weierstrass Theorem; Topics in Hilbert Spaces. Prerequisite: MATH 4280.

**MATH 4700 Special Topics in Mathematics (1-4 Credits)****MATH 4701 Combinatorial Algorithms (4 Credits)**

Basic enumeration techniques; representations of combinatorial objects; algorithms for searching, sorting, generating combinatorial objects, graph algorithms. Prerequisites: MATH 3701 or MATH 3710.

**MATH 4705 Special Topics Applied Math (1-5 Credits)**

Varying selected advanced topics in mathematics, depending on student demand. Possible alternatives include of variations, partial differential equations, algebraic topology, differential manifolds, special functions.

**MATH 4991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in course schedule for that particular year.

**MATH 4995 Independent Research (1-10 Credits)**

Research projects undertaken in conjunction with a faculty member.

**MATH 5000 Doctoral Seminar (3 Credits)**

Techniques, methods used in mathematical, computing research. Includes proofs, bibliographic searching, writing styles, what constitutes an acceptable dissertation.

**MATH 5991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**MATH 5995 Independent Research (1-10 Credits)**

Research leading to a dissertation.

## Molecular and Cellular Biophysics

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Mailing Address: 2050 E. Iliff Avenue, Denver, CO 80208

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Website: <https://science.du.edu>

### Molecular and Cellular Biophysics

The Molecular and Cellular Biophysics PhD (MCB) program provides opportunities for doctoral studies in the interdisciplinary field of biophysics. Participation of faculty from the Departments of Biological Sciences, Chemistry & Biochemistry, and Physics & Astronomy enhances the strength and breadth of our program by incorporating cross-disciplinary and collaborative approaches to research. The MCB PhD program is centered on research activities that coincide with faculty experience and expertise. Areas of research in the MCB program include cellular physiology, developmental dynamics, protein folding and aggregation, protein network analysis, signal transduction cascades, synthetic biology, systems biology and the development of novel imaging techniques. Projects at the interface of traditional disciplines of physics, biology and chemistry as well as methods of mathematical analysis and computer modeling are particularly encouraged.

The MCB PhD program offers both a core foundation in biophysical theory and practice yet provides flexibility and individualized attention such that students with diverse scientific backgrounds will have the opportunity to be trained in molecular and cellular biophysics. During their first year in the program, students conduct lab rotations, take a year-long course sequence that covers foundations of molecular and cellular biophysics and take additional graduate courses to supplement their undergraduate training. At the end of their first year, students will join the lab in which they will conduct their thesis research.

Students with strong quantitative undergraduate backgrounds (e.g., undergraduate degrees in physics, chemistry, mathematics, computer science/engineering) who desire to apply these skills to various biological problems, as well as students with a background in cell or molecular biology with a solid foundation in mathematics and physics are particularly encouraged to apply. Financial aid is usually offered in the form of Graduate Teaching or Graduate Research Assistantships, which cover tuition costs and provide a stipend for living expenses.



## Doctor of Philosophy in Molecular & Cellular Biophysics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Prerequisites

- A minimum of one year of calculus and one year of college physics (preferably calculus-based), regardless of undergraduate major, are required.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### Additional Requirements

- Applicants may be contacted to schedule an admissions interview.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Program

### Doctor of Philosophy in Molecular and Cellular Biophysics

Graduate studies in the program are highly individualized; programs should fit each student's unique needs and interests. Students are required to perform original, publishable research and to present a thesis based on research to the faculty of the molecular and cellular biophysics program.

A student qualifies for the PhD degree after demonstrating growth as an independent investigator—identifying a significant research question; proposing a hypothesis or model to answer the question; testing the hypothesis with appropriate experiments; and writing a dissertation acceptable to the department.

The structure of the PhD program in Molecular and Cellular Biophysics is as follows:

- required core courses and elective courses during the first year
- required lab rotations during the first year
- required seminar/special topics courses during the second year
- qualifying exams first year and second year
- thesis research second year to completion

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
First Year		
BIOP 4100	Foundations in Biophysics	3
BIOP 4150	Cellular Biophysics	3
CHEM 3130	Chemical Systems III	3

BIOP 4995	Independent Research	1-9
Second Year		
3 quarters of BIOP 4210 are required		
BIOP 4210	Current Topics in Biophysics	2
BIOP 4210	Current Topics in Biophysics	2
BIOP 4210	Current Topics in Biophysics	2
<b>Electives</b>		
During the first two years electives can be chosen from existing 3000- or 4000-level courses in the Division and must be chosen with consultation and the approval of the Steering committee. This use of electives is critical given the interdisciplinary nature of this PhD program and scientific discipline and the fact that incoming students will come from a range of disciplines in the physical sciences and life sciences.		
<b>The remainder of the credit hours required for the degree may include:</b>		
BIOP 4992		
BIOP 4995	Independent Research	
BIOP 5995	Independent Research	
<b>Total Credits</b>		<b>90</b>

Minimum credits required for the degree: 90 (must be approved by the program Steering committee)

#### Non-coursework Requirements

- passing performance in the qualifying examinations
- completion of a research dissertation of publishable quality
- successful oral defense of the dissertation

#### Additional requirements:

- successful completion of research rotations during the first year
- maintaining a minimum GPA of 3.0
- passing performance in the qualifying examinations
- attendance at departmental seminars and the presentation of one seminar per year
- completion of a research dissertation of publishable quality
- successful oral defense of the dissertation

A complete description of the program's official requirements and details of qualifying examinations are available on the Natural Sciences & Mathematics (<http://www.du.edu/nsm/departments/molecularandcellular/>) website.

## Master's Program

### Master of Science in Molecular and Cellular Biophysics

The MS in Molecular and Cellular Biophysics is a terminal master's degree for students who enter the PhD in Molecular and Cellular Biophysics but demonstrate a mastery in the program that indicates an MS degree is more suitable.

#### Degree Requirements

##### Coursework Requirements

Code	Title	Credits
<b>Required courses</b>		
BIOP 4100	Foundations in Biophysics	3
BIOP 4150	Cellular Biophysics	3
CHEM 3130	Chemical Systems III	3
BIOP 4210	Current Topics in Biophysics (Three quarters are required.)	2
BIOP 4210	Current Topics in Biophysics (Three quarters are required.)	2
BIOP 4210	Current Topics in Biophysics (Three quarters are required.)	2

BIOP 4995	Independent Research (Student must reach a minimum of 45 credit hours with approved independent research coursework.)	1-9
<b>Minimum Number of Credits Required</b>		<b>45</b>

Minimum credits required for the degree: 45

#### Non-coursework requirements

- Thesis
- Oral Defense

#### BIOP 4100 Foundations in Biophysics (3 Credits)

Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibria and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with PHYS 4100.

#### BIOP 4150 Cellular Biophysics (4 Credits)

Biophysical approaches to understanding cell function. We emphasize the various experimental approaches that biophysicists use to study basic cellular processes, including a variety of fluorescence images, optical and electrophysiological techniques. Cross listed with BIOL 4211.

#### BIOP 4210 Current Topics in Biophysics (2 Credits)

This is a seminar course that focuses on current primary literature in the fields of molecular and cellular biophysics. This is the first of a three course, year-long sequence.

#### BIOP 4993 Lab Rotation (2-9 Credits)

Lab rotation in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.

#### BIOP 4995 Independent Research (1-9 Credits)

Independent research in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.

#### BIOP 5991 Independent Study (1-10 Credits)

#### BIOP 5995 Independent Research (2-9 Credits)

#### BIOP 6991 Independent Study (1-10 Credits)

#### BIOP 6995 Independent Research (1-10 Credits)

## Physics and Astronomy

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The Department of Physics and Astronomy at the University of Denver combines a tradition of individualized instruction with a contemporary research focus. The department underwent a strong expansion with nine tenure-track and two teaching professor positions filled since 2006. Our diverse and dynamic faculty of 12 includes four women and come from seven different countries. We provide an attentive, hands-on research and learning community for undergraduate and graduate students up to the Ph.D. level. The department also offers a low student-to-faculty ratio in all advanced and graduate physics and astronomy courses and stresses individualized attention to each student. The program is recognized by the APS among US PhD-granting departments for our high percentage (50%) of female graduates: placing second nationally at the undergraduate level and third at the graduate level (APS data for the period 2011-2013).

The department has major research thrusts in stellar astronomy/astrophysics, biophysics, and condensed matter/materials physics. Our faculty members are internationally recognized and accomplished researchers. The department is a part of the University of Denver's interdisciplinary Molecular and Cellular Biophysics program (<https://science.du.edu/biophysics/>). Major state-of-the-art instrumentation is available both in the department and through collaborations with nearby national institutes in the region (NIST and NREL). Also, the University of Denver maintains our own Linux cluster for in-house high-performance computational needs.

## Doctor of Philosophy in Physics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Arts in Physics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Physics

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

- GRE scores are optional for admission to this program. Applications submitted without scores will receive full consideration. Every application undergoes a comprehensive evaluation, including a careful review of all application materials.

If you choose to submit test scores, you may upload your Test Taker Score Report PDF, which is considered unofficial. Official scores must be received directly from the appropriate testing agency upon admission to the University of Denver. The ETS institution code to submit GRE scores to the University of Denver is 4842.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Doctoral Program

### Doctor of Philosophy in Physics

The Department of Physics and Astronomy offers PhD degree in physics that prepares students for careers across a spectrum of scientific pursuits. At the conclusion of your degree, you'll be equipped with the experience and knowledge necessary to build a career in the advancement of scientific knowledge or education at the highest levels, which can open doors to careers in research and development in academia, government, and private industry.

Our department offers research opportunities in theoretical, experimental and computational astronomy and astrophysics, biophysics, and condensed matter and materials physics. PhD candidates in the program will work closely with faculty advisors to create a path of study that culminates in a dissertation defense based on independent research of a publishable quality.

### Degree Requirements

#### Coursework Requirements

Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Dissertation Committee.

Code	Title	Credits
<b>Graduate Core Courses</b>		<b>19-23</b>
Physics & Astronomy Graduate Core Courses are the following 8 courses (19-23 qtr hrs) that all students are expected to take during the first two years in the program:		
PHYS 4611	Adv Electricity & Magnetism I	3
PHYS 4612	Adv Electricity & Magnetism II	3
PHYS 4111	Quantum Mechanics I	3
PHYS 4112	Quantum Mechanics II	3
PHYS 4811	Statistical Mechanics I	4
PHYS 4001	Introduction to Research I	1,2
PHYS 4002	Introduction to Research II	1-3
PHYS 4003	Introduction to Research III	1,2
<b>Additional Coursework</b>		<b>71-67</b>
<b>Minimum credits required for the degree</b>		<b>90</b>

Minimum credits required for degree: 90 of which a minimum of 60 must be in Physics and Astronomy including the Graduate Core Courses, which constitute 19-23 quarter hours.

**Non-Course Requirements**

- Regular attendance at the Physics and Astronomy colloquia;
- Annual presentation at the Physics and Astronomy colloquia;
- Passing Comprehensive Examination at the PhD level;
- Advancement to Preliminary Candidacy at the PhD level;
- Formation of the Dissertation Committee;
- Passing Oral Dissertation Research Proposal;
- Advancement to Candidacy at the PhD level;
- Dissertation;
- Dissertation Defense. Three departmental faculty members and an Outside Chair are required for the Oral Defense.

**Other Degree Requirements**

- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;

## Master's Programs

### Master of Arts in Physics

The Department of Physics and Astronomy offers a Master of Arts (MA) in Physics that prepares the student for a wide variety of jobs. The MA degree is intended primarily for students who are seeking an advanced degree without a significant research component. For instance, the MA degree is appropriate for students pursuing careers in pre-college or community college teaching, planetarium or museums, or as technical representatives of various organizations. With complementary courses in education, MA graduates are well qualified to teach at the secondary level. The main difference between the MA and MS degree is that a research thesis is not required for the MA degree. However, students pursuing the MA degree will get exposed to some research experience through Introduction to Research courses in their first year in the program.

**Degree Requirements****Coursework Requirements**

Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Master's Committee.

Code	Title	Credits
<b>Graduate Core Courses</b>		<b>19-23</b>
Physics & Astronomy Graduate Core Courses are the following 8 courses (19-23 qtr hrs) that all students are expected to take during the first two years in the program:		
PHYS 4611	Adv Electricity & Magnetism I	3
PHYS 4612	Adv Electricity & Magnetism II	3
PHYS 4111	Quantum Mechanics I	3
PHYS 4112	Quantum Mechanics II	3
PHYS 4811	Statistical Mechanics I	4
PHYS 4001	Introduction to Research I	1,2
PHYS 4002	Introduction to Research II	1-3
PHYS 4003	Introduction to Research III	1,2
<b>Additional Coursework</b>		<b>26-22</b>
<b>Minimum credits required for the degree</b>		<b>45</b>

Minimum credits required for degree: 45 including the Graduate Core Courses, which constitute 19-23 quarter hours

**Non-course requirements:**

- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;
- Regular attendance at the Physics and Astronomy colloquia.

### Master of Science in Physics

The Department of Physics and Astronomy offers a Master of Science (MS) in Physics that prepares the student for a wide variety of jobs in industry, government and educational institutions. Our graduates have obtained industrial or governmental laboratory research positions, entered pre-college or community college teaching, joined planetarium or museum staffs, and become technical representatives of various organizations. With complementary courses in education, MS graduates are well qualified to teach at the secondary level. The MS in Physics is also a popular course of

study and professional improvement for people already working in industry. For those currently employed, research projects can usually be matched to the employer's programs, and often someone from the industry can serve as co-advisor so that the continuing education benefits both the student and the employer.

## Degree Requirements

### Coursework Requirements

Both 4000- and 3000-graduate level courses may be applied toward the degree, with the approval of the Graduate Committee or the Master's Committee.

Code	Title	Credits
<b>Graduate Core Courses</b>		<b>19-23</b>
Physics & Astronomy Graduate Core Courses are the following 8 courses (19-23 qtr hrs) that all students are expected to take during the first two years in the program:		
PHYS 4611	Adv Electricity & Magnetism I	3
PHYS 4612	Adv Electricity & Magnetism II	3
PHYS 4111	Quantum Mechanics I	3
PHYS 4112	Quantum Mechanics II	3
PHYS 4811	Statistical Mechanics I	4
PHYS 4001	Introduction to Research I	1,2
PHYS 4002	Introduction to Research II	1-3
PHYS 4003	Introduction to Research III	1,2
<b>Additional Coursework</b>		<b>26-22</b>
<b>Minimum credits required for the degree</b>		<b>45</b>

Minimum credits required for degree: 45 including the Graduate Core Courses, which constitute 19-23 quarter hours

### Non-Course Requirements

- Regular attendance at the Physics and Astronomy colloquia;
- Annual presentation at the Physics and Astronomy colloquia;
- Passing Comprehensive Examination at the MS level;
- Advancement to MS Candidacy;
- Formation of the Master's Committee;
- Thesis;
- Thesis Defense. Two departmental faculty members and an Outside Chair are required for the Oral Defense.

### Other Degree Requirements

- Good academic standing: a GPA of 3.0 or higher;
- No grades lower than C- are accepted toward the degree;

#### PHYS 3111 Quantum Physics I (4 Credits)

First of a two-quarter sequence. The Schrödinger equation: interpretation of wave functions; the uncertainty principle; stationary states; the free particle and wave packets; the harmonic oscillator; square well potentials. Hilbert space: observables, commutator algebra, eigenfunctions of a Hermitian operator; the hydrogen atom and hydrogenic atoms. Prerequisites: PHYS 2252, PHYS 2260, PHYS 2556, PHYS 3612 and MATH 2070.

#### PHYS 3112 Quantum Physics II (4 Credits)

Second of a two-quarter sequence. Angular momentum and spin; identical particles; the Pauli exclusion principle; atoms and solids: band theory; perturbation theory; the fine structure of hydrogen; the Zeeman effect; hyperfine splitting; the variational principle; the WKB approximation; tunneling; time dependent perturbation theory; emission and absorption of radiation. Scattering: partial wave analysis; the Born approximation. Prerequisite: PHYS 3111.

#### PHYS 3251 Astrophysics: Radiative Processes (4 Credits)

Because light is the primary means by which astronomers learn about the Universe, understanding the production and subsequent behavior of light is key to interpreting astronomical observations. This course introduces students to the physics of astrophysical radiation and its interaction with matter as it travels from its source to our detectors. Topics may include radiative transfer, emission and absorption processes, Compton processes, synchrotron radiation, thermodynamic equilibrium, radiative and collisional excitation, and spectroscopy of atoms and molecules. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3252 Astrophysics: Observations (4 Credits)**

Astronomy is fundamentally an observational science and as such it is important for practitioners to understand how their data are collected and analyzed. This course is therefore a comprehensive review of current observational techniques and instruments, aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. This class introduces students to the capabilities and limitations of different types of instruments while exploring the sources and types of noise and providing statistical tools necessary for interpreting observational data. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3254 Astrophysics: Stars (4 Credits)**

Stars are the fundamental building blocks of the Universe. Hence, understanding the nature of stars is the first step toward understanding the Universe. This course is therefore intended to introduce students to the rigorous physical and mathematical treatise of stellar structure and evolution. Topics may include the theoretical origins and applications fundamental equations of stellar structure and other supporting equations, and theoretical and observational applications of stellar evolution. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward Physics major or Astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3270 Workshop: Practical Astronomy (1-5 Credits)**

Capstone coursework featuring studies in experimental, computational, and/or theoretical work in astronomy and astrophysics. Credit can apply toward physics or astrophysics minor.

**PHYS 3510 Analytical Mechanics I (4 Credits)**

Lagrangian and Hamiltonian mechanics. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070 and consent of instructor.

**PHYS 3611 Electromagnetism I (4 Credits)**

First of a two-quarter sequence. Vector algebra; differential vector calculus (gradient, divergence and curl); integral vector calculus (gradient, divergence and Stokes' Theorems); line, surface and volume integrals; Electrostatics: the electric field, electric potential, work and energy in electrostatics; method of images, boundary value problems and solutions to Laplace's equation in Cartesian, spherical and cylindrical coordinates; multipole expansion of the electric potential; electric fields in matter: polarization; the electric displacement vector; boundary conditions, linear dielectrics. Magnetostatics: magnetic fields and forces. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070.

**PHYS 3612 Electromagnetism II (4 Credits)**

Second of a two-quarter sequence. Magnetic vector potential; magnetic fields in matter: magnetization; fields of magnetized objects; linear and nonlinear magnetic materials; electromotive force, Ohm's law; electromagnetic induction; Faraday's law; Maxwell's equations; the displacement current; boundary conditions; the Poynting theorem; momentum and energy density of the fields; the Maxwell stress tensor; the wave equation and electromagnetic waves in vacuum and matter; absorption and dispersion; wave guides; the potential formulation and gauge transformations; retarded potentials; dipole radiation. Prerequisite: PHYS 3611.

**PHYS 3700 Advanced Topics: General (3 Credits)**

Offered irregularly, depending on demand. May be taken more than once for credit. Prerequisite: instructor's permission.

**PHYS 3711 Optics I (4 Credits)**

First of a two-quarter sequence. Gaussian optics and ray tracing; matrix methods and application to optical design; elementary theory of aberrations; light as electromagnetic wave, diffraction and interference; interferometers and their applications. Elementary theory of coherence; selected topics. May include laboratory work as appropriate. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214, and MATH 2070.

**PHYS 3841 Thermal Physics I (4 Credits)**

First of a two-quarter sequence. Laws of thermodynamics; thermal properties of gases and condensed matter; kinetic theory of gases, classical and quantum statistics. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214 and MATH 2070.

**PHYS 3991 Independent Study (1-10 Credits)****PHYS 3995 Independent Research (1-10 Credits)****PHYS 4001 Introduction to Research I (1,2 Credit)**

This course is the first of the 3-course sequence designed to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students review essential material in mathematical physics, learn basic programming techniques and improve upon their skills in literature search and scientific writing, especially proposal writing. Special in-class seminars in collaboration with the Penrose Library and Writing and Research Center are scheduled. Student are introduced to research conducted by Physics and Astronomy faculty so that they can choose a faculty member with whom to take on a Winter Research Project during the winter interterm and winter quarter as part of Introduction to Research II. Students must prepare and submit a research proposal before the end of the fall quarter.

**PHYS 4002 Introduction to Research II (1-3 Credits)**

This is the second of the 3-course sequence to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students conduct an independent research or study project that they have outlined in the research proposal they submitted as part of Introduction to Research I under supervision of a faculty advisor of their choosing. At the same time, students have time to review issues that we face as researchers. Prerequisites: PHYS 4001 and consent of a faculty research advisor.



**PHYS 4003 Introduction to Research III (1,2 Credit)**

This is the third of the 3-course sequence to provide students with the opportunity of learning fundamental skills to conduct independent research in any physical science disciplines. In this course, students complete their Winter research project conducted as part of Introduction to Research II and present the results in writing as a term paper and in oral presentation as part of the Departmental Colloquia. Special in-class sessions in collaboration with the Writing and Research Center are included. Prerequisite: PHYS 4002.

**PHYS 4100 Foundations of Biophysics (3 Credits)**

Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibriums and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with BIOP 4100.

**PHYS 4111 Quantum Mechanics I (3 Credits)****PHYS 4112 Quantum Mechanics II (3 Credits)****PHYS 4251 Intro to Astrophysics I (3 Credits)****PHYS 4252 Intro to Astrophysics II (3 Credits)****PHYS 4255 Astrophysics: Black Holes, Cosmology, and Relation to Other Systems (4 Credits)**

The very small, the very large, and the very gravitational provide extreme tests of physics. In this course, we will cover two of these: cosmology, i.e., the universe on large scales, or as a whole (the very large) and black holes (the very gravitational). We will cover some basics of special and general relativity and quantum mechanics relevant to these topics, and discuss recent research testing these frontiers of physics, emphasizing analogies that help to relate these exotica to more familiar physical systems.

**PHYS 4320 Introduction to Quantum Materials (4 Credits)**

This physics course will introduce students to the recent experimental and theoretical developments in the field of quantum materials. Students will gain a basic understanding of how reducing the dimensions of materials to the nanoscale can produce extraordinary physical properties. The course will focus on fundamentals and recent advances in the fields of quantum transport, 2D materials, strongly correlated electronic systems, topological materials, and superconductivity. The goal of this course is to prepare students to engage with the modern condensed matter physics research and application engineering of novel quantum materials. Prerequisites: PHYS 4411 Advanced Condensed Matter or instructor's permission.

**PHYS 4350 Physics and information (4 Credits)**

Students in Physical Sciences are often well versed in the art of model building but less so in the process of model-selection when multiple models can describe the same data. Students rarely learn tools beyond curve fitting and least square error minimization for model selection. Consequently, students are often unaware of the scope of different tools and fail to make judicious choice of algorithms/theories when faced with diverse problems. For example, building a model from data is very different from generating data (stochastic or deterministic) from a model. Next consider two contrasting challenges of model building i) when there is limited data vs ii) when there is too much data. For the first problem – inferring models from limited data – the solution can be traced back to Boltzmann's formulation of Statistical Physics describing motion of atoms. The connection between Information theory, Inference and Boltzmann's description, however, is often overlooked in introductory or even advanced classes in Physics, and Statistics. Studying these similarities can unlock novel solutions for problems well outside of thermodynamics, even as far as Image processing, Biology and Network science. Inference also requires us to appreciate fundamental topics in Probability – difference between frequentist and non-frequentist approach, Bayesian formalism – that are rarely taught to physical scientists, life scientists or engineers. At the other extreme, faced with data deluge, we routinely ask: how do we make sense of too much data? We use clustering, PCA, Neural Networks. In this course we will discuss and connect all these seemingly disparate concepts and apply them – at the appropriate context – to diverse problems in Physics, Chemistry, Biology and beyond. In the process we will gain an in-depth knowledge about commonly heard but perhaps less understood topics such as: Entropy, Likelihood maximization, Bayesian statistics, PCA, Classification algorithms, and Neural Networks. We will also address another often overlooked but fundamental and fascinating topic, biology's inherent ability to encode and decode information. Currently there is no such course that address all these topics in Information and Data Science in an unified manner – deeply connecting their formal basis, regime of applicability – grounded on physical principles, with a forward looking approach towards application in many areas well outside of traditional sciences. A lot of learning in the course will happen 'on the fly', where the tools and application problems are learnt as needed.

**PHYS 4411 Advanced Condensed Matter I (3 Credits)**

Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4111.

**PHYS 4412 Advanced Condensed Matter II (3 Credits)**

Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4112.

**PHYS 4511 Advanced Dynamics I (4 Credits)****PHYS 4611 Adv Electricity & Magnetism I (3 Credits)****PHYS 4612 Adv Electricity & Magnetism II (3 Credits)****PHYS 4720 Light-Matter Interaction (4 Credits)**

This course will introduce the theory and applications of light-matter interactions. Fundamental theory will be explored from both semi-classical and quantum perspectives, and photon-carrier interactions will be studied in a variety of physical systems, including atoms, glasses, semiconductors, and metals. Experimental techniques will also be discussed, such as absorption, photoluminescence, and coherent spectroscopies, in addition to ultrafast nonlinear optical interactions. Students will also build their own demonstration and teaching module for elementary-age children, and will use their module to teach children at a local school.

**PHYS 4750 Seminar in Physics (1 Credit)****PHYS 4811 Statistical Mechanics I (4 Credits)**

Fundamentals of thermodynamics, microcanonical and canonical ensemble, quantum formulation noninteracting particle systems.

**PHYS 4860 Numerical and Computational Methods in Physics (4 Credits)**

The main goal of this course is to gain a better understanding of physical problems by solving them numerically; in the process, students learn about several numerical methods and computational techniques that have a very broad range of applications in many other scientific fields. Depending on the problem, students work with a software package (Mathematica), and also acquire coding experience in different programming languages. Graduate students carry out projects involving more complex simulation and numerical methods currently used in many areas of condensed matter physics, quantum chemistry and biophysics, such as Density Functional calculations, Monte Carlo and Molecular Dynamics methods.

**PHYS 4870 Special and General Relativity (4 Credits)**

This course will start with the techniques in Special Relativity and build familiarity with tensors. In the second part of the quarter, we will generalize to curved spaces and the Schwarzschild solution. And, finally, we will set up and solve the Einstein equations using the Cartan equations of structure to study the Robertson Walker metric spacetime used to construct the energy budget of the universe.

**PHYS 4910 Special Topics Physics (1-5 Credits)****PHYS 4991 Independent Study (1-10 Credits)****PHYS 4995 Independent Research (1-10 Credits)**

## Courses

**PHYS 3111 Quantum Physics I (4 Credits)**

First of a two-quarter sequence. The Schrödinger equation: interpretation of wave functions; the uncertainty principle; stationary states; the free particle and wave packets; the harmonic oscillator; square well potentials. Hilbert space: observables, commutator algebra, eigenfunctions of a Hermitian operator; the hydrogen atom and hydrogenic atoms. Prerequisites: PHYS 2252, PHYS 2260, PHYS 2556, PHYS 3612 and MATH 2070.

**PHYS 3112 Quantum Physics II (4 Credits)**

Second of a two-quarter sequence. Angular momentum and spin; identical particles; the Pauli exclusion principle; atoms and solids: band theory; perturbation theory; the fine structure of hydrogen; the Zeeman effect; hyperfine splitting; the variational principle; the WKB approximation; tunneling; time dependent perturbation theory; emission and absorption of radiation. Scattering: partial wave analysis; the Born approximation. Prerequisite: PHYS 3111.

**PHYS 3251 Astrophysics: Radiative Processes (4 Credits)**

Because light is the primary means by which astronomers learn about the Universe, understanding the production and subsequent behavior of light is key to interpreting astronomical observations. This course introduces students to the physics of astrophysical radiation and its interaction with matter as it travels from its source to our detectors. Topics may include radiative transfer, emission and absorption processes, Compton processes, synchrotron radiation, thermodynamic equilibrium, radiative and collisional excitation, and spectroscopy of atoms and molecules. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3252 Astrophysics: Observations (4 Credits)**

Astronomy is fundamentally an observational science and as such it is important for practitioners to understand how their data are collected and analyzed. This course is therefore a comprehensive review of current observational techniques and instruments, aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. This class introduces students to the capabilities and limitations of different types of instruments while exploring the sources and types of noise and providing statistical tools necessary for interpreting observational data. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3254 Astrophysics: Stars (4 Credits)**

Stars are the fundamental building blocks of the Universe. Hence, understanding the nature of stars is the first step toward understanding the Universe. This course is therefore intended to introduce students to the rigorous physical and mathematical treatise of stellar structure and evolution. Topics may include the theoretical origins and applications fundamental equations of stellar structure and other supporting equations, and theoretical and observational applications of stellar evolution. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward Physics major or Astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3270 Workshop: Practical Astronomy (1-5 Credits)**

Capstone coursework featuring studies in experimental, computational, and/or theoretical work in astronomy and astrophysics. Credit can apply toward physics or astrophysics minor.

**PHYS 3510 Analytical Mechanics I (4 Credits)**

Lagrangian and Hamiltonian mechanics. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070 and consent of instructor.

**PHYS 3611 Electromagnetism I (4 Credits)**

First of a two-quarter sequence. Vector algebra; differential vector calculus (gradient, divergence and curl); integral vector calculus (gradient, divergence and Stokes' Theorems); line, surface and volume integrals; Electrostatics: the electric field, electric potential, work and energy in electrostatics; method of images, boundary value problems and solutions to Laplace's equation in Cartesian, spherical and cylindrical coordinates; multipole expansion of the electric potential; electric fields in matter: polarization; the electric displacement vector; boundary conditions, linear dielectrics. Magnetostatics: magnetic fields and forces. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070.

**PHYS 3612 Electromagnetism II (4 Credits)**

Second of a two-quarter sequence. Magnetic vector potential; magnetic fields in matter: magnetization; fields of magnetized objects; linear and nonlinear magnetic materials; electromotive force, Ohm's law; electromagnetic induction; Faraday's law; Maxwell's equations; the displacement current; boundary conditions; the Poynting theorem; momentum and energy density of the fields; the Maxwell stress tensor; the wave equation and electromagnetic waves in vacuum and matter; absorption and dispersion; wave guides; the potential formulation and gauge transformations; retarded potentials; dipole radiation. Prerequisite: PHYS 3611.

**PHYS 3700 Advanced Topics: General (3 Credits)**

Offered irregularly, depending on demand. May be taken more than once for credit. Prerequisite: instructor's permission.

**PHYS 3711 Optics I (4 Credits)**

First of a two-quarter sequence. Gaussian optics and ray tracing; matrix methods and application to optical design; elementary theory of aberrations; light as electromagnetic wave, diffraction and interference; interferometers and their applications. Elementary theory of coherence; selected topics. May include laboratory work as appropriate. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214, and MATH 2070.

**PHYS 3841 Thermal Physics I (4 Credits)**

First of a two-quarter sequence. Laws of thermodynamics; thermal properties of gases and condensed matter; kinetic theory of gases, classical and quantum statistics. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214 and MATH 2070.

**PHYS 3991 Independent Study (1-10 Credits)****PHYS 3995 Independent Research (1-10 Credits)****PHYS 4001 Introduction to Research I (1,2 Credit)**

This course is the first of the 3-course sequence designed to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students review essential material in mathematical physics, learn basic programming techniques and improve upon their skills in literature search and scientific writing, especially proposal writing. Special in-class seminars in collaboration with the Penrose Library and Writing and Research Center are scheduled. Student are introduced to research conducted by Physics and Astronomy faculty so that they can choose a faculty member with whom to take on a Winter Research Project during the winter interterm and winter quarter as part of Introduction to Research II. Students must prepare and submit a research proposal before the end of the fall quarter.

**PHYS 4002 Introduction to Research II (1-3 Credits)**

This is the second of the 3-course sequence to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students conduct an independent research or study project that they have outlined in the research proposal they submitted as part of Introduction to Research I under supervision of a faculty advisor of their choosing. At the same time, students have time to review issues that we face as researchers. Prerequisites: PHYS 4001 and consent of a faculty research advisor.

**PHYS 4003 Introduction to Research III (1,2 Credit)**

This is the third of the 3-course sequence to provide students with the opportunity of learning fundamental skills to conduct independent research in any physical science disciplines. In this course, students complete their Winter research project conducted as part of Introduction to Research II and present the results in writing as a term paper and in oral presentation as part of the Departmental Colloquia. Special in-class sessions in collaboration with the Writing and Research Center are included. Prerequisite: PHYS 4002.

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Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibriums and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with BIOP 4100.

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Students in Physical Sciences are often well versed in the art of model building but less so in the process of model-selection when multiple models can describe the same data. Students rarely learn tools beyond curve fitting and least square error minimization for model selection. Consequently, students are often unaware of the scope of different tools and fail to make judicious choice of algorithms/theories when faced with diverse problems. For example, building a model from data is very different from generating data (stochastic or deterministic) from a model. Next consider two contrasting challenges of model building i) when there is limited data vs ii) when there is too much data. For the first problem – inferring models from limited data – the solution can be traced back to Boltzmann's formulation of Statistical Physics describing motion of atoms. The connection between Information theory, Inference and Boltzmann's description, however, is often overlooked in introductory or even advanced classes in Physics, and Statistics. Studying these similarities can unlock novel solutions for problems well outside of thermodynamics, even as far as Image processing, Biology and Network science. Inference also requires us to appreciate fundamental topics in Probability – difference between frequentist and non-frequentist approach, Bayesian formalism – that are rarely taught to physical scientists, life scientists or engineers. At the other extreme, faced with data deluge, we routinely ask: how do we make sense of too much data? We use clustering, PCA, Neural Networks. In this course we will discuss and connect all these seemingly disparate concepts and apply them – at the appropriate context – to diverse problems in Physics, Chemistry, Biology and beyond. In the process we will gain an in-depth knowledge about commonly heard but perhaps less understood topics such as: Entropy, Likelihood maximization, Bayesian statistics, PCA, Classification algorithms, and Neural Networks. We will also address another often overlooked but fundamental and fascinating topic, biology's inherent ability to encode and decode information. Currently there is no such course that address all these topics in Information and Data Science in an unified manner – deeply connecting their formal basis, regime of applicability – grounded on physical principles, with a forward looking approach towards application in many areas well outside of traditional sciences. A lot of learning in the course will happen 'on the fly', where the tools and application problems are learnt as needed.

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Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4111.

**PHYS 4412 Advanced Condensed Matter II (3 Credits)**

Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4112.

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Fundamentals of thermodynamics, microcanonical and canonical ensemble, quantum formulation noninteracting particle systems.

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The main goal of this course is to gain a better understanding of physical problems by solving them numerically; in the process, students learn about several numerical methods and computational techniques that have a very broad range of applications in many other scientific fields. Depending on the problem, students work with a software package (Mathematica), and also acquire coding experience in different programming languages. Graduate students carry out projects involving more complex simulation and numerical methods currently used in many areas of condensed matter physics, quantum chemistry and biophysics, such as Density Functional calculations, Monte Carlo and Molecular Dynamics methods.

**PHYS 4870 Special and General Relativity (4 Credits)**

This course will start with the techniques in Special Relativity and build familiarity with tensors. In the second part of the quarter, we will generalize to curved spaces and the Schwarzschild solution. And, finally, we will set up and solve the Einstein equations using the Cartan equations of structure to study the Robertson Walker metric spacetime used to construct the energy budget of the universe.

**PHYS 4910 Special Topics Physics (1-5 Credits)****PHYS 4991 Independent Study (1-10 Credits)****PHYS 4995 Independent Research (1-10 Credits)**

## Sturm College of Law

At the University of Denver Sturm College of Law, students don't just study law, they *experience* it. As a leader in experiential learning, our practical skills offerings are among the top-ranked programs in the nation. Our nine in#house clinics, multiple simulation-based classes, along with one of the largest externship programs in the country, provide students with abundant opportunities to develop their lawyering skills before entering the legal marketplace. We balance rigorous academics with the demands of the outside world and help students focus on what matters most: your career, your future and your life in law. With the legal practice experience you gain, you will be poised to distinguish yourself in a competitive job market even before graduation.

Denver Law faculty members are national leaders in their fields of animal law, corporate governance, energy law, free speech, intellectual property, health law and sports law. Our full-time juris doctor (JD) program and part-time JD program enable our students to pursue their passion by earning a certificate in one of our nationally ranked specialty programs including Constitutional Law, Corporate and Commercial Law, Criminal Law, Environmental Law, Health Law, International Law and Intellectual Property & Technology Law. We also offer an extensive range of master's degrees, including leading programs in environmental law and tax.

Since opening our doors in 1892, innovation has defined our culture. In 1904, we launched the nation's first legal aid clinic. In the 1960s, we helped found the Law and Society Movement, combining the study of law with cutting-edge perspectives from the social sciences. In 2003, we constructed the nation's first LEED Gold-certified "green" law building. And, in 2018, we launched our top-ranked Professional Part-Time JD Program, a hybrid learning a program that allows working professionals to advance their careers on their own schedules from virtually any location in the nation.

Throughout our history, the Sturm College of Law has been committed to diversity, equity and inclusion, and we continue to be recognized as a top law school for diversity by *preLaw* magazine. Our Associate Dean of Diversity, Equity and Inclusion, Office of Student Affairs, Professional Mentoring Program, student affinity groups and Law Alumni Council work together to forge a culture of respect and belonging that prepare our graduates to practice in an increasingly diverse and globalized workplace.

## Law

Juris Doctor

Office: Ricketson Law Building  
 Mail Code: 2255 East Evans Avenue, Denver, CO 80208  
 Phone: 303-871-6000  
 Email: [admissions@law.du.edu](mailto:admissions@law.du.edu)  
 Web Site: <http://www.law.du.edu/>

At the University of Denver Sturm College of Law, students don't just study law, they *experience* it. As a leader in experiential learning, our practical skills offerings are among the top-ranked programs in the nation. Our nine in#house clinics, multiple simulation-based classes, along with one of the largest externship programs in the country, provide students with abundant opportunities to develop their lawyering skills before entering the legal marketplace. We balance rigorous academics with the demands of the outside world and help students focus on what matters most: your career, your future and your life in law. Our nationally ranked specialty programs provide opportunities to pursue your passion in areas such as Constitutional Rights, Corporate and Commercial Law, Criminal Law, Environmental Law, Health Law, International Law and Intellectual Property Law. With the legal practice experience you gain, you will be poised to distinguish yourself in a competitive job market even before graduation. Join us at Denver Law and begin your legal journey today.

Master's and LLM Degrees

Office: Ricketson Law Building  
 Mail Code: 2255 East Evans Avenue, Denver, CO 80208

Phone: 303-871-6249

Email: [gradadmissions@law.du.edu](mailto:gradadmissions@law.du.edu)

Web Site: <http://www.law.du.edu/>

Denver Law offers a number of advanced degrees (LLM and Master's) that can supplement a student's law degree with specialized knowledge, introduce foreign lawyers and those educated in other disciplines to the U.S. legal system, or train students in the unique rigors of tax or legal administration. It is the goal of each academic program to bridge the objectives of its students to the curriculum and the University of Denver's mission to make a meaningful impact, both locally and globally.

## Juris Doctor

### Degree and GPA Requirements

- To be enrolled at the University of Denver Sturm College of Law, you must hold a bachelor of arts or a bachelor of science degree from a regionally accredited college or university. No undergraduate field of study is favored, based on evidence that a strong student in any major can develop the skills of writing, analysis and persuasion necessary for success in law school.

### Standardized Test Scores

- Valid Law School Admissions Test ( (<http://www.lsac.org/jd/lsat/about-the-lsat.asp>)LSAT) score

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS test score requirements for this degree program are:

- TOEFL Paper-based test: 587
- TOEFL Internet-based test: 95
- IELTS: 7.0

### Additional Requirements for International Students

- LSAC Credential Assembly Service (CAS)
  - If you have completed any post-secondary work outside the US (including its territories) or Canada, these transcripts must be submitted to the LSAC to be translated and evaluated. A foreign credential evaluation will be completed by the American Association of Collegiate Registrars and Admissions Officers and included with your CAS report.
    - We will not accept any other translation or evaluation services for the admissions process.
    - If you have questions, contact the office of admissions at [admissions@law.du.edu](mailto:admissions@law.du.edu)

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## Master of Laws in American Law Practice

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Requirements

- A Juris Doctorate (JD) or equivalent is required.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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## Master of Laws in Global Natural Resources, Energy, and Environmental Law

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- **Program GPA requirement:** The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Requirements

- A Juris Doctorate (JD) or equivalent is required.

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The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

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## Master of Laws in International Business Transactions

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

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- A Juris Doctorate (JD) or equivalent is required.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

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## Master of Legal Studies in Legal Studies

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
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baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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## Master of Laws in Clinical Legal Education

Bro ipsum dolor sit amet gaper backside single track, manny Bike epic clipless. Schraeder drop gondy, rail fatty slash gear jammer steepers clipless rip bowl couloir bomb hole berm. Huck cruiser crank endo, sucker hole piste ripping ACL huck greasy flow face plant pinner. Japan air Skate park big ring trucks shuttle stoked rockectomy.

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## Master of Legal Studies in Global Natural Resources, Energy, and Environmental Law

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Sturm College of Law may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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## Master of Science in Legal Administration in Legal Administration - Advanced Standing with a Concentration in Law Firm Administration

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Requirements

- A Juris Doctorate (JD) or equivalent is required.



## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 90
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate in Corporate & Commercial Law

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Other Requirements

- A Juris Doctorate (JD) or equivalent is required.

## English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 90
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Juris Doctor Program

### Juris Doctor

#### Degree Requirements

The Sturm College of Law awards the degree of Juris Doctor to those students who successfully fulfill the following requirements:

- Completion of ninety [90] semester credit hours with passing grades. A grade of F or NP (No Pass) constitutes a failing grade for purposes of this requirement. Students receive no credit hours toward graduation for courses in which they earn a grade of F or NP.
- Maintenance of the required cumulative grade point average: **a cumulative GPA of 2.3 or higher**
- **Successful completion of all required courses** (as defined in the chart that follows this section). A student who receives a grade of F in a required course must retake the course and earn a passing grade. Both grades remain on the student's transcript and affect the student's cumulative GPA.
- **Completion of the Upper Level Legal Writing requirement**
- **Completion of the Public Service requirement**
- **Completion of Experiential Coursework Requirement. All students must successfully complete a curricular offering of six or more semester credit hours. A list of qualifying courses will be made available each semester prior to registration.**
- **Students may not exceed 25 or more total Out-of-Class credits. Out-of-class credits include clinics, directed research or experiential projects, externships, Semester in Practice, journals, and non-JD courses. The additional limits apply:**
  - Clinics-25 credits or less
  - Directed Experiential Project-5 credits or less
  - Directed Research-5 credits or less
  - Externships-15 credits or less
  - Semester in Practice-19 credits or less
  - Journals-6 credits or less
  - Non-JD courses-8 semester credits (12 quarter credits) or less. Dual degree students may take up to 10 semester credits (15 quarter credits)
- **Completion of Career & Professional Development requirement**
- **Completion of ABA Standard 303(c) Requirement**

- **Resolution of all financial obligations to the University of Denver**

- Completion of all credit hours within a specified time period following initial matriculation at law school. Students are expected to complete their legal educations within seven years from the time of matriculation. Full-time day-division students at the Sturm College of Law normally meet all JD requirements by the end of their third year. Part-time evening or weekend-division students at the Sturm College of Law normally complete all JD requirements by the end of their fourth year.

### Good Standing

All students who enter the Sturm College of Law must maintain a cumulative grade point average of at least a 2.3 to remain in good standing.

Students may check their Degree Audit on My.DU.edu. Students have the responsibility to check their Degree Audit carefully and to contact the Registrar's Office if they note any discrepancy between their understanding of their degree requirements and their Degree Audit. Students have the sole responsibility to ensure that they have completed all graduation requirements.

### Coursework Requirements

Code	Title	Credits
<b>Required Courses:</b>		
LAWS 4385	Lawyering Process I	3
LAWS 4120	Civil Procedure	4
LAWS 4175	Contracts	4
LAWS 4195	Criminal Law	4
LAWS 4490	Property	4
LAWS 4610	Torts	4
LAWS 4386	Lawyering Process II	3
LAWS 4164	Constitutional Law	4
LAWS 4425	Legal Profession	3
LAWS 4235	Evidence	4
LAWS 4025	Administrative Law	3
<b>Electives</b>		<b>50</b>
<b>Total Credits</b>		<b>90</b>

### Public Service Requirement

All law students must satisfy the Public Service Requirement (PSR) in order to graduate. To satisfy the requirement, each student must perform a minimum of 50 hours of supervised, uncompensated, legal public service work that is approved through the Director of Externships & Public Interest Initiatives. Generally, you must complete 28 academic credit hours prior to satisfying the requirement. However, if you have completed at least one academic year, even if you have not completed 28 academic credit hours, you may satisfy the PSR via Option #4 (Volunteer Legal Experience) below.

You can satisfy the requirement in one of the following ways:

1. Registering for, and passing, an externship for credit at a government agency, judicial chambers, nonprofit organization, or private firm (as long as the 50 hours is pro bono at the firm) via the Legal Externship Office (<http://www.law.du.edu/index.php/legal-externship-program/>).
2. Registering for, and receiving a grade of C or better, in a clinic via the Student Law Office (<http://www.law.du.edu/index.php/law-school-clinical-program/>).
3. Registering for, and receiving a grade of C or better, in an eligible course. Eligible courses are indicated as such on the course schedule and may include: Live Client Lab, Low-Income Taxpayer Clinic, Poverty and Low Wage Work in America, Public Interest Lawyering Lab, Trial Practice III: Instructor's Practicum, Trial Practice III: Mentor's Practicum, Wills Lab, Workplace Rights Projects Lab, Youth Rights Workshop, and/or the Animal Activist Legal Defense Fund.
4. Volunteering, and engaging in 50 hours of supervised, uncompensated legal work, at a government agency, judicial chambers, nonprofit organization, or private firm, as long as the work at the firm is pro bono. This is known as a Volunteer Legal Experience.

\*\*In order to satisfy the requirement via option #4, a Volunteer Legal Experience, you must abide by all rules and regulations for the Public Service Requirement indicated on the website (<https://www.law.du.edu/index.php/public-service-requirement/>). You must complete an online **student certification and evaluation form** about your volunteer experience. Your supervisor, who must be licensed to practice law for at least three years, must complete an online **supervisor certification and evaluation form** which asks for the number of hours worked (must be at least 50), the timeframe in which the work was completed, and an evaluation of the student's work. When both of these forms are completed and submitted online, and it is confirmed that the work satisfies the requirement, your Degree Audit will be updated to reflect that you satisfied the PSR. Students engaging in this option are strongly encouraged to check in with the Public Interest Office prior to do the work to confirm it is eligible.

Please note: You are not required to complete the steps outlined above if you are satisfying the public service requirement via options #1, 2, or 3 above. For these options, your Degree Audit will reflect that you satisfied the PSR at the conclusion of the relevant semester.

Students are strongly encouraged to complete this requirement before their last semester of law school.

For more information about the PSR, visit this page (<http://www.law.du.edu/index.php/public-service-requirement/>) and/or contact the Public Interest Office at [publicinterest@law.du.edu](mailto:publicinterest@law.du.edu).

### Upper Level Legal Writing Requirement

All law students must satisfy the Upper Level Legal Writing requirement prior to graduation. The requirement provides students additional instruction and practice in research, organization and expression.

To satisfy the requirement, each student must\*:

- Complete a written product of at least ten (10) pages on an appropriate legal subject determined by a professor and the student.
- Secure the professor's written comments as to the substance and style of the student's written project
- Prepare a second draft of the written project in response to the professor's comments to the professor's satisfaction.

Students may satisfy the Upper Level Legal Writing requirement in the following ways:

1. *Advanced Legal Writing Course*

A student can enroll in and successfully complete the upper level legal writing course entitled "Advanced Legal Writing."

2. *Designated Seminar Classes or Clinics*

A student can enroll in and successfully complete a seminar or clinical course that satisfies the Upper Level Legal Writing requirement. Eligible courses are indicated on the course schedule. Not all clinics and seminars satisfy this requirement.

3. *Directed Research Projects*

The student may enroll in and successfully complete a Directed Research Project with a full-time faculty member. If the student successfully completes a Directed Research project that fulfills the Upper Level Legal Writing requirement, the professor must certify to the Registrar that the student has completed the Upper Level Legal Writing requirement. A student who elects to fulfill the Upper Level Legal Writing requirement under this option must make certain that the Registrar's Office receives certification from the professor that the student successfully fulfilled the Upper Level Legal Writing requirement. Only after the Registrar's Office has received official certification has the student completed this graduation requirement.

4. *Certification by Professor*

Any full-time or adjunct professor can offer a student the opportunity to complete the Upper Level Legal Writing requirement within the course taught by the professor or independently of the course taught by the professor. Upon successful completion of the Upper Level Legal Writing requirement, the professor must certify to the Registrar that the student has completed the requirement. A student who elects to fulfill the Upper Level Legal Writing requirement under this option must make certain that the Registrar's Office receives certification from the professor that the student successfully fulfilled the Upper Level Legal Writing requirement. Only after the Registrar's Office has received official certification has the student completed this graduation requirement.

5. A student may not use the same curricular offering to satisfy both the upper level writing requirement and the experiential requirement

### Experiential Coursework Requirement

1. All law students must successfully complete a curricular offering of six or more semester credits hours of experiential coursework.
2. Experiential courses include simulations, clinics, and field placements. To satisfy this requirement, the course must be primarily experiential in nature and must (a) integrate doctrine, theory, skills, and legal ethics, and engage students in the performance of professional skills, which include knowledge and understanding of the law, legal analysis and research, problem-solving, written and oral advocacy, and the exercise of proper professional and ethical responsibilities to clients and the legal system; (b) develop the concepts underlying the professional skills being taught; (c) provide multiple opportunities for performance; and (d) provide opportunities for self-evaluation.
3. Eligible courses are indicated on the course schedule.
4. A student may not use the same curricular offering to satisfy both the upper level writing requirement and the experiential requirement

### Career & Professional Development Requirement

- The Career & Professional Development Requirement ensures that Denver Law students will graduate with the knowledge and skills they need to thrive in the entry-level job market. All incoming JD students need to complete a total of seven Career & Professional Development experiences through a combination of qualifying programs and individual career advising appointments in order to graduate.

- To satisfy the CPD Requirement, each 1L student must complete 5 sessions of their choice during the 1L year from any or all of the following core competency areas:
  - Career & Academic Planning
  - Interviewing and Networking
  - Job Search Documents
  - Professional Development
  - Wellness / Personal Development
  - The Office of Career Development & Opportunities (“CDO”) will maintain a list of qualifying programs. Students may satisfy up to 2 of the 1L sessions through individual career advising appointments with the CDO.
- In addition, each JD student must participate in at least 2 individual career advising appointments after the 1L year.
- Students who have secured postgraduate employment and are no longer seeking employment may opt-out of the CPD requirement at any time by providing all ABA-required employment information to the CDO. The CPD requirement is administered and tracked by the Office of Career Development & Opportunities (“CDO”) and recorded by the Office of the Registrar. Completion of this requirement is indicated on the Degree Audit.

#### ABA Standard 303(c) Requirement

- All students must complete education on bias, cross-cultural competency, and racism that meets the requirements of ABA Standard 303(c) by completing the following:
- applicable mandatory orientation programming and one of the following:
  - successful completion of a non-credit bearing program designed to meet the standards of ABA Standard 303(c), or
  - successful completion of a clinic run by the Student Law Office (SLO), or
  - successful completion of an externship through the Externship Office, or
  - successful completion of a class designated by the law school as meeting the requirement. Class offerings in this area will vary.
- Note: Students involved in a class working with live clients (e.g law clinics, field placements, etc.) must complete the ABA Standard 303(c) education prior to or concurrently with enrollment in the live-client experiential class.

## Master of Laws Programs

### Master of Laws (LLM) in American Law Practice

#### Degree Requirements

#### Coursework Requirements

This customizable LLM degree introduces foreign-trained attorneys to the US Legal framework and allows for area specializations with a particular emphasis on College of Law’s Experiential Advantage Curriculum. Course plans vary based on individual student’s objectives.

Code	Title	Credits
<b>Required Courses:</b>		<b>18</b>
LAWS 4064	Introduction to the American Legal System	
LAWS 4032	Legal Analysis Strategies	
LAWS 4425	Legal Profession	
LAWS 4034	Legal Research and Writing for Graduate Students (Legal Research and Writing for Graduate Students)	
<b>All students must also choose at least two courses from the following list (8 credits)</b>		
LAWS 4120	Civil Procedure	
LAWS 4164	Constitutional Law	
LAWS 4175	Contracts	
LAWS 4190	Corporations	
LAWS 4195	Criminal Law	
LAWS 4235	Evidence	
LAWS 4490	Property	
LAWS 4610	Torts	

**Elective Courses****6**

The remaining 6 credits may be taken in any course in the curriculum that is available to JD students and is offered an in-person class.

**Total Credits****24****Minimum GPA: 2.7****Additional Degree requirements:**

1. Students must complete the degree in no fewer than two full-length semesters.
2. Students may not complete more than 4 semester credits in any summer term while in the program.

Minimum Number of Credits Required: 24

**Master of Laws (LLM) in Global Natural Resources, Energy, and Environmental Law****Degree Requirements****Coursework Requirements**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core Coursework Requirements</b>		<b>3-5</b>
LAWS 4220	Environmental Law	3
or		
LAWS 4450	Natural Resource Law	3
Students who received their first law degree outside of the United States must also take:		
LAWS 4064	Introduction to the American Legal System	2
<b>Elective Requirements</b>		<b>19-21</b>

The College of Law offers over forty courses in advanced degree programs in both international and domestic issues. For the remaining elective course requirement, students will customize their course of study to meet their individual professional goals. Students will choose from the courses below to create an informal specialization within the LLM, in consultation with an advisor and/or the faculty Director.

Courses subject to availability. Not all courses listed are offered every year.

LAWS 4025	Administrative Law	
LAWS 4035	Legal Research for Practice	
LAWS 4060	Alternative Dispute Resolution	
LAWS 4019	Animal Rights	
LAWS 4131	Commercial Law Survey	
LAWS 4137	Comparative Environmental Law	
LAWS 4135	Comparative Law	
LAWS 4160	Conflict of Laws	
LAWS 4179	Construction Law	
LAWS 4999	Directed Research (Relevant topics, with approval of advisor or Director of Program)	
LAWS 4210	Energy Law	
LAWS 4219	Environmental Justice	
LAWS 4220	Environmental Law	
LAWS 4206	Environmental Law Clinic	
LAWS 4802	Environmental Law Clinic Seminar	
LAWS 4037	European Union Environmental Law and Policy	
LAWS 4232	European Union Law	
LAWS 5025	Externship (Placement must be approved by advisor or Director of Program as relevant to the degree. )	
LAWS 4250	Federal Courts	
LAWS 4300	Native American Tribes and Federal Law	
LAWS 4251	Wildlife Law	
LAWS 4259	Global Climate Change Law and Policy	
LAWS 4265	Government Contracts Seminar	
LAWS 4342	International and Comparative Mining Law	
LAWS 4343	International and Comparative Petroleum Law	
LAWS 4288	International and Human Rights: Indigenous Peoples	
LAWS 4315	International Business Transactions: Survey Course	

LAWS 4341	International Commercial Arbitration Moot
LAWS 4317	International Environmental Law
LAWS 4319	International Human Rights
LAWS 4320	International Law
LAWS 4351	International Mergers and Acquisitions
LAWS 4379	International Trade Law
LAWS 4360	Land Use Planning
LAWS 5031	Legal Externship Seminar (As approved, titles vary.)
LAWS 4289	Legal Research Skills - International
LAWS 4425	Legal Profession
LAWS 4445	Mining Law
LAWS 4450	Natural Resource Law
LAWS 4464	Natural Resources Distinguished Practitioner Seminar
LAWS 4221	Navigating the National Environmental Policy Act (NEPA)
LAWS 4462	Negotiating Natural Resources Agreements
LAWS 4460	Negotiation and Mediation
LAWS 4465	Oil and Gas Law
LAWS 4495	Public Land & Resources Law
LAWS 4095	Real Estate Transactions
LAWS 4508	Renewable Energy for the 21st Century: Law, Policy & Markets
LAWS 4511	Renewable Energy Law
LAWS 5029	Semester in Practice (Placement must be approved by advisor or Director of Program as relevant to the degree.)
LAWS 4701-4709	Special Topics courses–Titles Vary, as approved
LAWS 4556	Subsustainable Dev & Trade
LAWS 4670	Water Law
LAWS 4889	Water Law Review

Or any other relevant course, with approval from Faculty Director.

**Total Credits**

**24**

Minimum Number of Credits Required: 24

Minimum GPA: 2.7

**Non-Coursework Requirements**

- Capstone: Students must complete a **Capstone requirement** by submitting a written product of at least 15-25 pages on an appropriate legal subject and with a significant legal research component, approved by the Program Director (either through an elective course or by registering for a 2-3 credit Directed Research project). Students must submit an approved Capstone Completion form to the Office of the Registrar no later than the last day of the final examination period for the student's term of intended graduation.

Dual JD/ LLM degree available to those pursuing a JD at the Sturm College of Law (<http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees/>).

## Master of Laws in International Business Transactions (Roche IBT LLM)

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Core Coursework Requirements</b>		<b>3-5</b>
LAWS 4315	International Business Transactions: Survey Course	3
**LLM students who received their first degree in law outside the United States must also complete:		
LAWS 4064	Introduction to the American Legal System	2
<b>Drafting/Negotiation Requirement</b>		
Select one of the following:		3
LAWS 4178	Contracts Drafting	

LAWS 4181	Corporate Drafting Seminar
LAWS 4341	International Commercial Arbitration Moot
LAWS 4182	Negotiation and Drafting in an International Business Context
LAWS 4462	Negotiating Natural Resources Agreements

### Elective Requirements

For the remaining elective course requirement students may customize their course of study from the list of approved courses below, depending upon individual professional goals. The College of Law offers over forty courses in advanced degree programs, divided equally between international and domestic issues. 16-18

LAWS 4006	Accounting for Lawyers
LAWS 4035	Legal Research for Practice
LAWS 4048	Agency Partnership & LLC
LAWS 4060	Alternative Dispute Resolution
LAWS 4070	Antitrust and Unfair Competition
LAWS 4090	Bankruptcy
LAWS 4100	Basic Tax
LAWS 4131	Commercial Law Survey
LAWS 4137	Comparative Environmental Law
LAWS 4135	Comparative Law
LAWS 4160	Conflict of Laws
LAWS 4214	Copyright Law
LAWS 4190	Corporations
LAWS 4371	International Investment Arbitration Practice & Procedure
LAWS 4999	Directed Research (Directed Research)
LAWS 5025	Externship (Relevant placement, with approval from advisor or Director of Program)
LAWS 4205	Employment Law Survey
LAWS 4037	European Union Environmental Law and Policy
LAWS 4232	European Union Law
LAWS 4297	Forced Migration & Human Trafficking
LAWS 4265	Government Contracts Seminar
LAWS 4884	Int'l Law Journal
LAWS 4343	International and Comparative Petroleum Law
LAWS 4341	International Commercial Arbitration Moot
LAWS 4317	International Environmental Law
LAWS 4319	International Human Rights
LAWS 4320	International Law
LAWS 4351	International Mergers and Acquisitions
LAWS 4346	International Sales
LAWS 4310	Introduction to Intellectual Property
LAWS 4379	International Trade Law
LAWS 4355	Labor Law
LAWS 5031	Legal Externship Seminar (As approved, titles vary)
LAWS 4425	Legal Profession
LAWS 4460	Negotiation and Mediation
LAWS 4465	Oil and Gas Law
LAWS 4096	Patent Law
LAWS 4373	International Practice and Procedure
LAWS 4508	Renewable Energy for the 21st Century: Law, Policy & Markets
LAWS 4511	Renewable Energy Law
LAWS 4530	Secured Transactions
LAWS 4528	Securities Law
LAWS 4529	Securities Litigation
LAWS 5029	Semester in Practice (Relevant placements, with approval from advisor or Director of Program)

LAWS 5030	Semester in Practice Seminar (Titles vary, as approved.)	
LAWS 4701-4709	Special Topics courses—Titles Vary, as approved	
LAWS 4556	Subsustainable Dev & Trade	
LAWS 4115	Trademark Law	
<b>Total credits</b>		<b>24</b>

Dual JD/ IBT LLM degree available to those pursuing a JD at the Sturm College of Law. (<http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees/>)

## Master of Laws in Clinical Legal Education

Graduate fellows in the Clinical Teaching LLM program enroll in a three-year program during which they are in residence in a particular clinic at the Student Law Office, the College of Law's in-house clinical program. Fellows earn between four and six credits per semester for each of the eight semesters they are enrolled. Over the course of their three-year term, fellows also supervise JD students enrolled in the clinics, work on cases and other legal matters, assist in teaching clinic seminars, and engage in scholarship.

Fellows earn academic credit for supervision of students and for scholarship, which culminates in the production of a publishable quality article. Fellows also participate in a teacher training courses as well as structured teaching rounds and scholarship workshops. Fellows must maintain a minimum GPA of 3.0 to remain in good standing and graduate from the program.

### Degree Requirements

All students must complete a minimum of 48 credits in the program curriculum and complete a final, publishable quality paper.

Code	Title	Credits
<b>Orientation:</b>		
LAWS 4000	Fellowship Orientation (4 credits)	
<b>Seminars:</b>		
LAWS 4900	Introduction to Clinical Pedagogy & Scholarship (First Semester-Year 1)	2
LAWS 4900	Introduction to Clinical Pedagogy & Scholarship (Second Semester-Year 1)	2
LAWS 4905	Scholarship Seminar I	4
LAWS 4921	Clinical Pedagogy & Design I (First Semester-Year 2)	1
LAWS 4921	Clinical Pedagogy & Design I (Second Semester-Year 2)	1
LAWS 4925	Scholarship Seminar II	4
LAWS 4931	Advanced Clinical Pedagogy & Design (First Semester-Year 3)	1
LAWS 4931	Advanced Clinical Pedagogy & Design (First Semester-Year 3)	1
<b>Student Supervision:</b>		
LAWS 4910	Co/Shadow Supervision Practicum	8 total credits
LAWS 4920	Supervision Practicum II	8 total credits
LAWS 4930	Supervision Practicum III	12 total credits

#### Non-course requirement:

Students must submit a final paper of publishable quality to the scholarship mentor for approval, ideally by end of second year.

**Minimum GPA: 2.7**

**Total Credits: 48**

## Master of Legal Studies Programs

### Master of Legal Studies (General)

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Core Coursework Requirements</b>		
LAWS 4064	Introduction to the American Legal System	2

**Students must select one of the following courses:**

**3-4**



LAWS 4025	Administrative Law
LAWS 4120	Civil Procedure
LAWS 4164	Constitutional Law
LAWS 4175	Contracts
LAWS 4195	Criminal Law
LAWS 4425	Legal Profession
LAWS 4490	Property
LAWS 4610	Torts

**Elective Requirements** **18-19**

For the remaining course requirements, students may customize their course of study depending upon individual professional goals and availability of courses in the JD program. Possible areas of specialization include: finance and trade law and policy, intellectual property, international law, family law and workplace law. Students may also elect to pursue certain courses in the MSLA curriculum, with approval from the MLS Program Director.

**Minimum GPA: 2.7**

**Total Credits** **24**

**Non-coursework Requirements**

- Capstone: Students must complete a Capstone requirement by submitting a written product of at least 15-25 pages on an appropriate legal subject and with significant legal research component, approved by the MLS Program Director (either through an elective course taken after the first term of the program or by registering for a separate Directed Research project for 2-3 credits). Students must submit an approved Capstone Completion form to the Office of the Registrar no later than the last day of the final examination period for the student's term of intended graduation.

Formal Dual Master of Legal Studies-Master of Social Work (<http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees/>) program and other flexible dual degree options are available.

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## Master of Legal Studies in Global Natural Resources, Energy, and Environmental Law

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Core Coursework Requirements</b>		<b>5</b>
LAWS 4064	Introduction to the American Legal System (AND)	2
LAWS 4220	Environmental Law (or)	3
LAWS 4450	Natural Resource Law	3
<b>Elective Requirements (at least 19 credits of pre-approved course)</b>		<b>19</b>

For the remaining elective course requirements, students may customize their course of study, depending upon individual professional goals, from the approved courses listed below.

LAWS 4025	Administrative Law
LAWS 4035	Legal Research for Practice
LAWS 4060	Alternative Dispute Resolution
LAWS 4019	Animal Rights
LAWS 4131	Commercial Law Survey
LAWS 4137	Comparative Environmental Law
LAWS 4135	Comparative Law
LAWS 4160	Conflict of Laws
LAWS 4179	Construction Law
LAWS 4175	Contracts
LAWS 4999	Directed Research
LAWS 4210	Energy Law
LAWS 4219	Environmental Justice
LAWS 4220	Environmental Law
LAWS 4206	Environmental Law Clinic
LAWS 4037	European Union Environmental Law and Policy

LAWS 4232	European Union Law
LAWS 5025	Externship (In relevant placement, as approved by Program Director)
LAWS 4250	Federal Courts
LAWS 4300	Native American Tribes and Federal Law
LAWS 4251	Wildlife Law
LAWS 4259	Global Climate Change Law and Policy
LAWS 4265	Government Contracts Seminar
LAWS 4342	International and Comparative Mining Law
LAWS 4343	International and Comparative Petroleum Law
LAWS 4288	International and Human Rights: Indigenous Peoples
LAWS 4315	International Business Transactions: Survey Course
LAWS 4341	International Commercial Arbitration Moot
LAWS 4317	International Environmental Law
LAWS 4319	International Human Rights
LAWS 4320	International Law
LAWS 4351	International Mergers and Acquisitions
LAWS 4379	International Trade Law
LAWS 4360	Land Use Planning
LAWS 5031	Legal Externship Seminar (Titles vary, as approved.)
LAWS 4425	Legal Profession
LAWS 4445	Mining Law
LAWS 4450	Natural Resource Law
LAWS 4464	Natural Resources Distinguished Practitioner Seminar
LAWS 4221	Navigating the National Environmental Policy Act (NEPA)
LAWS 4462	Negotiating Natural Resources Agreements
LAWS 4460	Negotiation and Mediation
LAWS 4490	Property
LAWS 4465	Oil and Gas Law
LAWS 4495	Public Land & Resources Law
LAWS 4095	Real Estate Transactions
LAWS 4508	Renewable Energy for the 21st Century: Law, Policy & Markets
LAWS 4511	Renewable Energy Law
LAWS 5029	Semester in Practice (In relevant placement, as approved. )
LAWS 4556	Subsustainable Dev & Trade
LAWS 4670	Water Law
LAWS 4889	Water Law Review
LAWS 4701-4709	Special Topics courses–Titles Vary, as approved
Or any other relevant LAWS course with approval of the Faculty Director	
Total credits	24

#### Non-Coursework Requirements

- Capstone: Students must complete a **Capstone requirement** by submitting a written product of at least 15-25 pages on an appropriate legal subject and with a significant legal research component, approved by the Program Director (either through an elective course or a separate Directed Research project for 2-3 credits.) Students must submit an approved Capstone Completion Form to the Office of the Registrar no later than the last day of the final examination period for the student's term of intended graduation.

Minimum GPA: 2.7

## Master of Legal Studies in Forensic Engineering

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Core Coursework Requirements</b>		<b>13</b>
LAWS 4001	Introduction to Law for Non-Lawyers	
LAWS 4179	Construction Law ( )	
LAWS 4580	Forensic & Scientific Evidence	
LAWS 4577	Introduction to Contract Law	
LAWS 4578	Introduction to Tort Law	
LAWS 4579	Expert Witness Role	
<b>Elective Requirements (Minimum of 11 additional credits from list of pre-approved courses below:)</b>		<b>11</b>
LAWS 4034	Legal Research and Writing for Graduate Students	
LAWS 4572	Forensic Scheduling	
LAWS 4581	Remedies in Construction Law	
LAWS 4576	Building Envelop & Civil Construction Review	
LAWS 4599	Expert Witness Practicum	
LAWS 4999	Directed Research	
LAWS 4XXX–Other relevant courses as approved by Program Director.		
Total credits		24

#### Non-Coursework Requirements

- Capstone: Students must complete a **Capstone requirement** by submitting a written product of at least 15-25 pages on an appropriate legal subject and with a significant legal research component, approved by the Faculty Director of the Forensic Engineering Certificate Program (either through an elective course or a separate Directed Research project for 2-3 credits.) Students must submit an approved Capstone Completion Form to the Office of the Registrar no later than the last day of the final examination period for the student's term of intended graduation.
- Minimum GPA: 2.7

## Master of Science in Legal Administration Programs

### Master of Science in Legal Administration with a Concentration in Law Firm Administration

#### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>A. MSLA Core Courses-Required</b>		<b>12</b>
MSLA 4410	Accounting and Financial Management in Legal Business	
MSLA 4380	Communication, Writing, and Research in Legal Business	
MSLA 4151	Applied Leadership and Management Theory	
MSLA 5010	Capstone: Externship/Project	
<b>B. MSLA Specialized Courses-Required</b>		<b>12</b>
MSLA 4954	Project Management	
MSLA 4385	Law Firm Communications and Technology	
MSLA 4420	Legal Practice Seminar-Law as a Business	
MSLA 4201	Law Firm Administration	
<b>C. Elective Courses</b>		<b>6</b>
Any MSLA course not listed as required above can be used to meet elective requirements.		
<b>Minimum Number of Credits Required for Degree</b>		<b>30</b>

Dual JD/MSLA degree option is available to students currently pursuing a JD at the Sturm College of Law. (<http://www.law.du.edu/index.php/graduate-legal-studies/dual-degrees/>)

## Advanced Standing Master of Science in Legal Administration with a Concentration in Law Firm Administration

### Degree Requirements

#### Coursework Requirements

Code	Title	Credits
<b>A. MSLA Core Courses-Required</b>		<b>9</b>
MSLA 4151	Applied Leadership and Management Theory	
MSLA 4380	Communication, Writing, and Research in Legal Business	
MSLA 4410	Accounting and Financial Management in Legal Business	
<b>B. MSLA Specialized Courses-Required</b>		<b>12</b>
MSLA 4385	Law Firm Communications and Technology	
MSLA 4420	Legal Practice Seminar-Law as a Business	
MSLA 4201	Law Firm Administration	
MSLA 4954	Project Management	
<b>D. Elective Courses</b>		<b>6</b>
Any MSLA course offered that is not listed as required above can be used to meet elective requirements.		
<b>Minimum Number of Credits Required for Degree</b>		<b>27</b>

## Graduate Certificate Programs

### Certificate in Law with a Concentration in Animal Law

#### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Core Courses:</b>		<b>2-3</b>
LAWS 4019	Animal Rights (or)	
LAWS 4119	Animal Law Survey	
<b>Advanced Animal Law courses (students must choose at least one of following):</b>		
LAWS 4220	Environmental Law	
LAWS 4251	Wildlife Law	
LAWS 4259	Global Climate Change Law and Policy	
Or any other relevant course approved by the Director of the Animal Law Program.		
<b>Complete for credit one of the following live-client experiences or simulations:</b>		
Animal Activist Legal Defense Project or		
An externship approved by Animal Law Faculty Director and coordinated through the Denver Law externship office, or		
Any practicum, live-client, or simulation course approved by the Animal Law Program Faculty Director, or		
LAWS 4206	Environmental Law Clinic (and)	
LAWS 4802	Environmental Law Clinic Seminar	
<b>Human Justice/General Electives (Students must select their remaining courses to meet the minimum 15 credit requirement from the following list):</b>		
LAWS 4279	Access to Justice	
LAWS 4050	Topics in Constitutional Law: Individual Rights	
LAWS 4051	Topics in Constitutional Law-First Amendment	
LAWS 4166	Constitutional Law II	
LAWS 4200	Criminal Procedure	
LAWS 4220	Environmental Law	
LAWS 4250	Federal Courts	
LAWS 4278	Lawyering for Racial Justice	
LAWS 4450	Natural Resource Law	
LAWS 4615	Torts (Advanced)	
LAWS 4635	Trial Practice I: Basic Courtroom Skills	
<b>Capstone Requirement:</b>		

Complete a research paper satisfying the upper-level writing requirement on an Animal Law topic, either through a course or directed research. Successful completion of the capstone must be approved by the Animal Law Certificate Program Director and the appropriate paperwork submitted to the Office of the Registrar.

**Minimum Number of Credits Required**

**15**

## Certificate in Law with a Concentration in Environmental and Natural Resource Law

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>1. Students must complete one of the following core courses:</b>		
LAWS 4220	Environmental Law (or)	
LAWS 4450	Natural Resource Law	
<b>2. Complete (for credit) one of the following live-client experiences or simulations in the ENRLP program:</b>		
LAWS 4802	Environmental Law Clinic Seminar	
LAWS 4206	Environmental Law Clinic (or)	
An ENRL-related full semester externship through the legal externship program (or)		
A simulated experience course such as the Natural Resources Distinguished Practitioner Seminar		
3. Complete a research paper satisfying the upper-level writing requirement on an ENRL topic, either through a course or directed research (with approval from the faculty director)		
4. Complete remaining credits by completing eligible ENRL electives. ENRL electives are indicated on the course schedule.		
<b>Minimum Number of Credits Required</b>		<b>15</b>

## Certificate in Law with a Concentration in Constitutional Rights and Remedies

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses:</b>		
LAWS 4164	Constitutional Law	4
LAWS 4025	Administrative Law	3
<b>Complete three (3) of the following courses:</b>		
LAWS 4200	Criminal Procedure	3
LAWS 4166	Constitutional Law II	3
LAWS 4168	Constitutional Litigation Seminar	3
LAWS 4250	Federal Courts	3
LAWS 4520	Remedies	3
LAWS 4050	Topics in Constitutional Law: Individual Rights	3
LAWS 4051	Topics in Constitutional Law-First Amendment	3
LAWS 4700	Special Topics (Habeas Corpus)	3
Or, other special topics courses (LAWS 4700-4709) as approved by Faculty Director		
<b>Complete at least one experiential learning opportunity (3 or more credits) from the following:</b>		
LAWS 4809	Civil Rights Clinic (or)	
LAWS 4800	Criminal Defense Clinic (or)	
A Constitutional Rights & Remedies Capstone course (as approved by the CRRP Faculty Director) or		
A Constitutional Rights & Remedies-related Externship (through the Legal Externship Program, as approved by CRRP Faculty Director) or		
Other experiential learning opportunity (minimum 3 credits) approved by the CRRP Faculty Director		
<b>Minimum Number of Credits Required</b>		<b>19</b>

## Certificate in Law with a Concentration in Corporate & Commercial Law

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Complete the following two (2) core courses:</b>		
LAWS 4006	Accounting for Lawyers	3
LAWS 4190	Corporations	4
Or can substitute relevant course for one of the above with approval of Faculty Director based on prior education and/or experience.		
<b>Complete two (2) of the following courses:</b>		
LAWS 4048	Agency Partnership & LLC	4
LAWS 4090	Bankruptcy	4
LAWS 4528	Securities Law	3
LAWS 4530	Secured Transactions	3
LAWS 4635	Trial Practice I: Basic Courtroom Skills (preferred section for program students)	3
Or can substitute relevant course for one of the above with approval of Faculty Director.		
<b>Experiential Learning Opportunity:</b>		
Complete one of the following options:		
Option 1 – (1) Complete a Critical Thinking Seminar from list below, and (2) Complete an approved Corporate & Commercial Law program Upper Level Writing Requirement course; and (3) Complete an approved Externship emphasizing Corporate or Commercial Law.		
Option 2 - Complete the full year (12 credits) Community Economic Development Clinic		12 (year long, 6 per semester)
LAWS 4835	Community Economic Development Clinic	
LAWS 4836	Community Economic Development Clinic Seminar	
<b>Complete at least one (1) additional Business Law course (from list above or below) of not less than 2 credit hours. (Note: Some students may need to take additional courses to fulfill 26 credit hour minimum requirement.)</b>		
<b>Critical Thinking Seminar Courses:</b>		
LAWS 4048	Agency Partnership & LLC	
LAWS 4070	Antitrust and Unfair Competition	
LAWS 4341	International Commercial Arbitration Moot	
LAWS 4371	International Investment Arbitration Practice & Procedure	
LAWS 4462	Negotiating Natural Resources Agreements	
LAWS 4460	Negotiation and Mediation	
LAWS 4414	Private Equity Seminar	
LAWS 4552	Securities Law Seminar	
LAWS 4418	Workplace Law Practicum: Sports & Entertainment Law	
LAWS 4701-4709	(Special Topics course. As approved by Faculty Director. Titles vary. Examples include Corporate Transactions Practicum, International Business Negotiations, Transactional Negotiations, Venture Law. See website for more details.)	
<b>Corporate &amp; Commercial Law Writing Courses:</b>		
LAWS 4485	Business & Commercial Law Seminar	
LAWS 4178	Contracts Drafting	
LAWS 4181	Corporate Drafting Seminar	
LAWS 4182	Negotiation and Drafting in an International Business Context	
LAWS 4346	International Sales	
LAWS 4379	International Trade Law	
LAWS 4411	Mergers & Acquisitions	
LAWS 4414	Private Equity Seminar	
LAWS 4701-4709	(Special Topics Course. As approved by Faculty Director. Titles vary.)	
<b>Other Business Law courses:</b>		
LAWS 4100	Basic Tax	
LAWS 4631	Commercial Space Law	

LAWS 4179	Construction Law
LAWS 4214	Copyright Law
LAWS 4227	Employment Discrimination Law
LAWS 4205	Employment Law Survey
TAX 4001	Fundamentals of Taxation
LAWS 4315	International Business Transactions: Survey Course
LAWS 4351	International Mergers and Acquisitions
LAWS 4011	Labor and Employment Writing Seminar
LAWS 4355	Labor Law
LAWS 4360	Land Use Planning
LAWS 4270	LLCs and Operating Agreements
LAWS 4411	Mergers & Acquisitions
LAWS 4096	Patent Law
LAWS 4008	Privacy Law
LAWS 4115	Trademark Law
LAWS 4416	Representing the Marijuana Client
LAWS 4618	Representing Clients Before the SEC
LAWS 4674	White Collar Crime
LAWS 4701-4709	(Special topics Course. As approved by Faculty Director. Titles vary. See website for more details. Approved courses include: Asset Management Regulation; Compliance; Cybersecurity, Data Privacy, & Incident Response Practicum; White Collar Crime)

Or other LAWS or TAX course, or relevant course from the Korbel School for International Studies or Daniels College of Business, with approval of Faculty Director.

**Other CCLP courses approved to meet 26 minimum credit hour requirement**

LAWS 4700-4709 Special Topics. Titles Vary. Approved courses include: Insurance Money & Litigation Bootcamp, Introduction to the Regulation of Cryptoassets, Taxation of Business Entities

**Minimum Number of Credits Required**

**26**

A minimum of 26 credits is required.

## Certificate in Law with a Concentration in Intellectual Property & Technology Law

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Complete two (2) of the following core courses:</b>		
LAWS 4214	Copyright Law	3
LAWS 4310	Introduction to Intellectual Property	3
LAWS 4376	Law and Emerging Technologies	3
LAWS 4096	Patent Law	3
LAWS 4008	Privacy Law	3
LAWS 4115	Trademark Law	3
<b>Complete two additional courses from the the list above and/or following list:</b>		
LAWS 4070	Antitrust and Unfair Competition	3
LAWS 4205	Employment Law Survey	3
LAWS 4215	Entertainment Law	3
LAWS 4433	Media Law	3
LAWS 4483	Patent Litigation	3
LAWS 4999	Directed Research (with approval from Faculty Director)	1-5

Or, relevant Special Topics courses (LAWS 4700-4709) as approved by Faculty Director including Cybersecurity Practicum, Patent Prosecution, and Law & Innovation Lab.

Or, any other relevant courses as approved by Faculty Director.

**Complete an experiential learning opportunity, through:**

i. Two (2) 1-credit IP capstone courses, or		
LAWS 4565	Intellectual Property Capstone	1-3
ii. An externship approved by the one of the Intellectual Property & Technology Law Faculty and coordinated through the Denver Law externship office, or		
iii. Another experiential learning opportunity as approved by the Intellectual Property & Technology Law Faculty Director(s). <small>Note: If the approved experiential opportunity is not for academic credit—or not for sufficient academic credit to meet the minimum 15 credit requirement of the certificate— student will need to take additional approved elective courses to meet the minimum 15 credit requirement'</small>		
<b>Minimum Number of Credits Required</b>		<b>15</b>

A minimum of 15 credits is required.

## Certificate in Law with a Concentration in International Law

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Required Course:</b>		
LAWS 4320	International Law	3
Students must complete a minimum of two courses from the list of core International and Comparative Law courses provided by the ILSP Director.		6
The remainder of credits required for the certificate must be satisfied by taking electives chosen from either the list of core courses or the list of Elective International, Comparative, and Foreign Law Courses provided by the ILSP director.		9
Upper-Level Writing Requirement.		
<b>Minimum Number of Credits Required</b>		<b>15</b>

A minimum of 15 credits is required.

## Certificate in Law with a Concentration in Workplace Law

### Certificate Requirements

#### Coursework Requirements

Code	Title	Credits
<b>Complete two of the following three courses:</b>		<b>6</b>
LAWS 4205	Employment Law Survey	
LAWS 4227	Employment Discrimination Law	
LAWS 4355	Labor Law	
<b>Complete a capstone experience in the Workplace Law curriculum. Capstone options include:</b>		
a. An employment/labor related clinical experience through the SLO.		
b. A workplace-related externship approved by the Program Director.		
c. Completion of a research paper satisfying the College of Law's upper-level writing requirement through a Workplace Law class or through directed research with a Workplace Law faculty member.		
d. Publishing a note on a workplace law topic in the Denver University Law Review under the supervision of a Workplace Law faculty member.		
e. In the event that the SCOL obtains or establishes a workplace law publication, serving as a student editor for the review or journal.		
f. Completion of a designated experiential advantage course in the Workplace Law curriculum.		
<b>Minimum Number of Credits Required</b>		<b>12</b>

A minimum of 12 credits is required.

## Law (LAWS)

### LAWS 4001 Introduction to Law for Non-Lawyers (1 Credit)

This course is designed to introduce non-lawyers to legal tools and methodologies so that they become competent at reading, understanding, and applying the law to new scenarios. It will also introduce them to legal research and writing. The course will cover reading and briefing cases, understanding and interpreting legislation, applying legal rules to new fact situations, and the relationship between different legal sources.



**LAWS 4002 Accounting for the Small Legal Practice (3 Credits)**

This course will provide an introduction to basic accounting fundamentals, provide key concepts that apply to attorneys and solo practitioners, and explore situations where accounting plays a role in the practice of law. Topics include: understanding the balance sheet, income statement, statement accounting; partnership vs. LLC; income tax accounting; money management and cash flow in a law practice; retainers; trust accounts; income measurement; auditing; and billing/fees/timekeeping.

**LAWS 4003 Appellate Advocacy (3 Credits)**

This course focuses on developing skills necessary for effective appellate advocacy. It includes discussion of the critical differences between trial and appellate practice and techniques for presenting a persuasive case on appeal. Students will write appellate briefs and present oral argument to a panel of judges. Students will also observe oral arguments presented in Colorado appellate courts.

**LAWS 4006 Accounting for Lawyers (3 Credits)**

This class introduces students to accounting principles and practices to prepare them for the manner in which transactional and other lawyers will be presented with accounting, auditing, and financial matters that must be understood to enable them to provide effective legal representation to clients. The course includes an introduction to basic concepts of bookkeeping and financial accounting, reading and understanding traditional financial statements, financial statement analysis and the use of financial ratios, and legal issues involving accountancy. The class will also examine the role and responsibilities of the independent auditor and the concept of full and fair disclosure of financial information as required by generally accepted accounting principles.

**LAWS 4007 Business Development: Marketing and Client Service (3 Credits)**

This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and, referrals.

**LAWS 4008 Privacy Law (3 Credits)**

This Privacy Law seminar examines the development of privacy rights as a key consideration in the business and governmental policy debates within the U.S. and E.U. These debates range from the appropriate role of government collection retention and usage of personal identifiable information (PII) as well as regulating the private sectors' usage of PII. The E.U. has taken the lead in establishing an all-encompassing privacy policy for both the public and private sectors, whereas the U.S. has established a sectorial approach to establishing privacy law and regulations. Lawyers will continue to play a significant role in shaping governmental privacy policy, drafting statutes and regulations, as well as business drafting and negotiating technology contracts.

**LAWS 4009 Community Expectations in Sustainable Development of Natural Resources (3 Credits)**

The spread of democracy, the rapid development of open information regimes, and the Internet means that it is increasingly important what local communities want, and how they view natural resource production. Sustainable development is a set of concepts that attempts to harmonize a number of seemingly competing goals. These include providing better conditions of life and more opportunities for people, especially the poor. They also include bringing production and consumption within limits that an ecosystem can tolerate in the long run. The new legal challenges need to be understood on a variety of levels: 1) the emerging set of international standards and requirements governing foreign direct investment; 2) changing national priorities in mineral legislation and the laws governing the extraction and use of mineral products; and 3) meeting community expectations for sustainable development.

**LAWS 4010 International Dispute Resolution (3 Credits)**

This class addresses critical topics for the attorney representing clients in international business transactions, including the role of the international lawyer, performing international research and locating international and foreign law resources, jurisdiction, provisional relief, choice of law, proof of foreign law, choice of forum or arbitration, service of process, obtaining the evidence, act of state, sovereign immunity, law of the seas, and enforcement of judgments. The class will consider relevant treaties and U.S. law, including the Hague Convention on Choice of Courts Agreement, the Uniform Foreign Country Money-Judgments Recognition Act, and potential litigation under such laws as the U.S. Foreign Corrupt Practices Act. The course addresses topics relevant to both litigation and arbitration.

**LAWS 4011 Labor and Employment Writing Seminar (3 Credits)**

The goal of this class is for students to research and write a scholarly law review article of publishable quality. Students will select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students will present their papers to the class toward the end of the semester. The top two papers will be selected for entry in the Jackson, Lewis National Labor and Employment Writing Competition.

**LAWS 4012 Protecting Intellectual Property in International Business Transactions (3 Credits)**

The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties are designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement and a manufacturing agreement. Students will then choose a topic from a selection of hypothetical problems, such as filing for patent protection in various jurisdictions, service of process on a foreign corporation, enforcing an arbitral award, resolving conflicts of laws, pre-litigation options. Each student will prepare a presentation for the class on the topic. The students will use the class feedback their research for the presentation to complete a paper on their topic. The drafting and paper will take the place of the final exam.

**LAWS 4013 Trial Practice II - Juries and Expert Witnesses (3 Credits)**

This course is for students who have already taken Trial Practice I. It will teach you more about how trial practice really works, build on what you learned in TP I, and allow you to sharpen and refine your skills. Since this class is taught using principles and methods developed by the National Institute for Trial Advocacy (NITA), you will accomplish this by actually doing the work, asking questions, introducing exhibits, working with experts, selecting juries and making arguments that help your client get a verdict. The class will have a focus on experts and juries. We will have real experts – psychiatrists, psychologists, and financial experts – for the expert witness exercises. We will also focus on juries and jurors: how to select them, how to persuade them and (I hope) how not to make them angry. In addition, you will prepare and conduct direct examination, cross examination, introduce exhibits, do opening and closing arguments, etc. In addition, we will cover redirect examination, dealing with difficult or obstreperous witnesses, working with interpreters, working with court reporters, and presentation of difficult issues such as damages.

**LAWS 4014 Emerging International Standards for Sustainable Development of Natural Resources (3 Credits)**

This course will focus on emerging international standards, legal, and “law-like” instruments designed to form the “rules of the road” in the dealings among private investors, host country governments, local communities, and other actors involved with sustainably developing natural resources. We will look at the track record of development: to what extent have natural resource projects helped make the world’s poor better off? And what is meant by “better off?” What is a “fair deal” between a corporation from, for example, Europe or North America and a developing country government in Africa? How are disputes resolved?.

**LAWS 4015 Intermediate Legal Analysis (3 Credits)**

Intermediate Legal Analysis will provide students with instruction in analytical skills in substantive areas of the law taught in the first year curriculum. Students will do multiple short assignments, primarily practice exams, in small sections. The course is a skills-based course, designed to develop analytical strategies necessary for success in law school, including rule synthesis and application, statutory interpretation, case analysis and briefing, fact evaluation, discernment of legal principles and theories, and effectiveness in written communication. The course will provide multiple opportunities for practice and feedback with exercises designed to help students learn, understand, and recall course materials with a particular emphasis in developing writing approaches and strengths for solving hypothetical legal problems. Upon successful completion of the coursework, students should be able to separate relevant from irrelevant facts, analyze statutory and case materials, apply relevant law to material facts in a competent manner to solve hypothetical legal problems, communicate effectively in writing, and complete analytical tasks within limited time constraints. The course will conclude with a final exam.

**LAWS 4018 Criminal Law (Advanced) (3 Credits)**

This course examines actual criminal cases from around the world and the application of the law at the time and place of the crime. The students will then compare this to the law today in the same jurisdiction and the Model Penal Code as applied to the same facts. This course also reviews current Colorado Law as it relates to liability and punishment based on the same fact pattern. The course will encourage analysis of what the law is and should be, and the aftermath of each case will lead to discussion about what actually happened to the defendant and why.

**LAWS 4019 Animal Rights (3 Credits)**

Students who have participated in the Civil Litigation Clinic for one semester are eligible to enroll in the Advanced Civil Litigation Clinic. The purpose of the advanced clinic is to provide students who have developed fundamental trial skills in the areas of landlord-tenant, domestic violence, and workplace law to further develop those skills and to work on cases and matters with greater independence for an additional semester without repeating the seminar component of the clinic.

**LAWS 4022 Criminal Clinic (Advanced) (3 Credits)****LAWS 4023 Civil Litigation Clinic (Adv.) (1-10 Credits)****LAWS 4025 Administrative Law (3 Credits)**

This class provides an introduction to the administrative process of government. Topics include Constitutional issues of separation of powers; delegation of legislative and judicial power; legislative and judicial authority in government agencies; agency exercise of policy-making functions; and controls imposed on agencies by administrative procedure legislation, Constitutional principles, and judicial review of agency action. Pre-req or co-req: LAWS 4164-Constitutional Law. Non-JD students must request permission to register.

**LAWS 4026 Criminal Procedure (Adv.) (3 Credits)**

From the commencement of formal proceedings to collateral attacks on convictions, this course guides students through the laws regulating criminal prosecutions. The course topics typically include pleas; trial rights; discovery; bail procedures; sentencing; double jeopardy; the death penalty; and habeas corpus. The focus of the course is on the federal constitutional rights and the federal rules of procedure that are applicable to each stage of a criminal proceeding. Prerequisite: LAWS 4200.

**LAWS 4027 Trial Practice II: Voir Dire (3 Credits)**

This course covers the practical process of jury selection including the court rules and statutes that apply as well as Constitutional issues including fair cross-section and discriminatory challenges. An exploration of the demographic, legal, and case-specific issues that can be addressed in jury selection. The course couples traditional lectures with emphasis on student exercises. The course culminates in a final voir dire where the student is given a case problem and required to incorporate persuasive introductions, law questions, case-specific questions, and conclusions. Student participation throughout the class is required as both the inquiring attorney and as a juror.

**LAWS 4028 Civil Procedure II: Trial and Post-Trial (3 Credits)**

Topics for this course include post-trial procedure, injunctions, and other advanced civil procedure matters.

**LAWS 4030 Family Law (Adv.) (3 Credits)**

Advanced Family Law is a practicum oriented class. This class has some lecture components, but there will be significant practicum aspects for students interested in learning about the practice of family law. Students will gain a general knowledge of family law, and more specifically the substantive and procedural aspects of dispute resolution oriented domestic relations practice. The subjects covered are divorce, custody and child support jurisdiction (intrastate and interstate); domestic case procedure, meeting with and managing your client; working with opposing counsel; temporary status conferences and agreements, Domestic Violence, discovery and use of experts, unbundled legal services, access to justice issues, and the permanent orders (final orders in the divorce); and attorney's fees. Prerequisite: LAWS 4240.

**LAWS 4031 Mediation (3 Credits)**

Students who have completed the basic Alternative Dispute Resolution course may enroll in this program that focuses on clients with more complex cases in both the civil and criminal arenas. Clients will be selected based on both public interest aspect and the propriety of the case as a learning vehicle for planning, pleading, negotiation, discovery, research and trial work. Prerequisite: LAWS 4060.

**LAWS 4032 Legal Analysis Strategies (3 Credits)**

This course provides last semester graduating students with instruction, guidance and feedback to develop foundational skills necessary to achieve success on both the bar exam and in the legal profession as skilled legal analysts. Substantively, the course will focus on core bar exam subjects (constitutional law, contracts, property, evidence, torts and criminal law/procedure) using practical problems in all three examination formats of the bar exam - essays, performance tests, and multiple-choice questions. Initially, the course provides a diagnostic evaluation of analytical and communicative strengths using a performance test and multiple-choice questions. Subsequent classes require submission of written practice exams with follow-up class presentations by students of analytical strategies used to solve hypothetical problems posed in essay questions, performance tests and multiple-choice questions. The course includes a final exam given during the final exam period designed to simulate bar exam protocols.

**LAWS 4033 Representing the Spanish Speaking Client (3 Credits)**

This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

**LAWS 4034 Legal Research and Writing for Graduate Students (2 Credits)**

This course will introduce students to the fundamentals of legal analysis in a common law system and various forms of legal writing. The course will also introduce students to current practice in legal research in the US legal system. This course is available to non-JD students only.

**LAWS 4035 Legal Research for Practice (2 Credits)**

Most new lawyers spend the bulk of their time conducting legal research. This course provides students with the practical research skills needed to succeed in today's law practice settings. The course follows an innovative sequence of classes structured around the most important research methods, tools, and search techniques for legal research proficiency. This approach teaches students the skills they need to be as effective and efficient as possible in their research, regardless of the research platform selected or the type of legal source one wishes to search. This course also uses a problem-based approach designed to simulate the types of research requests made in law practice settings. Course assignments include a variety of exercises, both in-class and outside of class, as well as four research assignments that demonstrate students' understanding of practice-focused research. Laptops are required for this course.

**LAWS 4037 European Union Environmental Law and Policy (3 Credits)**

The European Union (EU) has become a leading player in the context of European environmental legislation and policy making. Of particular interest has been the underpinning of the EU's single market, and environmental protection, the importance of which is clearly set out in the European Community Treaty. Matters dealing with climate change, genetically modified organisms, and recycling are now dealt with on a regular basis at EU level.

**LAWS 4042 Trial Practice II - Persuasion and Communication (3 Credits)**

This course is for students who are already skilled in the basic techniques of trials. This course will focus more on the "art" of advocacy. This course will focus on presentation and persuasion techniques that go beyond just getting the facts out. Students will practice storytelling techniques throughout trial, learn more persuasive use of visuals in storytelling, and think more critically about the use of case analysis and development of themes in advocacy. Prerequisite: LAWS 4635.

**LAWS 4048 Agency Partnership & LLC (4 Credits)**

This course investigates the structure and implications of various unincorporated business entities within three main categories: agency relationships, partnerships, and limited liability companies. Through the readings and various practice-oriented exercises, students will learn to understand and apply the rules, statutes, and doctrines that establish the governing framework for those entities, which range from some of the most basic to some of the most sophisticated forms of doing business. In addition to enhancing their ability to think critically and strategically about a variety of unincorporated business organization structures, students will develop practical skills that will improve their readiness upon graduation for the practice of law in various business contexts.

**LAWS 4050 Topics in Constitutional Law: Individual Rights (3 Credits)**

This course is an advanced constitutional law course, focusing on a selection of individual rights: equal protection; substantive due process; speech; the free exercise of religion; and the free establishment of religion. In each area, the course will seek to achieve a deep, descriptive understanding of the doctrine, and the ability to evaluate the doctrine in that area from a normative perspective.

**LAWS 4051 Topics in Constitutional Law-First Amendment (3 Credits)**

This is an advanced course in constitutional law that focuses on the law of the First Amendment. Most of the course will examine topics concerning the Free Speech Clause, including the theories of free speech, regulation of incitement, fighting words, defamation, offensive speech, hate speech, sexually explicit speech, and speech in the context of new communication media. It will also cover free speech doctrine and how it applies to symbolic speech, speech on government property, government compelled speech, speech in schools and by public employees as well as some topics concerning freedom of the press. The last part of the course will cover issues of freedom of religion under the First Amendment's Free Exercise Clause and Establishment Clause.

**LAWS 4055 Environmental and Agricultural Law (3 Credits)**

Agriculture contributes more than \$800 billion to the U.S. gross domestic product and provides 11 percent of US employment. As important as the food and fiber industries are to the American economy, devoting land to agriculture significantly affects the environment. Crop production can diminish habitat for wildlife, destroy wetland areas, erode the soil, cause nutrient and pesticide runoff, and pollute the air and water. This course addresses the complex and interconnected relationship of agriculture and environmental law, agriculture's historical roots in the United States, the evolution of agricultural policy, and modern developments in agriculture and environmental protection. The course is divided into three parts. In Part I, we will explore agriculture in a historical legal context and discuss USDA and Farm Bill programs. In Part II, we will focus on key environmental statutes and regulatory schemes that affect agriculture, including the Swampbuster program designed to prevent soil erosion and protect wetlands, the Clean Water Act, and the problems presented by Confined Animal Feeding Operations (CAFOs). In Part III, we will focus on emerging food systems in the United States, including certification and labeling programs, regulation of genetically engineered crops, the challenges (and opportunities) presented to farmers by climate change, as well as current and future trends in food production. We will discuss key policy and legal issues that surround each of these topics, with a particular focus on administrative law. Case studies of specific lawsuits will often be used to illustrate fault lines in how our society attempts to balance the need to produce cheap and abundant food against the need to protect the environment and public health.

**LAWS 4060 Alternative Dispute Resolution (3 Credits)**

The course examines the full range of contemporize dispute resolution processes: negotiation, mediation, arbitration and formal litigation. Conceptual and functional similarities and distinctions between these processes are explored. Additionally the processes; impacts upon disputants, role of the lawyer, the legal system and social order are reviewed.

**LAWS 4064 Introduction to the American Legal System (2 Credits)**

This course is designed for international LLM students who have not previously had exposure to either the US legal system or other common law systems. It focuses on the American legal system, include the three branches of government, federalism, the hierarchy of courts, and the anatomy of a law suit. Students will get a rigorous writing experience, drafting at least on legal document, such as a memorandum or a brief. In doing so, students will learn about legal research, analysis, writing, and Bluebooking. Students may also be asked to deliver and oral argument.

**LAWS 4065 American Legal History (3 Credits)**

This course concerns itself with the interaction between the legal system and social change in what is now the United States. Chronologically, the course materials run from the colonial period to the New Deal, although the nineteenth century will receive particular emphasis. A principal focus is the interrelationship of law, social life, economy, and ideology.

**LAWS 4070 Antitrust and Unfair Competition (3 Credits)**

The expansion of our economy over time has required the federal government and the courts to rethink their respective roles in regulating business conduct in the United States. The laws regulating business conduct are as dynamic as the notion of competition itself. This course teaches the history and fundamentals of antitrust and unfair competition laws in the United States. This course discusses the competitive problems which arise from monopolization, price and supply agreements, tying arrangements, exclusive dealings, cartel activity and mergers. The course also examines the interplay between federal, state and private enforcement of these laws.

**LAWS 4080 Real Estate, Title and Finance (3 Credits)**

This is an introduction to real estate transactions as they are encountered in the practice of law. We have shortened the course to a two-hour format to make it more accessible. Our emphasis will be on the representation of a client or an institution in the title and finance aspects of the real estate deal, which are central to every transaction. We will spend less time on contract formation and the role of brokers.

**LAWS 4085 Trial Practice III: Trial Practicum (3 Credits)**

Trial Practice III - The Trial Practicum (TP) is based upon the same educational platform as Trial Practice III - The National Trial Team (NTT). They are the same course, with the only difference being the TP students do not travel to compete against other schools, rather TP students compete in intra-school tournaments. TTP was created in response to the students who desire to benefit from the intensive study and simulated pre-trial and trial experience received by students on the National Trial Team course, and be "practice ready" upon licensure. This year-long, nine credit (three per semester), course is by invitation-only, and is demanding and intensive.

**LAWS 4089 Business Development: Marketing & Client Services (3 Credits)**

This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and referrals.

**LAWS 4090 Bankruptcy (4 Credits)**

This course introduces the federal bankruptcy system and Bankruptcy Code, including both the law of consumer bankruptcy and the law of corporate reorganizations. Topics include the rights of creditors in bankruptcy law and state law, the scope of the automatic stay, the treatment of executory contracts, the sale of assets in bankruptcy, the avoiding powers, bankruptcy planning, the restructuring of corporations in Chapter 11, and the procedure for confirming plans of reorganization.

**LAWS 4095 Real Estate Transactions (3 Credits)**

This is a problem-based course that covers both residential and commercial real estate transactions. Students will learn about the different phases of a real estate deal and examine sample documents that are involved in real estate transactions including purchase and sale agreements, brokerage arrangements, deeds of conveyance, and title insurance policies. Students will also address topics that appear on the bar exam such as the recording system and the financing of real estate acquisitions through mortgages and other tools.

**LAWS 4096 Patent Law (3 Credits)**

This course review the major patent law doctrines. Topics include patentability requirements under 35 U.S.C. 101, 102, 103, and 112, claim construction, various infringement doctrines, affirmative defenses and remedies.

**LAWS 4100 Basic Tax (4 Credits)**

This course provides students with a general understanding of tax law. Materials cover topics from personal and business deductions, to property basis and depreciation.

**LAWS 4101 Fundamentals of Taxation-JD (4 Credits)**

This class will cover fundamental concepts of the federal income tax system, including the definition of income, adjusted gross income, taxable income, exclusions from income, business and personal deductions, tax credits, basis, amount realized, gain and loss, capital gains and losses, depreciation, involuntary conversions, like-kind exchanges. This class is also intended to give the student a familiarity with the source materials of the tax law, including the Internal Revenue Code, Treasury regulations, case law and administrative materials.

**LAWS 4105 Business & Commercial Law Sem (1-3 Credits)**

Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority- and women-owned business firms. Prerequisite: LAWS 4190.

**LAWS 4108 Governance Workshop: Transparency and Privacy (2 Credits)**

This seminar will focus on cutting-edge legal issues related to governance, with a special focus on information: transparency, government accountability, information collection, and privacy. It will also provide an opportunity for students to engage in substantial scholarship of their own, improving their writing skills and providing insights into avenues for publishing written work. Most weeks, the Workshop will host a professor from another school to present a draft of a paper that has not yet been published. Students will carefully read the draft and participate in an in-depth discussion with the author. Through this process, students will have the opportunity to engage with many of the leading thinkers in the field. Some weeks, substantive material will be covered related to the course topics, including topics related to writing legal scholarship. Students will develop their own writing both in the workshop itself, and in scholarship groups of other students that will be assigned for the semester. Students will be expected to produce a significant piece of scholarship related to the topical area of this course by the end of the semester.

**LAWS 4110 Business Planning (3 Credits)**

The course introduces students to the transactional lawyering considerations involved in forming and representing an emerging growth business. The course examines the life cycle of a start-up company, including selecting the appropriate entity form, structuring the economic interests and managerial control among various owners, considering the lawyer's duties to the entity in dealing with its founders and management, and documenting various approaches to raising capital. Using a simulated deal format, students will draft, review and analyze documents typically used in organizing and financing a start-up business.

**LAWS 4112 Trademark Law (Advanced) (2 Credits)**

This seminar focuses on complex practical and legal issues confronted by today's trademark practitioners, ranging from brand protection strategies to litigating equitable relief claims for trademark infringement. The course also covers how trademark principles are being applied to the internet and e-Commerce. The course focuses on U.S. trademark law, but includes exposure to the aspects of international trademark law that are most frequently encountered by U.S. trademark practitioners. The course calls for students to participate in hands-on exercises, such as developing a new brand and arguing a preliminary injunction motion. The course requires a basic familiarity with trademark law, but the specific Trademark Law class is not a prerequisite. Prerequisite: LAWS 4310 or equivalent.

**LAWS 4115 Trademark Law (3 Credits)**

This course covers common law doctrines. Topics include the acquisition and preservation of trademark rights, false advertising claims, infringement doctrines, defenses, and remedies, with attention to internet issues and recent developments in the law. Recommended prerequisite: LAWS 4310.

**LAWS 4117 Taxation of Property Transactions (3 Credits)**

This course includes basis of property; capital expenditures and current expense comparison; depreciable status; amortization of intangible property; depreciation methods; property casualties and losses; profit or loss computation and characterization for taxable property dispositions; limitations on passive losses; lessor and lessee reporting; tax-deferred dispositions. Cross listed with TAX 4110.

**LAWS 4119 Animal Law Survey (2 Credits)**

This class is an introduction to the field of law referred to as "animal law." It is a survey course; we will study a range of legal topics that implicate the status and well-being of non-human animals. The course will not simply look casually or superficially at a spattering of areas where the law intersects with animals. Rather, the goal is to demonstrate that the field of animal law, like all great topics of legal study, is relevant to understanding general trends and overarching themes in U.S. law and policy. The course is a blend of theoretical and doctrinal materials, of historical reflections and future strategies. We will explore a variety of animal law topics and approaches for understanding "animal rights," but an overriding theme of the course is to understand whether and to what extent animal protection should be considered a civil rights movement. What is the role of activists versus lawyers? What is the role of criminal law in advancing the agenda of the movement? What is the role of constitutional law, and of science? And, do some species deserve more legal protections than others, and if so why?.

**LAWS 4120 Civil Procedure (4 Credits)**

This required introductory course examines how Constitutional statutory and judicial rules frame the determination of court controversies. They also explore the doctrines, remedies, and other principles pertinent to judicial dispute resolution.

**LAWS 4129 Comparative Corporate Law Seminar (2 Credits)**

Comparative Corporate Law examines the system for forming and managing businesses in the United States and overseas. We examine the impact of culture and other factors on legal regimes and examine whether a uniform international system is developing. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4131 Commercial Law Survey (4 Credits)**

This course provides an introduction to the concepts and methods of commercial law. As a survey course, it explores the major Articles of the Uniform Commercial Code, namely, Article 2 (Sales), Article 9 (Secured Transactions), Article 3 (Payment Systems), as well as Article 5 (Letters of Credit) and Article 7 (Documents of Title). In addition, the intersection of Article 9 and Bankruptcy Law will be discussed in some depth. The completion of this course gives students a firm footing for any advanced course in commercial law. Students taking only one course in commercial law receive broad exposure to the basics of commercial law.

**LAWS 4132 Colorado Legal Research (2 Credits)**

This course introduces students to legal materials generated by executive/administrative, legislative, and judicial branches of Colorado government. Students develop research strategies for answering legal questions using primary and secondary resources and learn to relate the various sources of authority to the structure of Colorado government. Students are required to bring laptop computers to class.

**LAWS 4133 Corporate Social Responsibility (3 Credits)**

Corporate Social Responsibility represents the integration of a various environmental, social, ethical, and even political considerations into basic business strategies to produce a positive impact on society while still earning profits. With increasing frequency, consumers and investors reward companies that embrace CSR by purchasing their products and stock. This seminar in Corporate Social Responsibility explores a variety of pressing legal issues involving corporate governance, sustainable development, shareholder activism, executive compensation, the role of religion in the boardroom, international regulation, and CSR certification, among other topics. Through the readings and discussions, students examine the American approach to CSR in light of international regulatory efforts and models of socially responsible business practices in various countries around the world. Students gain a greater sense of the special role lawyers play in burgeoning CSR movement by examining some sophisticated examples of corporate strategy, planning, and litigation on CSR matters. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4135 Comparative Law (3 Credits)**

Comparative Law is the study of the foundation of legal traditions and systems which exist in the world today. The major topics covered in this course are legal history and culture; legal structures; legal actors; and procedure and sources of law. The interactive course begins with an overview followed with coverage of each of the topics in relation to the United States legal system. We then cover the same topics in relationship to the common law tradition and the civil law tradition.

**LAWS 4137 Comparative Environmental Law (3 Credits)**

Comparative Environmental Law is an introduction to the growing network of international law (multilateral and bilateral treaties, customary law, adjudications, etc.) that govern environmental law. The course focuses on international legal issues including global climate change; trans boundary pollution; resource depletion; toxic waste export; biodiversity and wildlife/plant extinction; deforestation; desertification; ocean pollution; sustainable development; etc. (The internal domestic environmental laws of individual countries receive some attention as does trade law, but these are covered with more detail in Comparative Law and International Business Transactions, respectively.)

**LAWS 4139 Commercial Law for Foreign Investors in Guatemala (2 Credits)**

This class uses the Dominican republic-Central America-United States Free Trade Agreement (CAFTA-DR) and the North American Free Trade Agreement (NAFTA) to examine the legal framework regulating foreign investment in Central America and Mexico. With Guatemala's ratification of CAFTA-DR, Guatemala opened its doors not only to trade but also to foreign investment, including from U.S. companies looking to do business in Guatemala. While the CAFTA-DR includes norms that govern the relationship between foreign investors and Member States, the domestic laws of each Member State continue to provide the central regulatory structure that governs relations among the parties, including in the areas of commerce, intellectual property, labor and the environment. This is an introductory course that examines the principle commercial norms that would apply to foreign investors in Guatemala, with a special emphasis on the law of contracts. The course examines the comparable norms applicable under NAFTA and introduces the topic of how CAFTA's ratification has promoted rule of law reforms in Guatemala in the areas of commerce, intellectual property, labor and the environment. This course is taught in Spanish.

**LAWS 4143 Commercial Paper (2,3 Credits)**

This course introduces students to Article 3 of the Uniform Commercial Code, Negotiable Instruments. After studying this part of the UCC at the beginning of the semester, students will engage in a simulated, complex business transaction for the remainder of the course. The simulation involves problem solving, extensive document drafting, client counseling and professionalism, among other topics. The simulation involves transactions in a business/banking context, but is not an overview of banking law.

**LAWS 4144 Comparative Free Speech and Access to Information in the Americas (2 Credits)**

This course looks at the history and text of the guarantees of free speech in the constitutions of the United States and Latin American countries, including Guatemala; at judicial decisions interpreting them; and at the actual scope of those guarantees of free speech in practice, with emphasis on the function of free speech in facilitating democracy. The course also looks at the impact of globalization on free speech guarantees, including the impact of international treaties, the activities of NGOs, and speech on the Internet. The course compares the systems for providing citizens access to government information in the U.S. and Latin America, particularly Guatemala, and looks closely at areas where interest in disclosure and secrecy conflict.

**LAWS 4145 Computer and Internet Law (3 Credits)**

Computers and Internet Law is designed to consider the areas in which computer technology and the legal environment intersect. This includes legal protection of computer software; contracting for computer services; computer data banks and privacy; the check-less society; and the relationships between Federal Communications Commission policies and computers.

**LAWS 4160 Conflict of Laws (3 Credits)**

Conflict of Laws is an analysis of legal problems arising in cases when at least one of the operative facts cuts across state or national boundaries. Topics covered include problems of interstate jurisdiction over parties and subject matter the application of principles of full faith and credit and comity on the recognition and enforcement of interstate and multinational judgments; the comparison of various theories of law choice in the context of the Constitutional threshold constraints of the due process and full faith and credit clauses.

**LAWS 4164 Constitutional Law (4 Credits)**

This required introductory course examines the role of the United States Supreme Court and, in particular, the Court's power in exercising judicial review in cases interpreting the U.S. Constitution. The course focuses primarily on two topics. First is the doctrine of Separation of Powers: examining the structure and interrelationship of the three branches of the federal government, Congress, the Executive Branch, and the federal judiciary. Second is the doctrine of Federalism: the relationship and power distribution between the federal government and state governments. In addition, all sections devote part of the course to an introduction to at least one aspect of the large field of individual constitutional rights. The specific rights covered vary by instructor. Among the possible topics are: the Equal Protection Clause and Due Process Clause of the Fourteenth Amendment, the First Amendment, and/or the Fifth Amendment's Takings Clause. Students who wish to gain a deeper understanding of these topics are strongly encouraged to take Constitutional Law II.

**LAWS 4166 Constitutional Law II (3 Credits)**

This course provides upper level students exposure to a range of constitutional issues not covered in the basic required Constitutional Law course. At the discretion of the faculty, and in addition to a survey of constitutional law issues, this course may emphasize one or more specific topics, including but not limited to Sexuality, Causation, Poverty, First Amendment and Individual Rights.

**LAWS 4168 Constitutional Litigation Seminar (3 Credits)**

This course examines individual and class action litigation brought against government officials for the violation of constitutional rights under 42 U.S.C. section 1983, the primary federal civil rights statute, and other civil rights statutes. The historic interplay between substantive Constitutional law and traditional doctrines of tort liability has developed into an entire body of law under section 1983 that any civil rights or government lawyer must regularly confront. The seminar focuses on the most critical substantive issues in pursuing Constitutional litigation. This includes the history and purposes of section 1983; the elements of constitutional torts; rules governing liability of government officials and municipal liability; immunity doctrines; remedies; jurisdictional and procedural barriers to section 1983 litigation; and recovery of attorney's fees. The class also discusses the availability and viability of alternative remedial mechanisms to section 1983. Prerequisite: LAWS 4164.

**LAWS 4169 Constitutional Law Writing Seminar (3 Credits)**

This course satisfies the Upper Level Writing requirement (ULM). Permission by instructor only.

**LAWS 4175 Contracts (4 Credits)**

Consideration of the restatement of contracts and the relevant provisions of the Uniform Commercial Code. Legal protection accorded contracts: remedies and measure of recovery; damages; specific performance; restitution. Elements of agreement: preliminary negotiations; agreements unenforceable for indefiniteness; mutual assent. Consideration and the seal; bases of contractual liability; consideration; reliance and estoppel; mutuality. Problems of offer and acceptance; termination of offeree's power of acceptance; contracts concluded by correspondence; unilateral contracts—notice, knowledge, revocation of offer; contracts implied from conduct. Special problems of consideration. Third-party beneficiaries. Assignment. Effects of changes or unforeseen circumstances. Conditions in contracts—problems of draftsmanship: express and implied conditions; conditions precedent, subsequent and concurrent; severability of contract provisions. Procedures after default. The Statute of Frauds.

**LAWS 4178 Contracts Drafting (3 Credits)**

This course addresses the perspectives and skills that a lawyer must develop in order to assist clients with transactional work and aligning business objectives and contracts. In addition to delving deeper into selected areas of substantive contract law, students read materials that focus on writing and interpreting contractual provisions. Because a core focus of the class is writing for contracts, students regularly engage in drafting exercises to hone their drafting skills. The course also focuses on negotiation in a transactional setting, and how discussions with both clients and other parties can distill the key business terms that are to be reflected in a contract. Although substantive law and theory is utilized throughout the course, the primary objective of the course is exposing students to some of the practical, real-world skills essential to a transactional law practice.

**LAWS 4179 Construction Law (3 Credits)**

This course examines the legal relationships, obligations, rights, and remedies that govern the diverse parties to a construction project, including owners, lenders, contractors, material men, sureties, insurers, subcontractors, laborers, and others. A substantial portion of construction law (and accordingly, the primary focus of this class) is advanced contract law. Experience in the construction industry is not required, but those students who are unfamiliar with construction will benefit from spending a little extra time learning basic construction concepts and processes.

**LAWS 4181 Corporate Drafting Seminar (3 Credits)**

Corporate drafting focuses on writing responsive, lucid, unambiguous corporate documents. Students assume the role of the in-house counsel and other members of the corporate negotiating team as the team structures, negotiates, drafts, and implements corporate transactions. This course requires extensive writing. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4182 Negotiation and Drafting in an International Business Context (4 Credits)**

This course will focus on the basic principles of negotiation and contract drafting, as applied to international business transactions. Special emphasis will be placed on financial and corporate contracts, with a focus on a cross-border merger and acquisition transaction. The class will have three major components. First, we will cover the basic principles of effective contracts negotiation, paying particular attention to issues of cultural understanding and inter-cultural communication. Second, we will cover the basic principles of clear and unambiguous contract drafting and we will study and apply the basic 'geography' or building blocks of a cross border merger contract. Finally, we will draft and revise specific documents and agreements necessary to complete a cross border merger transaction. The seminar is taught through a combination of lectures, simulations, and hands-on drafting and negotiation exercises. This class requires extensive writing and team-based negotiations.

**LAWS 4185 Business Entities (4 Credits)**

The course provides an overview of the differences in the operation of a trade or a business as an LLC/LLP, an S-Corporation and a C-Corporation. The class offers an overview of the state law requirements for the operation of each type of business (Model Business act and LLC/LLP state statutes) and the difference in the tax treatment for each type of business. The objective is to give students a basic understanding of some of the do's and don'ts for each business and how they might advise a client as to the preferred business form in typical factual situations. The class explores both the legal and tax effects during the life cycle of any business, including formation, operation, distribution, redemption, sale of an interest, liquidation, mergers and divisions, and the death of the owner. Prerequisite: LAWS 4100.

**LAWS 4186 Corporate Taxation I (3 Credits)**

The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distribution to shareholders, stock dividends and redemptions, personal holding company, and accumulated earnings tax. Cross listed with TAX 4200.

**LAWS 4187 Corporate Taxation II (3 Credits)**

A continuation of Corporate Taxation I with emphasis on corporate reorganizations, operation, liquidation of subsidiary corporations and corporate division, and carryover of tax attributes. Cross listed with TAX 4300. Prerequisite: LAWS 4186.

**LAWS 4188 Corporate Taxation III (3 Credits)**

Advanced corporate taxation problems with emphasis on collapsible corporations; liquidations; detailed study of sections 305, 36, 307; loss carryovers and Subchapter S corporations. Cross listed with TAX 4330. Prerequisite: LAWS 4186.

**LAWS 4190 Corporations (4 Credits)**

Corporations provides students with a basic introduction to corporations, including the roles of shareholders and creditors. The instructor also covers the various duties and liabilities of officers and directors, and supplies a brief overview of the applicability of the federal securities laws.

**LAWS 4195 Criminal Law (4 Credits)**

The course explores the definition of crime and criminal liability.

**LAWS 4197 Victim's Rights (3 Credits)**

Victim's rights has emerged as an important arena for the criminal justice field in the 21st Century. Anyone planning a career in criminal justice will want to engage in this seminar class to learn about the law and its application to victim's rights. This class is designed to explore beyond advanced criminal procedure the role of the criminal justice system and its response to victim's. In-depth discussions will be held about victim's rights and criminal procedure.

**LAWS 4200 Criminal Procedure (3 Credits)**

Criminal Procedure outlines Constitutional and other rules regulating pretrial evidence acquisition by government officials in criminal matters. The course commonly includes the following topics: an overview of criminal justice administration; arrest; search and seizure; the exclusionary rule and its administration; wiretapping electronic eavesdropping; entrapment; interrogation; and confessions and lineup practices.

**LAWS 4201 Death Penalty Jurisprudence (3 Credits)**

The course is designed to make students aware of the substantive body of law surrounding the modern death penalty and the policy issues raised by the law. The course begins with the class constructing a fair death penalty. Students decide whether they, as the omnipotent legislature, want a death penalty. Then, students construct one that is fair, just and humane, and that achieves the goals that they have established for their death penalty.

**LAWS 4202 Disability Law (2-3 Credits)**

This course covers theories of disability and provides a brief history of disability rights in the United States. The course will explore the major federal laws protecting individuals with disabilities in various contexts such as housing, public accommodations, schools, and employment. Relevant federal statutes we will examine include Section 504, the Americans with Disabilities Act, the Fair Housing Act, and the Individuals with Disabilities Education Act. The course will also provide an overview of the Supreme Court's landmark decision in *Olmstead v. LC*.



**LAWS 4203 Elder Law (3 Credits)**

The course explores a range of issues relevant to legal counseling of elderly clients, such as mental and physical impairments, public assistance, Medicaid, social security, nursing homes, guardianships, trusts, and right to die issues.

**LAWS 4205 Employment Law Survey (3 Credits)**

This course provides a broad overview of the field of employment law. It begins with an exploration of the employer/employee relationship and the "at will" rule. It then addresses various constitutional, statutory, and common law doctrines that tend to be applied to the employer/employee relationship, often as exceptions to the "at will" rule. Contract, tort, and anti-discrimination doctrines will be covered, as well as constitutional doctrines addressing free speech and privacy in the workplace, and regulatory regimes addressing wages and hours. Finally, this course explores the post-employment relationship, including trade-secrets and non-competition agreements. These topics are addressed at both a theoretical and practical level.

**LAWS 4206 Environmental Law Clinic (3-6 Credits)**

The goal of the Environmental Law Clinic of the Student Law Office (SLO) is to protect the environment and public health, while teaching students practical legal skills that will translate into any practice area. Students applying for the Environmental Law Clinic are asked to select between two tracks: the Federal Wildlife Project or the Colorado Urban Project. Students who select the Federal Wildlife Project (FWP) track in the Environmental Law Clinic will work on the preservation of endangered species and their habitats throughout Colorado and the western United States. Students who select the Colorado Urban Project (CUP) track in the Environmental Law Clinic will work to address the emerging environmental issues along Colorado's urban Front Range. This course may satisfy the Upper Level Writing Requirement (ULW). Corequisite: LAWS 4802. It is recommended, but not required, that students complete Evidence and Legal Profession before registering for this clinic.

**LAWS 4210 Energy Law (3 Credits)**

Energy Law presents the regulation of production, conversion, transportation, distribution and pricing of fossil, hydro, nuclear, and other conventional sources of primary energy. It also offers insight into the regulation of renewable energy resources, including energy from the sun, wind, biomass, oceans, earth (geothermal), and rivers (including low-head hydro). There is an emphasis on new legislative and judicial development relating to these various energy sources. The course is taught in a seminar format, and students present and critique classmate papers as part of the class. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4212 Public Interest Capstone (0 Credits)**

This is a zero-credit opportunity for JD students nearing graduation that will allow for the informal community building that is so critical for sustaining student commitment and public interest attorneys for the long term. It will be a time for sharing, reflection, camaraderie, and connections, as well as advising and planning for a career in the public sector.

**LAWS 4214 Copyright Law (3 Credits)**

This course covers the major copyright law doctrines. Topics include the subject matter of copyright, the scope of protection, rights conferred, infringement doctrines, defenses, remedies, and attention to particular industries and recent development in the law. Recommended prerequisite: LAWS 4310.

**LAWS 4215 Entertainment Law (3 Credits)**

Entertainment Law focuses on issues that have an impact on the entertainment industry. Topics include copyright; service and trademark; licensing; publishing; unfair competition; antitrust; agency; and labor law. The class also explores publishing agreements.

**LAWS 4218 Discovery Practicum (3 Credits)**

Most civil litigations never get to trial. Instead, these cases are settled after the discovery period has revealed the strengths and weaknesses in the case. This course focuses on the instruments, rules, and case law governing discovery of information in litigation: interrogatories, document requests, requests for admissions, and depositions. It is taught in the form of a "whole-course simulation," which means students will represent a party and have an opposing counsel in a simulated litigation throughout the course. Students prepare and serve discovery documents (just as in practice), take, defend, and act as a witness in a deposition, and reach a settlement of the case at the end of the course. Because of the nature of the course and the many practice documents prepared during the semester, there is no final examination. This course will satisfy the Upper Level Writing requirement (ULW). This course is a "Carnegie Integrated Course."

**LAWS 4219 Environmental Justice (3 Credits)**

This course will introduce students to environmental injustice - the disproportionate environmental impacts to low-income and of color communities. The study of environmental justice delves into environmental, civil rights and poverty issues. Specifically, environmental justice seeks to remove these disproportionate impacts through a combination of laws, most notably civil rights, environmental and tort. Students completing this course will understand what environmental justice is, the history of the Environmental Justice movement in the United States and the tools used to try to level the playing field regarding environmental justice decision-making. The class will include hands-on exposure to those facing such environmental injustices. The grade for this course will be based on class participation, short assignments and a final paper.

**LAWS 4220 Environmental Law (3 Credits)**

Environmental Law covers the major federal laws and programs for environmental protection. These laws and programs include the National Environmental Policy Act; Clean Water Act; Clean Air Act; Resource Conservation and Recovery Act; and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although the course focuses primarily on federal statutory law, it also incorporates some discussion of common law remedies. Recommended prerequisite: LAWS 4025.

**LAWS 4221 Navigating the National Environmental Policy Act (NEPA) (2 Credits)**

The National Environmental Policy Act (NEPA) was the first major environmental law enacted in the United States, requiring Federal agencies to evaluate the environmental impacts of their proposed actions prior to making decisions. Both scorned and praised, familiarity with NEPA is must-know territory for any environmental lawyer. This class will leave you with a solid understanding of NEPA regulations and caselaw, categorical exclusions, environmental assessments and environmental impact statements, public involvement and public comment, interaction with other environmental laws and processes, recent and far-reaching streamlining efforts, how to write a NEPA document, and advice for working with Federal land management agencies.

**LAWS 4224 Employment Law Benefits (3 Credits)**

This course is a statute and case law course that introduces students to Employment Retirement Income Security Act (ERISA), the important federal law that controls the design and operation of virtually all employee benefit plans. The course offers students an understanding of the application of ERISA and how ERISA issues arise in business and private law practice. The classroom scenarios include lecture, problem solving and role playing to identify the kinds of experiences students are likely to experience in private practice.

**LAWS 4225 Estate and Gift Taxation (3 Credits)**

This class is a study of the federal estate tax; federal gift tax; and federal generation skipping transfer tax.

**LAWS 4227 Employment Discrimination Law (3 Credits)**

This course concerns federal constitutional and statutory law that prohibits discrimination in the workplace, including regulation of both private employers and the federal government. The course covers theoretical issues, such as the definition of equality, and practical problems that involve the complex procedural requirements of the applicable statutes.

**LAWS 4229 Employment Law Seminar (3 Credits)**

Students select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students present their papers to the class toward the end of the semester. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4230 Estate Planning (2 Credits)**

Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts, including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed.

**LAWS 4232 European Union Law (3 Credits)**

The European Union (EU) has been described as the 21st century's newest superpower. Bearing in mind the rapidly growing importance of the EU, this course introduces EU law, and emphasizes its historical underpinnings, institutional framework, legal procedures, and internal market. Moreover, emerging policies (e.g. enlargement, environment) are considered. The course examines these topics in the context of European political integration and where appropriate, the ongoing tension in the trans-Atlantic relationship between the EU and United States.

**LAWS 4235 Evidence (4 Credits)**

This required course is an introduction to procedural rules that regulate the use of evidence at trial, including coverage of the mode of examination, relevance, impeachment, character evidence, hearsay, expert evidence, and privileges. Particular attention is paid to the Federal Rules of Evidence. Non-JD students must request permission to register. Non-JD students must request permission to register.

**LAWS 4236 Election Law (3 Credits)**

This course examines federal and state election laws. Topics to be covered include the Voting Rights Act, redistricting, the Electoral College, gerrymandering, ballot initiatives, and campaign finance. Time permitting, we'll also cover open records laws and regulations around lobbying.

**LAWS 4237 Evidence Practicum (3 Credits)**

This practicum is designed to help students build trial skills and make the transition from evidence law learned in the classroom to evidence used in the courtroom. It provides simulation-type experiences requiring students to understand the foundations required to admit different kinds of evidence, to anticipate evidentiary issues, to make and to respond to objections, and to prepare examinations designed to avoid objections. The course supplements Trial Practice by focusing heavily on the rules of evidence. Prerequisite: LAWS 4235.

**LAWS 4238 Exempt Organizations (2 Credits)**

The statutory exemption for "charities," social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions. Crosslisted with TAX 4430.

**LAWS 4240 Family Law (3 Credits)**

This course is an examination of laws that involve and/or regulate families. Students learn the legal rights of families in cases incidental to marriage or without marriage. This includes child-parent relationships and the dissolution of marriage. This class also provides students with an understanding of new familial relationships.

**LAWS 4250 Federal Courts (3 Credits)**

This is an advanced public law course that examines the role of the federal courts in our constitutional system. It focuses on the federal courts' role and power in relation to the other branches of the national government (separation of powers) and in relation to state and local governments (federalism). Specific topics include: the organic judicial powers of the federal judiciary, including Article III's Case or Controversy requirement; congressional power to restrict or expand federal jurisdiction, the Supreme Court's power to review state court rulings on federal law by direct appeal and on collateral review (habeas corpus), federal question jurisdiction, federal civil rights law under 42 U.S.C. § 1983, and many of the doctrines that limit federal judicial power to provide remedies to parties whose federal constitutional and civil rights have been violated, including official immunity, state sovereign immunity, and the abstention doctrines. It is highly recommended for students interested in pursuing federal judicial clerkships and/or careers in federal civil rights litigation, government representation, or other federal litigation.

**LAWS 4251 Wildlife Law (3 Credits)**

This course covers wildlife law, with a focus on federal wildlife law. The course will cover the constitutional underpinnings of federal wildlife law and its core statutory framework, as well as looking at different conservation approaches. Time permitting, the course will also cover some state and international wildlife law.

**LAWS 4259 Global Climate Change Law and Policy (3 Credits)**

As concern over the threat of global climate change spreads, action on greenhouse gas emissions (GHGs) is increasingly commanding attention. This seminar consists of supervised research and writing on the issue of climate change and the legal and policy responses. The course focuses on the effects of climate change on development and the environment in industrialized and developing countries and the laws in the international, regional and domestic arenas that address the problem.

**LAWS 4260 Gender and the Law (3 Credits)**

This course examines the role of gender in many areas of the law, including employment discrimination and reproductive rights. Provides perspectives on the effects of gender-based hierarchy on the structure of the law and legal processes. Explore contemporary feminist jurisprudence and the impact of women in the legal profession.

**LAWS 4262 Sexual Orientation Law Seminar (3 Credits)**

This seminar offers an opportunity for students of any or no sexual orientation to study the relationship between law and sexual orientation to study the relationship between law and sexual orientation. Historically, law in the United States consistently and pervasively regulated the realm of human identity and behavior we call sexuality. Questions and claims challenging traditional assumptions about sexual orientation surfaced in the last twenty-five years. Our study of sexual orientation and law allows us to view the relationship between law and society through a new lens, that of sexual orientation. Specifically, we examine issues of sexual orientation arising in areas ranging from constitutional law criminal law, employment law, family law, health law, immigration law, to tax law. We discuss some or all of the currently controversial issues relating to sexual orientation and law, including such topics as the proliferation of both nondiscrimination laws and anti-gay initiatives like amendment 2 in Colorado, the constitutionality of laws prohibiting specified sexual behavior between different-sex and same-sex adults, the constitutionality of laws limiting the right to speak about sexual identity, public and private employment discrimination against gays and lesbians including the military ban on persons who are openly gay or lesbian, and discrimination against same-sex couples with respect to marriage, parenting, health benefits, and taxes.

**LAWS 4265 Government Contracts Seminar (3 Credits)**

This seminar provides an in depth examination of the unique statutory, regulatory and administrative process used by the U.S. Government when it annually spends more than \$1 trillion taxpayer dollars to contract for goods and services used by Federal departments and agencies. Topics include the contract award and contract administration processes, with an emphasis on practical solutions to issues which routinely confront attorneys who advise businesses that do business with the Government.

**LAWS 4270 LLCs and Operating Agreements (1 Credit)**

This course provides an overview of limited liability companies, including the attributes and characteristics of LLCs, the pros and cons of the LLC form, and a comparison of LLCs to other types of entities. The course also covers the structure and components of the operating agreement, including an in-depth examination of various provisions included in operating agreements. In conjunction with the course content, students will also be exposed to client interview techniques for in person client meetings, as well as client conference calls.

**LAWS 4276 Health Law (3 Credits)**

This survey course introduces students to how the legal environment of health care shapes both its quality and its distribution. The course begins with a foundation in how health care is both provided and financed in the U.S., including managed care, Medicare, and Medicaid. This foundation sets the stage for studying the laws and policies that impact health law, including ERISA, antitrust, fraud and abuse, the False Claims Act, Stark, and HIPAA. This course does not focus on bioethics or medical malpractice. Students must submit a publishable quality paper on a health law topic approved by the professor.

**LAWS 4277 Holocaust Seminar (2-3 Credits)**

This class focuses on conceptions of individual and state accountability. By understanding how the Holocaust occurred, and how individual and collective acquiescence combined with affirmative conduct, we can begin to grasp the complex web that created a moment in time where morality and civilization were abdicated and almost eradicated. We examine how law, culture, power, ignorance and fear combined to create the Final Solution, and how conceptions of moral agency and accountability were forged in flames that marked the death camps. Students read narratives of resistance and collaboration and historical accounts of how the U.S., Europe and religious institutions interacted with the Third Reich. Through the readings and discourse that follow, students have the unique opportunity to question what constitutes moral agency and how individuals and cultural systems should be held accountable for circumstances that created the Third Reich and its ideology. This class is interdisciplinary thereby integrating law with literature, political theory and philosophy. Prerequisite: instructor's permission.

**LAWS 4278 Lawyering for Racial Justice (1 Credit)**

This seminar provides a unique opportunity for Denver Law students to earn one credit by studying a significant topic related to the law and racial justice. The seminar will allow students to begin to develop 1) a substantive understanding of the application of critical race theory to a variety of contemporary legal and social issues, and 2) a sense of professional identity through the examination of lawyering practice in the context of critical race theory. Topics discussed generally change each semester to respond to current events and pressing needs and interests. The course may include guest lectures from faculty and practitioners in other disciplines. Students will thus have an opportunity to interact with an array of professors who have expertise and interest in critical race theory and practice.

**LAWS 4279 Access to Justice (3 Credits)**

This class will explore the justice gap in the United States, focusing primarily on the civil side. We will first consider what has caused the dearth of legal services available to low and moderate income people. We will then examine what solutions states have tried to address the justice gap and why those solutions have been only modestly effective. Finally, while the class is focused primarily on the civil justice gap, we will spend some time discussing the inadequacy of criminal representation for indigent defendants.

**LAWS 4280 Hughes Research Seminar (1-5 Credits)**

Topic of Seminar to be determined by Hughes Research professor teaching the course.

**LAWS 4285 Legal Research Skills - Specialized (0 Credits)**

This zero-credit course introduces students to sources and methods for administrative law and legislative history research as well as subject-specific research on selected topics such as securities, natural resources, intellectual property, immigration, environmental and international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4287 Legal Research Skills - Basic (0 Credits)**

This zero-credit course introduces students to the basic primary sources of American law (cases and statutes), secondary sources, the Bluebook and citators and other tools for updating research. Print and electronic materials are used throughout the course. Students must attend eight (8) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4288 International and Human Rights: Indigenous Peoples (3 Credits)**

This course explores some of the major contemporary legal issues facing indigenous peoples across the globe. The course covers issues as far ranging as: how indigenous groups are defined under the law; ethical and legal issues pertaining to indigenous self-governance including the tension between minority rights, individual rights, and democratic precepts; the uneasy application of self-determination law to indigenous self-governance; the implications of human rights, environmental, intellectual property, and international trade regimes for indigenous peoples; and international legal texts affecting indigenous peoples, such as the United Nations Declaration of the Rights of Indigenous Peoples. At the option of the individual student, this course can be used to satisfy the Upper Level Writing requirement (ULW).

**LAWS 4289 Legal Research Skills - International (0 Credits)**

This zero-credit course introduces students to sources and methods for international, comparative and foreign law research. Topics may include treaty research, international trade law, human rights law, international intellectual property law, customary international law and private international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4290 Human Rights Law (2 Credits)**

The course provides an introduction to international civil and political rights and economic, social, and cultural rights in the international arena. It also covers the means available to protect such rights of the individual and groups. The focus is on the implementation part at the United Nations and other international, regional and national settings. Prerequisite: LAWS 4320.

**LAWS 4292 Individual Tax Problems (3 Credits)**

Using the Internal Revenue Code and the Federal Income Tax Regulations as a basis, substantive issues relating to individual taxation are covered. Areas included are general concepts of gross income, individual employee benefits and deductions, charitable deductions, alternative minimum tax, deductibility and classes of interest, office in home and vacation homes, and a general overview of the interrelationships of various statutory and non-statutory principles. Cross listed with TAX 4020.

**LAWS 4295 Immigration Law (3 Credits)**

This is a study of the historical development and current jurisprudence in American immigration law. The course examines such concepts as sovereign authority, exclusion, expulsion and asylum, and current developments in the area.

**LAWS 4297 Forced Migration & Human Trafficking (3 Credits)**

This course will examine the laws and policies governing forced migration. Students will get an overview of the scale, scope, and causes of forced migration, and will explore what it means to be a refugee according to the international conventions and U.S. law. We will ask and try to answer questions including: what conduct constitutes "persecution"? How is someone fleeing violence different from a refugee? What kinds of durable solutions exist to address the refugee crisis? In this participatory class students will also learn about human trafficking and the national and international efforts to respond to this crime. In addition to the normal substantive course work, students are required to observe 4-6 hours of refugee-related hears at the Executive Office of Immigration Review in Denver.

**LAWS 4298 Immigration Law Advanced (3 Credits)**

This course provides theoretical and practical approaches to the representation of non-citizens in removal proceedings. This course is designed for students who have an interest in practicing immigration law with a focus on deportation and removal practice before the Department of Homeland Security, the Executive Office for Immigration Review, and the federal courts. The goal of this course is to give students a theoretical framework for identifying and assessing immigration issues, including immigration consequences of criminal convictions, and for formulating strategies for effective prosecution and representation of non-citizens in removal proceedings. The instructor also teaches the practical tools and procedures, which students may apply to actual case representation. Prerequisite: LAWS 4295 or an immigration related externship.

**LAWS 4300 Native American Tribes and Federal Law (3 Credits)**

This course introduces the legal relationship between Native American tribes and the federal government. This body of law, consisting of hundreds of treaties and Presidential executive orders, thousands of Congressional statutes, and tens of thousands of reported court decisions, is also known as Federal Indian Law. The course explores the legal development of Native American tribal sovereignty and self-determination from the British Crown to the present day, including tribes' rights to land and natural resources; the federal government's trust responsibility to tribes; tribe's inherent powers of self-government; modern civil and criminal jurisdiction; the relationship of tribes to state and local governments; the federal government's legal obligation to consult with tribal leaders on decision-making by executive branch departments and agencies, including with respect to cultural resource protection; and the legal and political status and civil rights of individual Native Americans and Alaska Natives in the federal constitutional system.

**LAWS 4303 International Criminal Law Practicum (3 Credits)**

In this course, the class collectively analyzes the genocide, war crimes and crimes against humanity charges against an accused in a major international tribunal prosecution. Each student is assigned witnesses in the case and is expected to analyze that testimony and record their work in the case database using Casemap software meticulously following previously established protocols. The work involves the students learning the nature of the conflict generally, thoroughly learning the indictment against Taylor, getting up to speed on the law of war crimes and crimes against humanity, and finally assessing the witness testimony for relevant facts and attributing those facts to the legal outline in the case.

**LAWS 4304 Insurance Law (3 Credits)**

A comprehensive overview of laws, standards, concepts and remedies related to Insurance, including: interests protected by Insurance; selection and control of risks; insurable interest; the principle of indemnity; types and classifications of Insurance; making, dealing with and termination of insurance contracts; underwriting and claims handling; regulation of Insurance and insurers; subrogation; and extra-contractual liability. This course will satisfy the Upper Level Writing requirement (ULW).

**LAWS 4309 International Law and the Use of Force (3 Credits)**

This course deals with the two aspects of the use of force by countries: the initial decision to resort to force and then the regulation of that force once the conflict begins. In 1945, the United Nations Charter set out to prohibit the resort to force by its member states except in two limited situations: self-defense or where authorized by the Security Council. The Geneva Conventions and its protocols, as well as customary international law, regulate how that force is applied. The subject of this course is how these provisions have been interpreted since 1945 and trends in the law that will guide us in the future.

**LAWS 4310 Introduction to Intellectual Property (3 Credits)**

This survey course covers the basics of United States intellectual property law, including patents, copyrights, trademarks, and trade secrets. The course addresses the policies underlying the protection of intellectual property and compares the different ways organizations and individuals can use intellectual property to protect their interests. This course is intended both for students who want an introduction to intellectual property and for those who intend to pursue a career in intellectual property law.

**LAWS 4315 International Business Transactions: Survey Course (3 Credits)**

This course provides students with a general overview of international business transactions. The course examines the legal framework of international sales transactions including the commercial terms of the sales agreements, shipping contracts, insurance, financing arrangements and customs documentation. The course also examines the foreign direct investment transaction, international franchise and distribution agreements. The regulation of international business is reviewed, with special attention to the World Trade Organization agreements and regional trade areas.

**LAWS 4317 International Environmental Law (3 Credits)**

This is an introduction to International Environmental Law – the expanding field of multi-nation treaties, laws, judicial decisions, policies, practices, and politics governing the global environment. IEL backgrounds students on the 21st century's hottest international law topics – sustainable development, climate change, transboundary air and water pollution, natural resources development, international trade, toxic waste and recycling, and protection of wildlife, ecosystems, human life, and human rights.

**LAWS 4318 International Business Transactions: Federal Regulation (3 Credits)**

IBT: Federal regulation examines the ability of the federal government to control international trade. The focus of the course is US export controls, embargoes, anti-terrorism regulations that apply to international commerce, and the Foreign Corrupt Practices Act. Students prepare a compliance program integrating these regulations into a workable framework for a company.

**LAWS 4319 International Human Rights (3 Credits)**

The seminar begins with a general overview of international human rights as put forth in the International Bill of Rights. The second part of the course focuses on the emerging area of corporate social responsibility and human rights. The last part of the seminar consists of student presentations on the topics of the research papers required for the course.

**LAWS 4320 International Law (3 Credits)**

International Law is the foundational course in public law, treaties, systems, and policies that bind nations into a world community of law. The class places special emphasis on the origins of international law; statehood; international responsibility and claims; use of force; and human rights.

**LAWS 4341 International Commercial Arbitration Moot (3 Credits)**

This course uses the Willem C. Vis International Commercial Arbitration Moot Competition to give students practical skills-based training in the most important aspects of international commercial arbitration and international sales law. The Vis Moot is based on a problem governed by the U.N. Convention on Contracts for the International Sale of Goods (the "CISG").

**LAWS 4342 International and Comparative Mining Law (3 Credits)**

The course deals with basic concepts of mineral law, as practiced in various jurisdictions. This includes exploration, mining and environmental protection and reclamation issues. It then focuses on the current evolution and legal and policy status of mining legislation, mineral investment agreements, and major actors. Students completing this course develop a basic understanding of the general approaches, legal frameworks, policies and agreements used to regulate the mining industry in key jurisdictions outside the United States. This course is taught in Spanish.

**LAWS 4343 International and Comparative Petroleum Law (3 Credits)**

The course deals with basic concepts of international law relating to petroleum investment, current elements of petroleum legislation, and petroleum investment agreements (production-sharing, concession, joint venture, service, management contracts). Also, students explore such aspects of petroleum law as dispute settlement and legal status. The instructor will discuss the major actors (international petroleum companies, state petroleum enterprises, Ministries of Energy) and their legal and policy status. Students completing the course leave with a basic understanding of the general approaches, policies, and agreements used to regulate the petroleum industry in key selected jurisdictions outside the United States.

**LAWS 4344 International Tax (3 Credits)**

Introduction to U.S. international taxation with an equal emphasis on inbound and outbound transactions. Resident and nonresident alien taxation, withholding taxes, effectively connected (business) income, foreign investment in U.S. real estate, tax treaties, branch taxes, earnings stripping, conduit financing rules, foreign earned income exclusion, classification of foreign entities, foreign tax credit, foreign personal holding companies, controlled foreign corporations, passive foreign investment companies, export transactions, Subpart F manufacturing rules, outbound property transfers, and transfer pricing. Cross listed with TAX 4420.

**LAWS 4345 Jurisprudence (3 Credits)**

The course is designed to introduce several contemporary modes of legal thought. The course is an exploration and critical evaluation of these differing perspectives on law are pursued to foster an understanding of the interdependency between legal philosophy and legal decision process, the role law plays in our culture, and the social and philosophical impediments to law's effectiveness.

**LAWS 4346 International Sales (3 Credits)**

This course will examine the laws governing the international sale of goods, including the Unidroit Principles, the relevant rules adopted by the United Nations Commission on International Trade Law, the Convention on the International Sale of Goods (CISG), and the International Chamber of Commerce (ICC) Modern International Sale Contract. Special emphasis shall be given to the CISG as well as to comparing the law of international sale of goods with United States contract law. Issues such as international payments methods, letters of credit, customs clearing procedures, and dispute resolution will also be discussed. Two large topics - (1) the CISG and (2) letters of credit and other means of financing cross-border transactions - comprise the bulk of the course.

**LAWS 4347 International Environmental Law in Latin America (2 Credits)**

This course examines the role of international law in promoting cooperative solutions to some of the most pressing environmental problems confronting the planet. The course begins with an introduction to the international law framework within which international environmental law has developed, and emphasizes the relationship between international environmental law and international human rights law. The course then uses several case studies to analyze the legal regimes that have developed to address environmental problems of particular relevance to Latin America, including protection of biodiversity, climate change adaptation and mitigation, and protection of water resources. This course is taught in Spanish.

**LAWS 4348 International Criminal Procedure and Practice (3 Credits)**

The International Criminal Court and the various international and internationalized tribunals such as the International Criminal Tribunal for Rwanda and for the former Yugoslavia prosecute a unique and evolving set of international criminal laws designed to end the impunity of military and political leaders engaged in mass violence. The post-World War II Nuremberg trials were the first attempt to use tribunals to hold individuals criminally responsible. Later, the Nuremberg present was the basis of the creation of ad hoc war crimes tribunals for the former Yugoslavia and Rwanda in the early 1990s, which then opened the door to other tribunals such as the Special Court for Sierra Leone, the Extraordinary Chambers for Cambodia and the International Criminal Court. The practitioners of the tribunals represent the range of cultures, mores and legal traditions of the world. These varied experiences create different expectations as to the conduct of proceedings and what amounts to procedural fairness. This course studies the rules of procedure and practice that have developed at the international tribunals in the multi-cultural context.

**LAWS 4350 Juvenile Law (3 Credits)**

This course examines the legal parameters surrounding juveniles. Students gain a basic understanding of juvenile law, such as the legal definition of who is considered a child and the allocation of power between the state, parent(s), and the children. The class examines what protection the Constitution provides children and the historical development and philosophy of juvenile justice to understand the foundation of juvenile law. The focus of the class also includes an examination of rights of abused children and children who are delinquents and status offenders.

**LAWS 4351 International Mergers and Acquisitions (3 Credits)**

Using recent articles as case studies, students will consider what motivates corporations to undertake cross-border acquisitions and divestitures, why most transactions ultimately fail to meet expectations, and how lawyers structure transactions to avoid these pitfalls, including (i) corporate forms worldwide (corporations, partnerships, LLCs); (ii) the timeline of M&A transactions from the initial idea through transfer of ownership and the 5 years thereafter; (iii) forms of acquisition (merger, asset purchase and stock purchase); and finally (iv) negotiation of the pertinent legal documents. This course has become increasingly relevant as the world becomes less open and congenial, while businesses continue to seek geographically and culturally diverse markets. This course is appropriate for both students with no business background and students with extensive business and legal experience.

**LAWS 4355 Labor Law (3 Credits)**

Labor Law provides a background of modern labor relations law and union pressures with an historical review of the laws that shape this field. Laws covered include the National Labor Relations Act; National Labor Management Relations Act; Labor-Management Reporting and Disclosure Act of 1959; Civil Rights Act of 1964; employer unfair labor practices; union unfair labor practices; internal affairs of labor organizations; collective bargaining and settlement of labor disputes; and state labor legislation. Also, it explores employer and union labor practices and manners in which disputes concerning these practices may be resolved.

**LAWS 4358 Land Conservation Transactions (3 Credits)**

This course covers the fundamental law and principles related to land conservation. It is a research based class, and students are responsible for researching, presenting information and drafting regarding a specific conservation project. This course provides all the background necessary to allow students to conduct a meaningful research foray in and to create conservation easements for land conservation.

**LAWS 4360 Land Use Planning (3 Credits)**

This course examines government controls used in the regulation of land use and development and the urbanization of the built environment in cities and metropolitan areas in the United States. The course includes an analysis of state and local laws and federal constitutional issues related to the use of master plans, zoning and land development codes, growth management and smart growth development techniques, as well as the topics of subdivision regulation, eminent domain and urban renewal. Special problems in land use planning studied include exclusionary zoning, regulation of aesthetics, design controls and visual beauty, signs and billboard, religious land use, protection of natural lands and wildlife habitat, regulation of natural resources development, fair housing laws, and the protection of private property rights in the urban regulatory process.

**LAWS 4362 Latin American Law (3 Credits)**

This course seeks to provide students with a basic understanding of Latin American legal traditions. Intended for students who will come into contact with Latin American law in their work as lawyers, international civil servants, business executives and diplomats. The course examines the civil law tradition and constitutional law issues and current developments, such as Latin American economic integration, reform of the public sector, and the emergence of the Inter-American system for the protection of human rights.

**LAWS 4365 Law and Economics (3 Credits)**

This course is an examination of selected common law, regulatory law, and Constitutional law issues from the perspective of economic efficiency analysis.

**LAWS 4370 International Investments (3 Credits)**

The global investor is faced with a complicated task. He must deal with multiple currencies, multiple markets, multiple cultures, and multiple regulatory environments. However, the most important aspect of international investment is the use of multiple currencies. Accordingly, the first module of this course lays the foundation of foreign exchange rates: the basic facts of foreign exchange quotations, international parity conditions and arbitrage implications, and exchange rate forecasting. The second module covers the various assets and markets available for global investing: international bonds, equities, alternative investments, and optimal international portfolio selection. The third and final module develops risk control techniques available with derivatives: forwards, futures, options, and swaps. Overall, this course will emphasize conceptual understanding and applications, rather than lengthy theoretical exposition and mathematical analysis.

**LAWS 4371 International Investment Arbitration Practice & Procedure (3 Credits)**

International investment arbitration has a few names. It has been referred to as investor-state arbitration, investor-state dispute settlement (ISDS), and sometimes simply international arbitration. Investor-state arbitration is a powerful and relatively new form of dispute resolution. It largely originates from the many bilateral investment treaties (BITs) developed in the 1950s, and has expanded to larger and more complicated international treaties such as NAFTA, CAFTA, and the Trans Pacific Partnership (TPP). Today, this is the fastest growing field for international legal practitioners. Any international transaction with the characteristics of a foreign investment implicates investment treaties. With the development of new trade agreements such as the TPP and Transatlantic Trade and Investment Partnership (TTIP) the field will only continue to grow. This course is experiential in nature. It examines the field of investor-state arbitration from the perspective of an investment dispute. The class will simulate an investment dispute in the context of an International Centre for the Settlement of Investment Disputes (ICSID) proceeding. The course will move through a typical ICSID case from beginning to end (in an abbreviated format) and focus on key areas in the field of investor-state arbitration. This course will only be taught in the spring semester and serves as the gateway to the University of Denver Foreign Direct Investment Moot Team (<http://www.fdimoot.org>). Students with a strong interest in joining the FDI Moot Team and attending the FDI Moot as counsel the following fall semester will be given preference to join the class.

**LAWS 4373 International Practice and Procedure (3 Credits)**

This course is only open to members of the current Jessup Team and focuses upon the practice and procedure before the International Court of Justice. Students will examine the ICJ's history, organization, competence, and role as the primary judicial organ of the United Nations and permanent institution for the pacific settlement of disputes between States. The course will be split between both theory and practice, wherein students will study the major landmark cases of the ICJ affecting the practice of international law, and be exposed to the rules of procedure and style of practice before the ICJ through the use of a hypothetical contentious case between two States. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4375 Law and Society (3 Credits)**

The primary focus of this seminar is on law as a product of the structure of society. The subject matter can be divided into four distinct sections: 1) What factors affect the development of substantive law? This section examines the influence of values, beliefs and norms. 2) Given the existence of substantive law, what organizations develop to carry out the administration of law? Here concentration is on the phenomena classified as legal roles, organizations, institutions, and inter-institutional relations -e.g., juries, the legal profession, courts, legislature, etc. 3) How does law affect social behavior? and 4) What is the role of law in social change?.

**LAWS 4376 Law and Emerging Technologies (3 Credits)**

Technological innovations have created challenges for regulators and policymakers. This course focuses on recent emerging technologies and introduces law students to ways law interacts with technology. Students are encouraged to think creatively to address the current challenges and anticipate future legal impacts. It also familiarizes students with the recent legal scholarship in this field. Topics covered in this course include autonomous vehicles, AI and facial recognition, big data, digital privacy, deep fakes, platform governance, and quantum computing.

**LAWS 4378 Race, Class & Reproductive Justice (2,3 Credits)**

This course examines how race and class status affect women's reproductive rights and how both legal rules and medical practices in this area rely on stereotypes and enforce norms of "good motherhood" on women. Topics covered include some or all of the following: abortion, contract parenthood ("surrogacy"), cloning, sterilization, embryo freezing, pregnancy-based employment discrimination, criminal prosecutions of women for prenatal substance abuse, and court-ordered Cesarean sections.

**LAWS 4379 International Trade Law (3 Credits)**

This course examines the law of international trade in goods and services, focusing principally on the law of the World Trade Organization and the General Agreement on Tariffs and Trade. We examine the trading system's rules restraining national restrictions on trade that address, among other things, tariff and non-tariff barriers, discrimination, regionalism, anti-dumping, countervailing duties, and safeguards. The course also spends time considering the relationship between trade and other regulatory areas or social values, such as environmental protection, health and safety standards, human rights, intellectual property protection, and other facets of globalization. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4380 Hazardous Waste and Toxic Substances (3 Credits)**

This practical, hands-on course reviews the major federal environmental protection programs, with an emphasis on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") and the Resource Conservation and Recovery Act (RCRA). It also covers Toxic Torts, Underground Storage Tanks, the Clean Water Act, Safe Water Drinking Act, and the Clean Air Act. Other materials may be distributed by the instructor on OSHA, NEPA, TSCA, OPA, the Colorado state voluntary cleanup program (VCUP), toxicology, and immunity issues. The course emphasizes practical application of major environmental laws. Students become familiar with statutory and regulatory schemes, and are expected to be able to identify environmental legal issues and apply environmental laws and regulations to hypothetical problems. JD student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495. LLM and MRLS student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495, or be registered to take any of these.

**LAWS 4382 Legislative Process: Institutions & Interpretations (3 Credits)**

This course is designed to be a three credit introductory course on the legislative process. This course focuses on theories of the process through an examination of theories of representation, theories of deliberation, direct democracy, and due process of lawmaking. Finally, this course will also explore legisprudence. Legisprudence explores theories of statutory interpretation and constitutional/statutory provisions which govern the political process and its participants. This course is intended to serve very practical goals. Students considering careers as legislative drafters, legislative staffers, elected officials, lobbyists or activists should emerge from this course with an understanding of the legislative process and a sense of how courts, agencies, and the executive branch are likely to interpret statutes. This course provides litigators with the tools to convince the courts that their interpretation of a statute is the correct one. For those students whose careers will require advising others about the meaning of statutes, this course helps provide the skills needed to perform that task.

**LAWS 4383 Doing Business-Latin America (3 Credits)**

Taught in Spanish, this course acquaints students with the legal framework of business transactions in Latin America. The course exposes students to the civil law system used in most Latin American countries and covers selected topics of importance to lawyers advising clients doing business, or seeking to do business in Latin America. Topics may include the development of Latin American law, types of corporate and partnership organization, trade law, foreign investment, intellectual property, taxation of foreign income, environmental and labor standards, and dispute resolution.

**LAWS 4385 Lawyering Process I (3 Credits)**

The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis.



**LAWS 4386 Lawyering Process II (3 Credits)**

The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis. The second semester builds on students' research, writing, analytical, and oral presentation skills in the context of advocating for a client.

**LAWS 4387 Professionalism and Well-being Skills for the Effective Lawyer (2 Credits)**

The objective of this course is to support professional identity formation and growth in the professionalism and well-being skills of future lawyers as they progress toward growing competence as professionals. The first half of the course focuses on law student well-being and optimizing brain health and mental strength to enhance performance. The second half of the course is devoted to the development of professionalism skills such as professional development, self-awareness, bias, social proficiency, wisdom, and leadership, essential attributes of a high-performance legal practice.

**LAWS 4390 Law and Neuroscience (3 Credits)**

In this survey course, we will cover some neuroscience basics, including a brief history of neuroscience, how neurons and neurotransmitters work, what is currently known about how the brain is organized, both structurally and functionally, how modern neuroscience views the so-called Cartesian dichotomy between emotion and cognition, and the basics of the most common types of neuroimaging. We will then explore the law and neuroscience of pain, memory, lie detection and criminal responsibility, discussing how neuroscientific discoveries might or might not change how the law handles these discrete problems, and the related evidentiary issues of how to get neuroscientific evidence admitted or excluded in cases involving these problems. We will finish, time permitting, with some speculations about artificial intelligence and neuroprosthetics.

**LAWS 4395 Military Law (3 Credits)**

This course will review the history, nature and sources of military law; the Uniform Code of Military Justice and the functions and procedures of military courts-martial, including the rights and status of military personnel. It will also cover an overview of the laws of armed conflict; national security and domestic application of operational military law; and the policies and international treaties affecting the detention and prosecution of enemy combatants and other foreign nationals. The course materials will rely on primary sources including statutes, cases, treaties, and selected law review and other articles, which will be provided electronically to each student. The course will review these military law topics with an emphasis on case studies and policy discussions in the context of recent current events.

**LAWS 4400 Lobbying Law (3 Credits)**

This course will focus on the role and nature of advocacy and lobbying before state and federal legislative and regulatory bodies. The areas will include but are not limited to the role of financing with emphasis on Citizens United, the issues involved in Department of Interior Policy and public lands, the structure and lobbying of new tax legislation, high frequency trading in securities markets, Dodd-Frank and the new regulations, the JOBS Act and crowdfunding, immigration law and border security, state legislative lobbying and healthcare lobbying. Some guest lecturers will be invited, including former cabinet members at the federal level, judges, former White House counsel, financial analysts who are lawyers, members of Congress and Senators. Students will be required to develop a lobbying and advocacy program in an area assigned by the Professor.

**LAWS 4410 Public Sector Employment Law (2 Credits)**

In Public Sector Employment Law, students will learn the law unique to public employment. Particular emphasis will be placed on constitutional legal claims brought under 42 USC Sec. 1983, including claims for violation of the freedoms of speech and association, equal protection, due process, and privacy. The class will also cover public administrative remedies, various governmental immunities, and open records laws. The course materials will be taught through a combination of traditional Socratic method and practical real world exercises, including the drafting of pleadings, interviewing of parties, and arguing of substantive legal motions.

**LAWS 4411 Mergers & Acquisitions (4 Credits)**

This course investigates the legal framework and strategies for structuring mergers and acquisitions ("M&A"). The class will be taught in the "modern learning" format to help students develop practical skills that will improve their readiness upon graduation for the practice of law in diverse business contexts. Among other topics, the course will address structuring various acquisition transactions, negotiating terms of the deal, drafting deal documents, conducting due diligence, advising boards on fiduciary obligations, interpreting relevant state law and federal securities laws, and exploring litigation to thwart potential business combinations. Throughout the course, students will engage in a variety of research, drafting, interviewing, counseling, and advocacy exercises. Through those exercises, group reflections on various assignments, and class discussions of other assigned readings, students will enhance their ability to think critically about a variety of M&A issues from both transactional and litigation perspectives. Pre-req: LAWS 4190.

**LAWS 4412 Sustainable Cities Practicum (3 Credits)**

Communities around the west are increasingly working to accommodate population growth without promoting sprawl. From transit oriented development in the suburbs to urban infill projects in the city center, cities are exploring ways of promoting new, more sustainable forms of development – sometimes in places that are not ready to accept increased density and amidst changing notions of what Americans really want. This course will explore issues of sustainability, as they relate to land use, and will help prepare students to work in the field of urban planning and development. Partnering with a local organization and utilizing the concept of "Action Learning," students will work in teams as they engage in real-time problem solving of a complex issue involving land use and sustainability. It is anticipated the course will include a field trip and work with practitioners engaged in the issue of concern. A research paper and final presentation will be required.

**LAWS 4413 Trail Tactics (3 Credits)**

This course is intended for those who truly desire to be a trial lawyer. It is an advanced, hands-on course which is designed to teach you how to be successful in trial – not just trial practice, but overall trial strategy. This course will teach you not just what to do in trial, but will also answer the question as to why you do what you do. It involves the strategy of trying cases, including trial themes, as well as preparation and participation in doing voir dire, opening statements, direct and cross examination of witnesses, when to make objections and when not to make objections, as well as closing. You will learn to use various trial techniques included in the text *Rules of the Road*, and will learn all the ins and outs of trying a case in front of a jury.

**LAWS 4414 Private Equity Seminar (3 Credits)**

In this course students will learn legal doctrine and practical skills through the examination of various aspects of private equity groups. The class will focus on legal issues arising in private equity investment cycles, including raising a fund, investing the fund, managing the investment, and exiting the investment. Students will consider the legal foundations of fund formation, business law, and structuring investments, including state and federal laws affecting business associations and corporate transactions. The class will also highlight tax and regulatory considerations of private equity groups and their investments. The class will have a heavy emphasis on practical skills, including critical thinking, and best practices for beginning lawyers, including structuring transactions, drafting transactional documents, and negotiating deals.

**LAWS 4415 Protecting Intellectual Property in International Business Transactions (3 Credits)**

The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement, a manufacturing agreement, an employment agreement or some other agreement that embodies international intellectual property issues. Students will then choose a topic, such as patent, trademark or copyright issues in a particular region or particular industry. Each student will prepare a presentation for the class on the topic. Then the student will use the class feedback in conjunction with research for the presentation to complete a paper on the topic. The drafting and paper will take the place of a final exam. The paper qualifies for the Upper Level Writing Requirement.

**LAWS 4416 Representing the Marijuana Client (3 Credits)**

This class is designed to provide students with an understanding of the realities of representing a marijuana client (either private or public) in the current turbulent legal environment. We will study the background of marijuana regulation at the state and federal levels in the United States, with particular attention paid to the federalism implications of the dispute between state and federal law in this area. We will then turn to specific areas of law impacted by marijuana law reform in the states, from legal ethics, to regulatory compliance, to criminal law enforcement, to the financial and tax aspects of running a marijuana business in the current legal regime.

**LAWS 4417 Representing the Spanish Speaking Client (3 Credits)**

This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

**LAWS 4418 Workplace Law Practicum: Sports & Entertainment Law (3 Credits)**

This course will expose students to contemporary sports law practice as an aspect of general entertainment law from a of labor and employment perspective. Students will learn relevant doctrine regarding such matters as collective bargaining, individual contract rights, administrative law, interest and grievance arbitration and the impact of the anti-trust laws on labor and employment relations at the professional and collegiate levels. They will have the opportunity to develop practical skills by drafting documents for a simulated NLRB union organizing or unfair labor practice proceeding, reading and interpreting actual transcripts of NLRB or arbitration proceedings, acting as an advocate in a mock baseball arbitration, and engaging in simulated negotiations by drafting bargaining proposals and arguing for those proposals in a bargaining session among classmates.

**LAWS 4421 Introduction to Small Practice Management (3 Credits)**

This course provides an introduction to the administrative needs necessary to open and operate a solo or small legal practice. Topics include: administrative needs specific to various types of legal practice; space and facilities; technology; document management systems; malpractice insurance; outsourcing; health insurance; conflicts; and human resources issues.

**LAWS 4423 Legal Databases Research (3 Credits)**

This course introduces students to a variety of legal databases, both fee-based and free, that can be utilized for conducting effective legal research as a student and practicing lawyer. Students learn to analyze and critically evaluate whether or not a database provides accurate information and resources. Students learn to determine which legal databases are most useful for specific types of information and resource needs. Students learn to construct successful search strategies that can be employed to search a database and find the information required. This course equips students to become expert searchers in the online environment.

**LAWS 4424 Legal Spanish for Lawyers (2 Credits)**

This course prepares students with basic Spanish proficiency to represent Spanish-speaking clients in the U.S. legal system or to work in Spanish on transnational matters involving Latin America. It combines one-on-one Spanish immersion instruction with a structured classroom component. The Spanish immersion component introduces and builds on each student's legal Spanish vocabulary in areas of law likely to require lawyering in Spanish or in areas identified as priorities by the student. The structured classroom component allows students to practice skills in Spanish, such as client interviewing, intake, and client counseling, through simulations and group exercises. This course is taught in Spanish.

**LAWS 4425 Legal Profession (3 Credits)**

This required course is the study of the legal profession in American society. Topics include the history, structure, and function of the legal profession; the role of lawyers in the delivery of legal services; standards of professional ethics (including the Code of Professional Responsibility and the Rules of Professional Conduct); professional responsibility problems that confront the legal profession; developments in the delivery of legal services; disciplinary procedures; and admission to the practice of law. Non-JD students must request permission to register.

**LAWS 4430 Mediation and Arbitration Clinic (3 Credits)**

This is a course offering clinical experience in both mediation and arbitration. The student learns mediation skills, performs mediation simulations, and mediates actual cases. Students are oriented to the role of arbitrator, perform arbitration simulations, and attend actual arbitrations. By gaining experience in both roles, students learn which process to choose for resolving a particular dispute. In addition, students learn lawyering skills such as communication, negotiation, problem solving, and drafting agreements. Application must be sent to the Student Law Office for admission to this course. Students will earn 3 out of class credits for this course and 2 in class credits through the corequisite course L4803, Mediation and Arbitration Clinic Seminar. Corequisite: LAWS 4803. Prerequisite: permission of faculty supervisor.

**LAWS 4433 Media Law (3 Credits)**

This course addresses the First Amendment, statutory, and common law regimes under which the news media operate in the United States, ranging from the seminal *New York Times v. Sullivan* to the recent decisions on anonymity for online bloggers. This course is designed to provide opportunities for serious study/discussion of legal issues affecting the news media, as well as opportunities for practical experience in the tasks confronted by today's media lawyers. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4436 Litigation Technology (3 Credits)**

Litigation Technology gives students up-close, hands-on learning to prepare and effectively use electronic illustrative aids and demonstrative exhibits in trial and alternative dispute settings. Each student prepares opening statements, closing arguments, and direct and cross-examinations, utilizing litigation software. Students learn to create their own presentations, and how to advocate most effectively using technology.

**LAWS 4440 Mental Health and the Law (3 Credits)**

This course will help students understand how mental illness and psychopathology interface with the legal system, in both the civil and the criminal justice systems. Taught by a practicing lawyer and a board-certified forensic psychiatrist, the course will begin with an overview of approaches to diagnosing and treating mental disorders, a brief discussion of psychotropic medications, and a description of the process for conducting forensic mental examinations of the sort used in court proceedings. We then will survey the many different contexts in which mental health intersects with the law before examining some of those contexts in detail. Specific areas of focus will include risk assessment and civil commitment, the right to treatment, informed consent and the right to refuse treatment, special competency issues involving children and older people, workplace discrimination based on mental illness, and a series of criminal law issues, including competency to stand trial and mental status defenses, sentencing, mental health and the death penalty, the evaluation and incarceration of sexual predators, and mental health issues involving incarcerated persons.

**LAWS 4442 Trial Practice III: Mentors Practicum (3 Credits)**

Advanced Trial Practice: Mentors Practicum is a year-long, skills-based course for law school students seeking to refine their trial skills, and improve their understanding and application of evidence and criminal procedure, through teaching these skills to local area high school mock trial students. The course consists of two classes a week. The first takes place at the law school. This weekly class involves case analysis and evidentiary discussion, resulting in the law students preparing their lesson plans to be taught to the high school students. Lesson plans include trial topics such as case analysis and evidentiary discussions, direct and cross-examination, objections and the rules of evidence, opening statements, closing arguments, and development of theme and theory. The second weekly class takes place at a local area high school, where the law students act as mentor-coaches to high school mock trial teams.

**LAWS 4444 Medical Malpractice (3 Credits)**

This course is a study of the various types of medical malpractice claims, and special issues encountered in medical malpractice litigation. Students learn how to select and prepare medical negligence cases for trial, with focus on the use of discovery tools in medical cases, hiring and working with medical experts, and explore settlement, subrogation, and probate approval for the settled claims of a minor. Medicine is central to medical malpractice litigation, so students are also exposed to concepts in anatomy, physiology, pathology, medical terminology, and medical records in this course.

**LAWS 4445 Mining Law (3 Credits)**

This course provides the basic framework of mining law. It begins with the acquisition of title to and development of deposits of hard minerals and energy resources under the mining and mineral leasing laws of the federal and state governments in the western United States. Next, it emphasizes the practices and procedures of the various proprietary and regulatory agencies responsible for the management and administration of public lands. Finally, students learn how to resolve competitive demands for exclusive and multiple use of public lands for mineral production and conservation.

**LAWS 4446 Multiculturalism, Race and the Law Seminar (3 Credits)**

This course is designed to examine the interstices of cultures, race, identity and the law as manifested in legislation and jurisprudence. Through case law and articles, we uncover and examine the ways in which legal systems define and promote certain racial and cultural activities, identities, and classifications and discourage others. Some are advanced as legitimate, and deserving of protection, and others not so. These endorsements have a significant impact on the makeup of American society. We see ourselves as a melting pot of cultures and peoples from all over the world, but do our laws really promote this vision? Have our laws evolved to promote racial and cultural harmony, or to discourage it? While most discussion focuses on these issues as they appear in the United States, we also discuss cases and materials from other nations, including Australia, Canada, India, Israel, Europe and Africa. Race and culture have played a pivotal role in historical and current political events and these will also be examined from a global perspective. There is no final exam, but written work is assigned throughout the term, and a final research paper is required.

**LAWS 4450 Natural Resource Law (3 Credits)**

The course is designed primarily for students who wish to have an introduction to and an overview of the entire natural resources law area in one course. Students survey the primary natural resources subject matter areas: water law; mining law; oil and gas law; public land law; environmental law; and energy law.

**LAWS 4452 Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement (3 Credits)**

This course deals with the basic concepts of financial evaluation of a natural resources project. The emphasis is on financial evaluation topics and issues relevant to a lawyer's participation in a project. Students are introduced to the time-value of money; spreadsheet analysis; discounted cash flow; and spreadsheets, with relevancy to negotiations. Students are encouraged to consult with the director of this program before enrollment.

**LAWS 4454 Psychiatry and the Law (3 Credits)**

This course explores the relationships between psychiatry, psychology, medicine and the law. Subjects to be covered include: DSM-IV diagnoses and psychopharmacology; sanity and competency determinations; role of mental health experts in the court; special issues involving the mentally ill and death penalty; issues particular to juvenile offenders; third party protections and reporting requirements in child abuse and danger to third parties; civil commitment and involuntary treatment of the mentally ill; malpractice including professional misconduct and sexual boundary violations, and standards of mental health care; professional ethics in medicine and the law; law of informed consent and proxy decision making for medical treatment; confidentiality; clinical and legal aspects of end of life care; and prisoners' rights in correctional settings including sex offender treatment. Readings include landmark state and federal decisions shaping each of these areas, along with readings from legal and mental health literature.

**LAWS 4460 Negotiation and Mediation (3 Credits)**

The course examines principles of negotiation, bargaining and dispute problem solving. Builds the development of skills in negotiation and later mediation. Principles of problem solving introduced in negotiation are further developed in an exploration of mediation, it's legal, economic, skills context and its propriety as a process to resolve disputes in varying circumstances.

**LAWS 4462 Negotiating Natural Resources Agreements (3 Credits)**

Students completing this course leave with an understanding of the general approaches, and primary issues and motivations pertaining to the negotiation of large, internationally funded petroleum and mining projects. They particularly gain a perspective on the negotiation of first-tier agreements between trans-national companies and governments, and joint venture agreements between private parties.

**LAWS 4463 Qualified Pension and Profit Sharing Plans (3 Credits)**

An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business. Cross listed with TAX 4120.

**LAWS 4464 Natural Resources Distinguished Practitioner Seminar (3 Credits)**

The Distinguished Natural Resources Practitioner in Residence Seminar is a "capstone seminar" taught each year in the Spring Semester by a different but prominent natural resources or environmental law lawyer who has extensive experience in energy, resources, or environmental law work. The focus of the Seminar is on skills training, where the skills taught are those that all lawyers need in order to have a successful career in the practice of law. Among the "how-to" skills typically addressed are (1) how to obtain a job, either as a lawyer or as a law-trained worker; (2) how to obtain and retain clients; (3) how to work in the private sector, government sector, business sector, and in-house sector; (4) how to write; (5) how to work with associates and colleagues; (6) how to deal with technical or scientific matters in a legal context; (7) how to work in the litigation arena, before trial and appellate courts; (8) how to practice or appear before administrative agencies; (9) how to organize and refine a mass of complicated information so that a decision-maker can make sense of it. There is no final exam or paper expected; the grade is usually by class participation and small writing exercises. Prerequisite: permission of instructor.

**LAWS 4465 Oil and Gas Law (3 Credits)**

This course surveys the various characteristics of oil and gas interests. Topics include mineral rights, and how ownership leases and transfers of these rights should be handled. The instructor also distinguishes the field of oil and gas law on private lands from those in the public domain.

**LAWS 4468 Pre-Trial and Discovery Practicum (3 Credits)**

This "hands-on" course provides students with a practical understanding of the pretrial process and how discovery procedures shape and impact civil litigation today. The progression of class topics mirror the pretrial process within the context of a hypothetical case. Starting with initial client interviews, class topics include interrogatories, requests for production, electronic discovery, depositions, and expert discovery. Students also consider ethical issues relating to discovery and the pretrial process, and what remedies or sanctions are available for discovery abuses. This course will satisfy the Upper Level Writing requirement (ULW).

**LAWS 4470 Banking Law (3 Credits)**

This course provides an overview of the banking system, including the economic function of banks, the role of the central bank, and U.S. banking history. This course will cover the evolution of banking regulation, as well as recent developments that have intensified scrutiny on banks. Additionally, a "Real Deal" Workshop will provide students with an opportunity to a) gain hands-on training in transactional practice, (b) experience a "deal" from a lawyer's perspective and learn about what transactional practice entails and (c) learn to draft stock purchase agreements, credit documents and other fundamental transactional agreements. Topics that will be covered include permissible activities of banks, the role of the FDIC, the Federal Reserve Board, and the Comptroller of Currency; and the regulatory response to crises in the banking system.

**LAWS 4474 Patent Prosecution (2-3 Credits)**

This course explores practical and procedural aspects of patent law. These aspects include application drafting, patent examination and prosecution, and patent appeals. Students will be expected to do some role playing as inventor, patent attorney, and/or examiner. While Patent Law is not a formal prerequisite for this course, students who have not taken Patent Law should be prepared to do extra reading in the first few weeks of the semester to familiarize themselves with the basic concepts of patent law.

**LAWS 4480 Professional Ethics Seminar (3 Credits)**

This seminar begins with brief introductions to ethics in general and professional ethics specifically, and then turns to in depth consideration of theoretical perspectives on lawyer's ethics. For the remainder of the semester the seminar focuses on: (1) Comparative professional ethics: comparing the ethics of other professions—medicine, journalism and business, for example—with the ethics of lawyering. (2) Narrative ethics: stories (from literature, biography, or tradition) and how they inform ethical perception and choice. (3) Topics chosen by students for research and presentation.

**LAWS 4481 Partnership Taxation (3 Credits)**

Tax treatment of partnership income in the hands of the partner; the conduit rule; problems associated with the formation, operation, and dissolution of the partnership; sale of the partnership interest; withdrawal and retirement of partners; basis adjustments, unrealized receivables, and substantially appreciated inventory. Cross listed with TAX 4320.

**LAWS 4483 Patent Litigation (3 Credits)**

This is an in-depth study of laws, strategies and tactics of patent litigation. Topics include legal principles, procedures and strategies associated with patent claim construction, infringement, invalidity and unenforceability. Also, students cover patent trial practice with a focus on both the knowledge and practical skills necessary to litigate patent cases.

**LAWS 4485 Business & Commercial Law Seminar (3 Credits)**

Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority—and women—owned business firms.

**LAWS 4487 Prosecutor as Protagonist (3 Credits)**

This seminar is an in depth examination of the role of the prosecutor in our justice system. Attorney General Suthers leads wide ranging discussions about crime and punishment. Topics discussed and debated include the purpose of criminal sentencing, minimum mandatory sentences, the death penalty, the juvenile justice system, plea bargaining, prosecutor ethics, special prosecutors, criminal justice interest groups, prosecution oversight of police, forensic science, federalization of crime, attorney general activism, jury reform, reform of drug laws, and mental illness in the criminal justice system. Some of the top experts in Colorado on these subjects speak to the seminar participants.

**LAWS 4489 Civil and Criminal Tax Procedure (2-4 Credits)**

Statute of limitations on assessment/collection of deficiencies, definition of deficiency, restrictions on assessment and collection; statute of limitations on overpayments, claims and suits for refund, and limitations for criminal prosecutions; regulations and rulings—retroactive revocation; administrative settlements, closing agreements and compromises; civil penalties; tax return preparer penalties; civil litigation—injunctions, jurisdiction of Tax Court, District Court, and Court of Claims, small claims procedure, authority to increase deficiencies, choice of forum; jeopardy assessments and termination of taxable years; criminal tax investigations—administrative summons, document production (taxpayer and third party), constitutional protections, common law privileges, strategies; professional responsibilities and ethics for the tax practitioner. Cross listed with TAX 4310.

**LAWS 4490 Property (4 Credits)**

This course introduces selected topics relating to rights and interests in land and personal property. These topics include estates in land and future interests; private and/or public restriction of land use; conveyancing; interests and estates in land; and landlord/tenant relations.

**LAWS 4495 Public Land & Resources Law (3 Credits)**

This course provides an overview of law, policy, and procedures governing the third of United States land managed by the federal government for the benefit of all the people. The course traces the interwoven law, history, and economics controlling acquisition and allocation of public lands and resources and examines a selection of significant commercial uses and resource categories of land use practices. Recommended prerequisite: LAWS 4025.

**LAWS 4497 Law & Popular Culture (3 Credits)**

Why are there so many jokes about lawyers? Why is John Grisham so popular? What explains the success of the "Law and Order" franchise? Does popular culture affect the outcomes of trials? This seminar explores the role law plays in popular culture (for example, how law and lawyers are portrayed and perceived; how law shapes and defines pop culture) and the role popular culture plays in law and in the lives of lawyers (for example, the impact of cameras in the courtroom); should lawyers be allowed to write books and sell their clients' stories? The reading list includes traditional materials (case law and legal scholarship) as well as movies, novels and other popular culture materials. Recommended prerequisite: LAWS 4425.

**LAWS 4498 Public Interest Practicum (1 Credit)**

The Public Interest Practicum is one option for students to satisfy the Public Service Requirement. The only satisfying course offered for only zero or one credit, it requires participation of the JD student in a 50-hour, non-compensated, law-related, public interest placement under the supervision of an attorney or judge who has been in practice or on the bench for a minimum of three years. A practicum student must complete the minimum of 50 hours in one of the following settings: judicial internship; government agency; private law firm doing pro bono or low bono work; non-profit (501(c)(3)) organization; or pre-approved uncompensated research project for a faculty member. A student may decide to take the Public Interest Practicum for 1 credit or 0 credit. The Public Interest Practicum for 1 Academic Credit requires a Public Interest Practicum Online Seminar component to supplement the practical experience. The Public Interest Practicum is beneficial for students who are not planning on satisfying the Public Service Requirement through other opportunities.

**LAWS 4500 Public Utility Regulation (3 Credits)**

This intensive, 1-week course presents law practitioners with recent innovations in the economics and policy of utility regulation. Course features guest lectures with individuals from industry and government sectors that are involved with utility regulation. Students learn the social science of utility regulation and gain insight into how utility regulation is conducted.

**LAWS 4506 Energy & Project Finance Law (3 Credits)**

This course explores the legal, economic, technological, and policy underpinnings of the Renewable Energy Industry, global warming, and associated implications to the electric utility and transportation sectors. The course addresses both domestic and international perspectives on renewable energy development.

**LAWS 4508 Renewable Energy for the 21st Century: Law, Policy & Markets (3 Credits)**

Renewable Energy for the 21st Century helps prepare students for future involvement in this dynamic sector. Students are introduced to the policy and legal framework involving renewables and energy efficiency as well as important technological and market-based issues.

**LAWS 4509 Renewable Energy: Project Development and Regulation (3 Credits)**

This course examines the broad range of legal topics that a renewable energy lawyer must understand in order to practice effectively. We examine the structure, regulation, and functioning of the electric energy industry in the United States. We explore in detail the law applicable to the development, ownership and operation of renewable projects across the spectrum of technologies. Significant emphasis is placed on the practical "real world" issues encountered in developing, financing and operating these projects.

**LAWS 4510 Transactional Legal Research (2 Credits)**

This course will introduce the legal material, research methodologies, and resources used in conducting transactional legal research. Students will gain experience locating and using law and guidance produced by government agencies, business-oriented legal treatises, transactional materials, and company/industry research. This class will take an integrative approach between the different business-related disciplines to provide students with a well-rounded knowledge base.

**LAWS 4511 Renewable Energy Law (3 Credits)**

The development of renewable energy sources has grown exponentially both nationally and worldwide. The increased appetite for renewable energy sources has driven a need for more information about those sources and the significant legal implications arising from the development of those sources. This course is organized by resource—solar, wind, hydropower, biomass, and geothermal. It focuses primarily on critical legal issues in tort, property, and contract areas raised by the expansion of these key renewable energy sources. The course also addresses the role of energy efficiency and some of the broader legal hurdles facing renewable energy use from a nationwide perspective.

**LAWS 4520 Remedies (3 Credits)**

Remedies provides students with the basic principles and problems of damages, restitution, and equity. Students enter into an investigation of fundamental concepts, such as remedial goals, problems of proof, and the relationship between remedies and substantive rights. The course also explores equitable remedies and alternative remedial devices available in any given situation.

**LAWS 4524 Russian for Lawyers I (3 Credits)**

This is a unique chance to break stereotypes about Russia! This sequence of courses introduces students to the fundamentals of the Russian language, with emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance, international trade, stock exchange, and with a special focus on Natural Resources and Environmental Law in Russia. No prior knowledge of Russian is required.

**LAWS 4525 Russian for Lawyers II (3 Credits)**

This course picks up where Russian for Lawyers I leaves off by continuing to introduce students to the fundamentals of the Russian language, but with an emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance and banking, insurance, international trade, and stock exchange/securities matters. Prerequisite: LAWS 4524.

**LAWS 4526 Sales and Leases (3 Credits)**

This course examines the formation and terms, as well as remedies for breach, of contracts for the sale of goods under Article 2 of the Uniform Commercial Code (UCC). The course completes the coverage of Article 2 of the UCC that was introduced in the first-year Contracts course. In addition, the course also examines the provisions on leases in Article 2A, sales transactions involving the use of documents of title (Article 7) and letters of credit (Article 5).

**LAWS 4527 School of Mines Exchange (3 Credits)****LAWS 4528 Securities Law (3 Credits)**

Students in this course study the statutes and regulations regulating the offer and sale of securities by private and public corporations. Course material information pertaining to the Securities Exchange Act of 1934; federal regulation of the public securities markets; insider trading; broker-dealer regulation; tender offers; and public corporations. Recommended prerequisites: LAWS 4190 or LAWS 4048.

**LAWS 4529 Securities Litigation (3 Credits)**

The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions. Students who have taken the Commercial Law Survey course should not take this unless they wish to study this subject in greater depth.

**LAWS 4530 Secured Transactions (3 Credits)**

This course covers the law of secured transactions in personal property. It is not a securities course. Students who have taken the Commercial Law Survey course should not take this unless they wish to study this subject in greater depth. The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions.

**LAWS 4539 Social Change Lawyering (2 Credits)**

This seminar explores the role of law and the legal profession in pursuing broader social causes across the political spectrum, such as the pursuit of civil rights for racial minorities or the effort to overturn the constitutional right to abortion. Distinguished from the practice of law solely advocating the interests of individual clients, social change lawyering is a major component of the legal profession of the 21st century. Known variously as “public interest law,” cause lawyering, and by numerous other labels, this area of practice implicates many important issues worthy of serious scholarly consideration. Some of the topics that may be examined include: the competing definitions of social change lawyering and the relevance of such definitions; the history of American law and social change; the role of progressive/conservative ideologies in social change lawyering; the role of government and private firm lawyers in effectuating social change; strategies and organizational models for social change lawyering groups; the relationship between social change lawyers and their clients; the economics and financing of social change lawyering; ethics and social change lawyering; legal education and social change. Throughout the course, students are asked to critically examine the role of lawyers in social change, and question whether and how lawyers have been effective agents of social change in American society. The course does not use a traditional casebook. Rather, students study a set of materials comprised of excerpts from law review articles and books, historical and sociological materials, and problems. Students are required to write short, reflective discussion board posts on each week’s readings, as well as a more comprehensive final paper. Students may elect to use this seminar to fulfill the upper level writing requirement if they submit a draft of the final paper and do a substantial rewrite after receiving the instructor’s feedback. Prerequisite: permission of instructor.

**LAWS 4543 Sexual Orientation and the Law (3 Credits)**

This seminar offers an opportunity for students to study the relationship between law and sexual orientation. Historically, law in this country consistently and pervasively regulated the realm of human identity and behavior we call sexuality. However, questions and claims challenging traditional assumptions about sexual orientation have surfaced in the last twenty-five years. Our study of sexual orientation and law allows students to view the relationship between law and society through a new lens, that of sexual orientation.

**LAWS 4545 Sports Law (3 Credits)**

The course studies the legal problems of professional athletics. It applies the application of contract law, antitrust, labor law and income tax to the functioning of a professional league. The question of governmental regulation of professional sports is a constant focus of students’ work. Special attention is given to the impact of these questions on negotiating players’ contracts.

**LAWS 4550 Local Government Law (3 Credits)**

Although barely touched upon in many law school courses, states and local governments play an important role in our everyday lives. They enjoy substantial law-making power; are responsible for financing and providing many public goods and services; and are the location of a great deal of political participation. This course will examine the theory behind and sources of local government power as well as the advantages and disadvantages of decentralized decision-making. Specific topics include: voting rights, local government formation and boundary change, state-local relations and local home rule, interlocal conflicts, school finance reform, and regional governance.

**LAWS 4552 Securities Law Seminar (3 Credits)****LAWS 4553 The Spanish Speaking Lawyer: Introductory Legal Skills and Vocabulary in Spanish (3 Credits)**

This introductory course will provide law students an avenue to become more comfortable speaking about legal matters in Spanish. Students will acquire Spanish-language vocabulary relating to the lawyer-client relationship, litigation, and various substantive areas of law, with the opportunity to utilize this vocabulary. Students can expect to gain legal skills in Spanish, including performing intake, managing good phone etiquette, interviewing clients, drafting correspondence, communicating fees, explaining civil and criminal court proceedings, and understanding ethics and confidentiality. The course will also provide students with an opportunity to begin to achieve cultural competency when representing Spanish-speaking clients. The class will be interactive, and may include: discussions of readings, small group discussions, simulations, presentations, arguments, speakers on different substantive areas of law and viewing of law-related films. This course will primarily be taught in Spanish.

**LAWS 4555 Street Law (3 Credits)**

Under faculty supervision, students in two-person teams will teach law in urban high schools. An underlying principle of the course is that one of the best ways to learn is to teach. There will be weekly seminars and field performances supervised by the instructor. Students will develop skills in: practical application of legal concepts; substantive topics in federal and Colorado Law; teaching techniques; classroom management; and the multi-faceted roles of lawyers in the community. Each student will participate in researching, drafting, and presenting a course in a particular field of substantive law.

**LAWS 4556 Sustainable Dev & Trade (3 Credits)**

This seminar is designed to give an introduction to the convergence of trade, environment, and development issues and law, addressing areas of conflict and synergies among them. It focuses on rules, procedures, and institutions aimed at making globalization compatible with sustainable development by integrating trade policy and law with policies that address other aspects of "human development", such as, environmental concerns, social concerns, human rights, gender issues, and governance. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4560 Colorado Legal Research (1 Credit)**

This course will focus on Colorado-specific primary and secondary sources using a problem-based approach, so as to simulate the type of work performed at law firms. It is geared toward students who have some experience with research and want to improve their skills and writing ability before they finish law school. Students will gain hands-on experience researching judicial (case law), legislative (statutory), and executive (administrative) legal materials and will learn research methodologies and strategies to tackle research problems effectively. Classes will combine instruction with hands-on scenarios using print and electronic resources and students will complete research and writing projects for this course, which runs for the first seven weeks of the semester. Students are required to bring their laptops to class.

**LAWS 4561 Crimmigration Law Seminar: The Intersection of Criminal Law and Immigration Law (3 Credits)**

This seminar addresses the historical and contemporary relationship between criminal and immigration law. In particular, the course explores how individuals perceived to have violated a criminal offense are treated in the immigration law system, how individuals thought not to be citizens of the United States are uniquely affected by criminal procedure norms and substantive criminal law, and how states and the federal government have sought to police criminal activity by noncitizens. In the process, course participants will learn to analyze constitutional, statutory, and regulatory provisions concerning immigration, as well as procedural and substantive requirements concerning criminal proceedings as they affect noncitizens. Participants will also consider the motivations that resulted in various enforcement policies grounded in civil or criminal law related to immigration and immigrants.

**LAWS 4562 E-Discovery (3 Credits)**

Litigation is undergoing a significant transformation as technology continues to evolve and Society transitions from a "paper" to a "digital" world. That transformation inevitably impacts the legal community, confronting lawyers and clients with the choice of conducting discovery on a pre-computer, "business as usual" basis or embracing the challenges and opportunities presented by "e-discovery." This course provides students with an understanding of the legal and practical challenges presented by "e-discovery" and how electronically stored information ("ESI") shapes and impacts litigation and the pretrial process.

**LAWS 4563 Environmental Law, Energy, & Natural Resources in Indian Country (3 Credits)**

This Seminar explores energy and natural resources development on Native American tribal lands in the United States, and how tribes, states and the federal government regulate and enforce environmental quality within Indian Country. The Seminar is open to all interested students and does not require any previous study or experience in American Indian law. It provides an introduction to tribal sovereignty and self-determination, along with some of the basics of Indian Country jurisdiction and tribal sovereign immunity. Students will examine the federal governments trust responsibility to Indian tribes and nations. The Seminar also examines the legal framework used to regulate and enforce environmental quality, traditional and renewable energy development, and the use and stewardship of other natural resources on Indian lands. The goal of this Seminar is for students to gain a greater awareness of Indian tribes and nations and the critical role they play in overall U.S. environmental, energy, and natural resource law and public policy.

**LAWS 4564 Immigration Law in Spanish (3 Credits)**

Immigration Law in Spanish is a survey of the fundamental concepts of U.S. immigration law. In addition, students learn and practice the vocabulary required to appropriately communicate these concepts to Spanish-speaking clients. The class is taught entirely in Spanish, and requires a working-level written and spoken proficiency in the language.

**LAWS 4565 Intellectual Property Capstone (1-3 Credits)**

The intellectual property capstone is a simulation based course that crosses different intellectual property disciplines. Several different adjuncts are asked to prepare real world problems in different substantive and procedural contexts. The problems vary from year to year, but generally deal with patent, copyright and trademark law from litigation, administrative (i.e. representation before the patent and trademark office) and business perspectives. Students are expected to have taken at least one prior intellectual property course. This course fulfills the experiential component of the IP Certificate requirement.

**LAWS 4570 Introduction to Contracts and Torts (3 Credits)**

This online course provides an introduction to the foundational principles of Contract Law, including the restatement of contracts and the relevant provisions of the Uniform Commercial Code, and foundational principles of Tort Law, including intentional torts, negligence, and strict liability. This course is available to non-JD students only.



**LAWS 4571 Introduction to Forensic Engineering and Construction Dispute Resolution (3 Credits)**

This online course introduces students to the forensics industry and how forensics applies to claims and disputes in design and construction issues. The course addresses common disputes such as insurance claims, contract disputes, negligence claims, etc. This course will also discuss the different dispute resolution forums and venues, from insurance appraisals, to mediation, to arbitration or litigation. This course is available to non-JD students only, and is required for students in the Master of Legal Studies in Forensic Engineering.

**LAWS 4572 Forensic Scheduling (1 Credit)**

This online course covers the five standard forensic scheduling methods: Impacted As-Planned Method, As-Planned v. As-Built Method, Time Impact Analysis, Windows Analysis, and Collapsed As-Built Method. This class will use Primavera P6 scheduling software. This class is limited to non-JD students only.

**LAWS 4574 Expert Report Preparation (1 Credit)**

Forensic consultants need to understand how to outline, assemble, and clearly communicate issues and opinions within expert reports. This course reviews standard report templates and covers how to prepare report sections including-but not limited to-executive summaries, summary of opinions, assignment, documents reviewed, analysis, conclusions, and demonstratives.

**LAWS 4575 Civil Trial Practice-Forensic Engineering (3 Credits)**

This online class will cover the main aspects of civil litigation and trial practice as they relate to forensic engineering including discovery, trial, examination and cross-examination, and expert testimony. Pre-requisite: LAWS 4571.

**LAWS 4576 Building Envelop & Civil Construction Review (1 Credit)**

This course would review the components of building envelope and civil design. It would also review standard contract drawing details, manufacturer's recommendations, and code requirements for various building components.

**LAWS 4577 Introduction to Contract Law (2 Credits)**

This online course provides an introduction to the foundational principles of Contract Law, including the principles and law governing the formation of contracts (offer, acceptance, and consideration), contractual terms and duty, breach of contract, and some discussion of remedies. This course is available to non-JD students only.

**LAWS 4578 Introduction to Tort Law (2 Credits)**

This online course provides an introduction to the foundational principles of tort law, including intentional torts, negligence, and strict liability. This course is available to non-JD students only.

**LAWS 4579 Expert Witness Role (2 Credits)**

Expert witnesses play a number of roles as they take on their role, including serving as consultants, writing expert reports, and providing testimony. This course will focus on the core requirements needed for this role, providing an overview of the dispute resolution setting in which they work, with particular emphasis on ethical responsibilities and the task of writing an expert report. It will also cover how to write an expert report by outlining, assembling, and clearly communicating issues and opinions within expert reports. This online course will review standard report templates and cover how to prepare report sections including-but not limited to-executive summaries, summary of opinions, assignment, documents reviewed, analysis, conclusions, and demonstratives.

**LAWS 4580 Forensic & Scientific Evidence (3 Credits)**

This course will cover the key elements of Evidence Law with a particular focus on evidence law governing forensic and scientific evidence. This includes an introduction to the preparation of scientific evidence, rules governing admissibility of forensic and scientific evidence in the courtroom, and rules applicable to expert witnesses and their testimony.

**LAWS 4581 Remedies in Construction Law (2 Credits)**

This course will address the remedies that are applicable in construction law disputes, including remedies applicable to contracts and torts disputes. It will cover the basic principles and problems of damages, restitution, and equity. Prerequisites: LAWS 4179.

**LAWS 4589 LLM and Master's Internship (0 Credits)**

The Sturm College of Law encourages students to gain practical experience and to develop professional skills in the legal and policy fields. Some students may elect to pursue externships for credit while others may choose to pursue paid opportunities during their study in the program. Internships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The internship should provide a new learning experience for the student intern and must be related to their field of studies (e.g. business and commercial law; environmental law and policy). Satisfactory completion of the internship will result in a passing grade for the externship. The Program Director and/or GLS Advisor may serve as Supervisor for non-JD interns.

**LAWS 4590 JD Internship (0 Credits)**

The Sturm College of Law encourages students to gain practical experience and to develop professional skills in the legal and policy fields. Some students may elect to pursue externships for credit while others may choose to pursue paid opportunities during their study in the program. The internship should provide a new learning experience for the student intern and must be related to their field of studies (e.g. business and commercial law; environmental law and policy). Satisfactory completion of the internship is determined by review of an Internship Assessment Form submitted to the externship office at the end of the term.

**LAWS 4599 Expert Witness Practicum (3 Credits)**

This class will cover the main aspects of civil litigation and trial practice as they relate to forensic engineering and the process of being an expert witness including discovery, trial, examination and cross-examination, and expert testimony. The course will be taught in a practicum style, with students taking on the role of expert witness. Prerequisites: LAWS 4579.

**LAWS 4605 Taxation of Natural Resource (2 Credits)**

This course outlines the financial, business, and legal tax problems that may be encountered during the acquisition, operation, and disposition of natural resources properties. It is a strong course for students to develop skills in general tax planning for natural resources ventures.

**LAWS 4610 Torts (4 Credits)**

This introductory course considers compensation for private wrongs, covering harm to persons and property, with attention to legal theories of intentional torts, negligence and strict liability.

**LAWS 4615 Torts (Advanced) (3 Credits)**

Advanced Torts combines practical and theoretical discussion of issues that personal injury lawyers face in practice. The topics in the seminar vary but generally include fee agreements, damages, use of experts, medical malpractice, hospital and other liens, subrogation, and governmental immunity. The seminar emphasizes the empirical reality of injuries, claims, and litigation. Prerequisite: LAWS 4610.

**LAWS 4618 Representing Clients Before the SEC (3 Credits)**

SEC insiders explain the processes and practices of the Division, intertwined with discussion and analysis of SEC enforcement actions past and present. This course gives students critical information to effectively represent a wide variety of clients before the Division, among them public companies, regulated entities, defrauded investors, and perpetrators of crime.

**LAWS 4631 Commercial Space Law (2 Credits)**

This course is designed to provide a basic understanding of legal principles and issues in international and domestic space law, with a focus on commercial space law. You will study issues of importance to the Colorado space industry. Those issues, however, touch everyone in the world. For example, we will evaluate issues relating to the use of GPS timing and location signals, remote sensing of the earth from space, and the use of satellite communication. These technologies and associated legal issues reach every country in the world. We start with a survey of the international laws that govern outer space activity. You will be introduced to space law treaties addressing the use of outer space for peaceful purposes, liability for damage caused by space objects, jurisdiction and control of space objects, the rescue and return of astronauts and space objects, property rights in space, and other matters. We will discuss the influence on space laws of cold war politics, developing versus developed country tensions, and the impact of sovereignty interests on technologies that can broadcast television signals direct to homes and extract information about a country's natural resources – all from space. Then we will address U.S. space laws and regulations impacting space activities. Finally, the class will explore specific commercial space activities such as satellite communication, space stations, space tourism, space launches, remote sensing of the earth from space, and the financing and insuring of space activities.

**LAWS 4633 Day One: Civil Practice Lab (3 Credits)**

Day One: Civil Practice Lab is designed to take students from client intake through to the eve of trial, simulating the research, analysis, drafting, and verbal argument that lawyers encounter every day in civil cases. Through the course, students learn about the practical aspects of running a firm, valuing cases, and managing client and firm expectations. They also learn how to draft memoranda, disclosures, discovery, motions and mediation statements, while practicing the skills of examining witnesses, negotiating, and oral argument through mock depositions, mediation, and evidentiary hearings. The classes provide a procedurally chronological picture of a civil case and weave throughout practical considerations and application of the rules of professional conduct. In short, the class prepares students to practice on day one of their new career.

**LAWS 4634 Motions Practice (3 Credits)**

In this class, students learn how to present and argue pre-trial motions. These motions include motions from civil practice (motion for preliminary injunction, motion to dismiss, motion for summary judgment, etc.) criminal practice (motion to suppress, Rule 35 (c), etc.) and evidentiary motions (Rules 403, 404, and 405.) In addition, the course covers both legal and evidentiary motions in limine. Each student is asked to prepare, present, and argue a motion, as well as decide motions presented by others after making appropriate findings of fact and conclusions of law. Because a number of the motions involve the presentation of witnesses and appropriate case and statutory law, students learn trial skills, as well as refresh their knowledge of criminal and civil procedure, and the rules of evidence. Students are not asked to draft motions or prepare written briefs.

**LAWS 4635 Trial Practice I: Basic Courtroom Skills (2-3 Credits)**

The course is designed to teach the concepts and organizing principles of the formal trial process. It emphasizes the understanding necessary to develop, evaluate, prepare, and present a case for trial before a judge, jury, or other fact-finder. Exercises and simulations are used to demonstrate the importance of theory building and teach the functions of each stage of a trial. Students develop the advocacy skills appropriate to adversary adjudication. Prerequisite or corequisite: LAWS 4235.

**LAWS 4637 Civil Litigation Practicum (3 Credits)**

This course provides students a practical, hands-on approach to civil pretrial litigation. Students draft pleadings, motions and discovery requests essential in the litigation process prior to the actual trial stage.

**LAWS 4638 Trial Practice III: Mentor's Practicum (3 Credits)**

The Mentor's Practicum employs and relies upon integrated teaching, feedback, student collaboration, and multiple assessment. The practicum is designed for law school students who have exhibited advanced skills in trial advocacy, client advocacy, case analysis and communication.

**LAWS 4639 Survey of Trusts and Estates (3 Credits)**

This course will provide a broad introduction to trusts and estate planning, including an overview of property disposition through intestate succession, wills, and trusts.

**LAWS 4640 Trusts and Estates (4 Credits)**

Students enrolled in this course learn the ins-and-outs of trusts and estates planning. The course surveys everything involving succession wills, trusts, the role of third parties to a trust or estate, and property disposition.

**LAWS 4651 Advanced Legal Writing and Research (3 Credits)**

This course provides students with practical experience in drafting various documents they will likely encounter in the practice of law, including both objective and persuasive writing. Students will learn the advanced research skills they need to locate relevant legal materials, including an in-depth knowledge of legal research methods and resources. Students will then use their research results to create precise, clear, effective, and legally sound written documents for a series of modern law practice situations. There will be in-class exercises designed to develop student expertise with particular legal research and writing skills. Course assessments include an internal memorandum, a pleading, a motion, and a decision. This course satisfies the upper-level writing requirement. Laptops are required for this course.

**LAWS 4660 Scientific Evidence (3 Credits)**

The course begins with the U.S. Supreme Court decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (113 S.Ct. 2786 (1993)). This decision threw out the Frye Rule that had governed the admission of scientific evidence in federal courts since 1923. While the Daubert rule now applies in all federal courts, states are free to either stay with the Frye Rule, adopt the new Daubert Standard or adopt some combination of the two. Students discuss the implications of these evidentiary changes in a number of areas of legal controversy. The course concentrates primarily on the use of social science evidence; however, topics include tort litigation involving Bendectin, and the controversy over the use of DNA testing in criminal cases. Other topics include the use of scientific evidence in consumer confusion cases; obscenity cases and the question of community standards; and the number of syndrome evidence cases, including post-traumatic stress disorder, battered woman syndrome, and rape trauma syndrome. Constitutional law cases include coverage of death penalty issues, jury size cases, and school segregation by race and gender (including the controversy over single-sex education, and the ending of school busing mandates by the federal courts). The goal of this course is to increase the proficiency of lawyers to use scientific evidence on behalf of clients and be able to defend against such evidence when presented by the opposing counsel.

**LAWS 4670 Water Law (3 Credits)**

Water Law is an introductory course for students interested in pursuing water law. It covers private property rights in water, and the legal and environmental controls surrounding it. Recommended prerequisite: LAWS 4025.

**LAWS 4672 International Water Law (3 Credits)**

This course presents a global overview of water law, systems, and practice in the modern world. It includes coverage of hydrology, history, national legal systems, and modern international treaties and cases. It has a special emphasis on sustainable development, equitable utilization, pollution control, and ecosystem protection utilized for multi-nation water basins. LAWS 4670 Water Law and LAWS 4320 International Law courses are not a prerequisite, as basics will be covered.

**LAWS 4674 White Collar Crime (3 Credits)**

This course is designed for students with an interest in advanced criminal law practice, particularly the growing legal field of white collar crime. This seminar course will introduce students to the major substantive legal areas that make up the white collar field, including mail and securities fraud, bribery, health care fraud, conspiracy, and money laundering. In addition, students will learn the basics of conducting a corporate internal investigation, dealing with search warrants and subpoenas, criminal pre-trial matters, special considerations for criminal discovery, and common ethical issues. By the end of the course, students will have learned the basic substantive and procedural issues involved in white collar practice. Students will learn from and interact with a variety of practitioners drawn from the private and government sector. Instructor permission is required for enrollment.

**LAWS 4686 Wills Lab (1 Credit)**

This lab is designed to provide students with practical experience with interviewing and drafting for a real client while under the close supervision of a practicing attorney. Clients come primarily from Legal Aid. Each student is individually supervised by a volunteer attorney or by Prof. Marsh. The attorney goes with the student to the first interview with the client to assist the student if any difficulties come up in the interview. Then the student drafts the appropriate documents from scratch, and the attorney helps the student determine what revisions are necessary. When documents are in final form the attorney assists the student in having the documents properly signed. Documents include will, living will, and medical or financial powers of attorney, as appropriate. Letter grades are given by Prof. Marsh. Note that no student is allowed to drop the Wills Lab after the first interview with the client unless there is a severe medical emergency. There will be one introductory meeting scheduled during lunch time. All the rest of the work is scheduled individually by the student, supervising attorney, and client. NOTE: Students will NOT be allowed to drop the course after the first interview with the client. Prerequisite: LAWS 4640 or LAWS 4639.

**LAWS 4700 Special Topics (1-5 Credits)****LAWS 4701 Special Topics (1-5 Credits)****LAWS 4702 Special Topics (1-6 Credits)****LAWS 4703 Special Topics (1-5 Credits)****LAWS 4704 Special Topics (1-5 Credits)****LAWS 4705 Special Topics (1-5 Credits)****LAWS 4706 Special Topics (1-5 Credits)****LAWS 4707 Special Topics (1-5 Credits)****LAWS 4708 Special Topics (1-5 Credits)****LAWS 4709 Special Topics (1-15 Credits)****LAWS 4800 Criminal Defense Clinic (3-6 Credits)**

This clinic offers students the opportunity to defend low-income clients charged with various criminal offenses. These offenses include DUI/DDWAI; domestic violence; assault; theft; disturbance; child abuse and neglect; menacing; etc. Students represent their clients in various municipal and county courts in the area. This course requires numerous court appearances for arraignments, pre-trial motions, and sentencing. Students should be prepared for an intense litigation experience in misdemeanor criminal defense. Corequisite: LAWS 4801. Prerequisite: permission of faculty supervisor.

**LAWS 4801 Criminal Defense Clinic Seminar (3-4 Credits)**

The Criminal Law Clinic Seminar must be taken in conjunction with the Criminal Law Clinic. Class sessions will be devoted to a variety of topics, including classes on lawyering skills, substantive law, issues of lawyering and society, and case review sessions, in which student attorneys will present information about their cases/projects to each other and give and solicit feedback about issues they are confronting in the representation of their clients. The classes include simulation exercises that are critiqued by faculty, and field exercises that involve trips to the Denver jail. Classes are taught by clinical faculty and by guest speakers who include area judges, practitioners, interpreters and other court personnel. Co-requisite: LAWS 4800.

**LAWS 4802 Environmental Law Clinic Seminar (3 Credits)**

THE ELCP clinic seminar must be taken in conjunction with the ELCP Clinic. During class, students will review federal civil procedure through a lecture series entitled "anatomy of a lawsuit," have specific lectures on effective legal writing, and commonly used statutes such as the Freedom of Information Act, and Endangered Species Act. Each student must also prepare a class presentation on their assigned major case, and participate in random, less formal docket meetings. Students must also attend four guest lectures from lawyers and other professionals on environmental law advocacy issues. Students earn 3 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4206.

**LAWS 4803 Mediation & Arbitration Clinic Seminar (2 Credits)**

The Mediation and Arbitration Clinic Seminar must be taken in conjunction with the Mediation and Arbitration Clinic. The seminar meets once a week for 90 minutes. Students read articles on mediation issues and receive intensive training in the classroom that is reinforced with classroom simulations. Students are also required to critique each other in the simulations. The seminar focuses upon identifying and resolving issues that arise during actual mediations. Students will earn 2 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4430.

**LAWS 4805 Civil Litigation Clinic (5 Credits)**

The Civil Litigation Clinic students represent low-income clients in a variety of civil disputes. The clinic permits students to participate in the selection of cases and problems they work on. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Civil Litigation Clinic requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 5 out of class for this course and 4 in class credits through the co-requisite course. Corequisite: LAWS 4806.

**LAWS 4806 Civil Litigation Clinic Seminar (4 Credits)**

The Civil Litigation Clinic students represent low-income clients in a variety of civil disputes. The clinic permits students to participate in the selection of cases and problems they work on. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Civil Litigation Clinic requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 4 in-class credits for this course and 5 out-of-class credits through the co-requisite course. Corequisite: LAWS 4805.

**LAWS 4807 Child Advocacy Seminar (2 Credits)**

The Child Advocacy Externship Seminar is a course and taught by the Rocky Mountain Children's Law Center. In the fall semester, the seminar course focuses on the laws surrounding advocacy for children in dependency & neglect, delinquency, civil protection order, and education cases. In the spring, students can enroll in a 2-credit Advanced Child Advocacy seminar to expand on the fall semester with topics such as the overlap of child welfare and family law, immigration advocacy, appellate advocacy for children, trial practice in the child welfare context, ethical issues in the representation of children, and a variety of other hot topic child advocacy issues. Students can choose to also enroll in a corresponding externship for credit. For more information on the field work component, please visit <http://www.law.du.edu/index.php/legal-externship-program/specific-externship-programs/child-advocacy-externship-program>.

**LAWS 4809 Civil Rights Clinic (3-6 Credits)**

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and the prison's refusal to provide meaningful process to individuals placed in long-term segregation. Co-requisite course LAWS 4812, Civil Rights Clinic Seminar. Pre-requisite or co-requisite course: LAWS 4425, Legal Profession. This course meets the Upper Level Writing requirement (ULW).

**LAWS 4812 Civil Rights and Disability Law Clinic Seminar (3 Credits)**

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and prison's refusal to provide meaningful process to individuals placed in long-term segregation. Students will earn 3 in class credits for this course and 3 out of class through the corequisite course L4805, Civil Rights Clinic. This course meets the Upper Level Writing requirement (ULW).

**LAWS 4813 Low Income Taxpayer Clinic-JD (1-4 Credits)**

Using a focused series of classes related to issues facing individual low income taxpayers embroiled in conflict with the Internal Revenue Service or in litigation before the United States Tax Court (innocent spouse relief, earned income credit, dependency exemptions, appeals of audits and collection due process issues, tax litigation), this course first prepares tax students to represent taxpayers regarding such issues, then provides the opportunity to practice before the IRS and in the Tax Court. In a clinical setting, students are trained in all facets of practice before the IRS and the Tax Court. Once trained, under the supervision of clinical staff, the students undertake representation of low income taxpayers in tax audits, appeals, collection proceedings, and, if necessary, before the Tax Court. All facets of client representation, including initial client meetings, representation agreements, client advocacy, and ending the representation, are experienced by each clinic participant. Cross listed with TAX 4415.

**LAWS 4825 Immigration Law and Policy Clinic (5 Credits)**

For the fieldwork component of the Immigration Law and Policy Clinic (ILPC), student attorneys appear in immigration court representing indigent, detained clients in bond and/or removal proceedings. Students may also provide consultations with student counsel in the Criminal Defense Clinic on the immigration consequences facing CDC clients. There may be additional opportunities for advocacy in post-conviction and/or federal habeas litigation, and in matters in which the ILPC will provide counsel and legal assistance to non-profit advocacy organizations pursuing policy or legislative reform or other non-litigation (or possibly litigation) matters. Throughout their fieldwork, student attorneys apply knowledge gained through the ILPC seminar by practicing lawyering skills such as interviewing, client counseling, fact investigation, legal research and writing, oral advocacy, negotiation, policy advocacy, and preparation for, and advocacy in, contested hearings. Through the ILPC fieldwork, students will have opportunities to explore systemic problems in the immigration enforcement system—particularly where immigration and criminal enforcement are conflated and entwined—such as racial and economic bias, law enforcement accountability, hyperincarceration, and access to justice. Credit Hours: 5 out-of-class credits (Fall term) / 2 to 7 out-of-class credits (Spring term) ULW: This course does not automatically meet the Upper Level Writing (ULW) requirement. Students who, in the course of their fieldwork, complete written work sufficient to meet the ULW requirement may obtain certification from their instructor.

**LAWS 4826 Immigration Law and Policy Seminar (2-4 Credits)**

The Immigration Law and Policy Clinic (ILPC) seminar provides timely instruction in topics relevant to student attorneys appearing in immigration court representing indigent, detained clients in bond and removal proceedings. In seminar, students will learn lawyering skills such as interviewing, client counseling, fact investigation, legal research and writing, oral advocacy, negotiation, policy advocacy, and preparation for, and advocacy in, contested hearings. Some classes may address issues that have not yet arisen in their clinic cases, with the goal of exposing students to different lawyering methods and advocacy tools. Through the ILPC seminar classes and related fieldwork, students will have opportunities to explore systemic problems in the immigration enforcement system—particularly where immigration and criminal enforcement are conflated and entwined—such as racial and economic bias, law enforcement accountability, hyperincarceration, and access to justice. This course does not meet the Upper Level Writing (ULW) requirement. Credit Hours: 4 in-class credits (Fall) / 2 in-class credits (Spring).

**LAWS 4835 Community Economic Development Clinic (3 Credits)**

The Community Economic Development ("CED") Clinic is a clinical legal education program that provides free transactional (non-litigation) legal services to small businesses, low-wealth entrepreneurs, community-based enterprises, nonprofit organizations, and artists. The Clinic is designed to simultaneously teach student attorneys the fundamentals of transactional practice while providing high-quality and invaluable legal representation to its clients. Through the representation of the Clinic's clients, student attorneys are exposed to the intersection of business law concepts and CED practice. Student attorneys learn that transactional lawyering is preventive lawyering, which involves avoiding conflict, litigation, and other negative outcomes. The Clinic's focus on the legal practice of CED will expose student attorneys to the variety of social systems, government programs, and federal, state, and local government laws that impact their clients. Client work includes drafting corporate formation documents; assisting nonprofit organizations with tax-exempt applications and maintenance of tax-exempt status; drafting and negotiating contracts; and acting as general counsel to both small businesses and non-profit organizations. In addition, students may research issues related to public policies that affect clinic clients and provide community education workshops on substantive law issues pertinent to one of the clinic's practice areas. Co-req: LAWS 4836, co-req/pre-req: LAWS 4425.

**LAWS 4836 Community Economic Development Clinic Seminar (3 Credits)**

The Community Economic Development ("CED") Clinic is a clinical legal education program that provides free transactional (non-litigation) legal services to small businesses, low-wealth entrepreneurs, community-based enterprises, nonprofit organizations, and artists. Clinic students are required to attend this bi-weekly 75 minute seminar while participating in the clinic. The seminar focuses on both substantive corporate law and transactional lawyering skills and is reinforced with complex simulations that students perform and then critique with faculty. Co-req LAWS 4835, pre-req/co-req LAWS 4425-Legal Profession.

**LAWS 4867 Advising the Adviser: Compliance and Enforcement under the Investment Advisers Act (3 Credits)**

This class will focus generally on investment adviser (IA) compliance with the federal securities laws and the Securities and Exchange Commission's (SEC) role with respect to that compliance. We will focus on how to advise an IA with respect to SEC regulations, touching on topics such as an IAs role as a fiduciary and an IAs requirements with respect to marketing, best execution, and principal and cross trading. We will also focus on what's necessary to establish and operate a robust IA compliance program.

**LAWS 4880 DU Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4884 Int'l Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4885 Preventive Law Journal (0-6 Credits)**

An enrollment card obtained from the Managing Editor is required.

**LAWS 4888 Transportation Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4889 Water Law Review (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4900 Introduction to Clinical Pedagogy & Scholarship (1-2 Credits)**

The purpose of this yearlong, two-credit (total) seminar is to introduce graduate teaching fellows to fundamental concepts of teaching and scholarship. Upon completion of this course, students understand: theoretical frameworks for supervision of J.D. students in the fieldwork portion of a clinic; the goals of seminar teaching, including the theory of backward design and the use of case rounds and other signature pedagogies; and the key differences between legal writing and academic scholarship, with an emphasis on developing a habit of and timeline for scholarly writing.

**LAWS 4905 Scholarship Seminar I (4 Credits)**

This is a semester-long, four-credit, intensive course taken after completion of the first academic year in which students produce and present drafts of scholarly articles along a timeline set out at the start of the semester.

**LAWS 4910 Co/Shadow Supervision Practicum (1-8 Credits)**

During their first academic year enrolled in the clinical LL.M. program, fellows will "shadow" or "co-supervise" law students with experienced faculty. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.

**LAWS 4920 Supervision Practicum II (1-4 Credits)**

During their first academic year enrolled in the clinical LL.M. program, fellows "shadowed" or "co-supervised" law students with experienced faculty (for which they will receive four credits per semester). In their second year, fellows supervise on their own two students and in their third year, four students. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.

**LAWS 4921 Clinical Pedagogy & Design I (1 Credit)**

The purpose of this yearlong, two-credit course is to explore more deeply the pedagogy and methods for teaching in both student supervision and classroom seminar settings. This series of courses accomplishes two important goals: (1) building a learning community through which a group of faculty come together and increase faculty collaboration around a shared enterprise of teaching; and (2) improving teaching. Graduate fellows will talk about events in their classrooms/supervision sessions, present "problems" to be unpacked and re-conceptualized, solicit ideas about what and how to teach, and share innovative assessment tools. Fellows reflect with supportive colleagues about the relationship between what they have done and their teaching goals and formulate plans with the benefit of the insights of others. The objective of this course is to have discussions that will facilitate the development of both concrete solutions and broader themes in the fellows' teaching.

**LAWS 4925 Scholarship Seminar II (4 Credits)**

This is a semester-long, four-credit, intensive course taken after completion of the second academic year in which students produce and present drafts of scholarly articles along a timeline set out at the start of the semester.

**LAWS 4930 Supervision Practicum III (1-6 Credits)**

The expectations for student supervision increase in the third year. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.

**LAWS 4931 Advanced Clinical Pedagogy & Design (1 Credit)**

The purpose of this yearlong, two-credit course is to explore more deeply the pedagogy and methods for teaching in prior years; hone methods to fellows' unique professional, academic identities; and reflect on these and their experiences teaching in both supervision and classroom settings to articulate and design their own clinics. This course accomplishes two important goals: (1) building a learning community through which a group of faculty come together and increase faculty collaboration around a shared enterprise of teaching; and (2) improving teaching. During rounds, graduate fellows talk about events in their classrooms/supervision sessions, present "problems" to be unpacked and re-conceptualized, solicit ideas about what and how to teach, and share innovative assessment tools. Fellows reflect with supportive colleagues about the relationship between what they have done and their teaching goals and formulate plans with the benefit of the insights of others.

**LAWS 4950 Scholarship (1 Credit)**

The transition from legal advocacy writing to academic legal scholarship is challenging. In addition to learning a new style of writing and new methods of research, fellows must devote substantial time to the academic writing endeavor. Most students (and faculty) reflect in hindsight that writing a law review article for the first time takes substantially longer than they anticipated. Over the course of the fellowship, fellows earn one credit per semester for making progress toward completion of a paper of publishable quality. In this course, fellows apply theories of research and writing to the activities of writing (choosing topics, creating timelines, researching, and drafting sections of their articles).

**LAWS 4991 Corporate Apprenticeship Program (4 Credits)**

The Corporate Apprenticeship Program's purpose is to provide the opportunity for law students to learn about the distinct challenges facing corporate counsel. This program is offered solely in the spring term and consists of four mandatory seminars and 15 hours of work per week (preferably on consecutive days) in the legal department of sponsoring corporations. The interactive seminars are designed to introduce students to the practice environment and operations of an in-house corporate legal department.

**LAWS 4996 Thesis (1-10 Credits)**

The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and the the community. Example placements include public defenders' offices; prosecutors' offices; the Attorney General's office; Legal Service offices; judicial clerkships; and selected private firms. Need special enrollment permission from Internship/Externship Office. A maximum of 10 credit hours may be awarded for this program.

**LAWS 4999 Directed Research (1-5 Credits)**

Direct Research is an opportunity for students to research and write on any area of law approved by a full-time faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality. A copy is delivered to the supervising faculty member for grading and a second copy is delivered to the associate dean for academic affairs by the last day of exams for that semester. Students may petition for either two or three semester hours. A maximum of five semester hours credit for Directed Research is permitted in satisfaction of the 90-credit degree requirement. A Directed Research application form (available in the registrar's office) signed by both the faculty supervisor and student is required for enrollment. The registrar's office will register the student for his or her directed research once the student's application form has been approved. All directed research projects must conform with the upper level writing requirement, which involves a mandatory rewrite, in addition to any other requirements. This course satisfies the Upper Level Writing requirement (ULW). Permission is required from the faculty supervisor and the Assistant Dean for Student Affairs to increase credit hours to 4 or 5.

**LAWS 5025 Externship (1-10 Credits)**

The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. Externship Seminar: In conjunction with the above field placement each student shall meet in a seminar under the supervision of a member of the law faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

**LAWS 5026 Trial Practice III: National Trial Team (3 Credits)**

The Trial Teams Course is for the new and veteran students who are selected to represent the school on one of the national trial teams. The course meets one night a week during the summer session for five hours each night. The course is split into two sections, one for returning team members, and one for the newly-selected team members. The course is an advanced courtroom-simulation course in which students work intensely with other students and the instructor, delving into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. The veteran section begins the first class with students presenting both sides of a criminal case. The new member section begins with refreshers on case analysis, evidence, and courtroom strategies, and culminates with final trials. There is weekly out-of-class case analysis, drafting, and preparation required. Grading is based on classroom participation, written homework, simulated courtroom presentations, and a final trial.

**LAWS 5027 American Association for Justice Trial Team (3 Credits)**

Sturm's American Association for Justice Trial Team (AAJ) is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must be invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester, and continuing throughout the entire semester, the AAJ team-course meets once a week in a classroom environment, for a total of 2.5 classroom hours per week. The AAJ team-course also meets a second time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and examination drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the AAJ tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, and simulated courtroom presentations. Prerequisite: LAWS 4635.

**LAWS 5028 ABA Trial Team (3 Credits)**

Sturm's ABA/NTC team is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must be invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring, and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester and continuing throughout the entire semester, the ABA/NTC team-course meets twice a week in a classroom environment, for a total of five (5) classroom hours per week. The ABA/NTC team-course also meets a third time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the ABA/NTC tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, and simulated courtroom presentations.

**LAWS 5029 Semester in Practice (1-12 Credits)**

The Semester in Practice program is designed to allow students the opportunity to develop practice skills by working full-time in legal programs of concern to the legal profession and community. This is a capstone experience offered to students in their last year of law school, where students have significant exposure to the substantive law in their externship. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. As this is an externship, credit may vary, up to 12 credits, depending on the student. Externship Seminar: In conjunction with the above field placement, each student shall meet in a three-credit graded seminar under the supervision of a member of the externship faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

**LAWS 5030 Semester in Practice Seminar (3 Credits)**

This seminar is the classroom component of the Semester in Practice (SIP) course. Through class discussion, we explore a variety of issues that provide students with the opportunity to reflect on the legal profession and how they perceive their role in the profession - currently and prospectively. We focus primarily on professional identity and ethical issues of key importance to the practice of law.

**LAWS 5031 Legal Externship Seminar (1-3 Credits)**

The Legal Externship Program is divided into practice-specific programs. Students enrolled in each of these programs are required to also enroll in an accompanying for-credit seminar that addresses topics specific to each practice area.

**LAWS 5035 Public Service Externship (2-6 Credits)**

The externship program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; and judicial clerkships. To ensure that the College of Law remains in the forefront of public service, every Juris Doctor student is required to perform a minimum of 50 hours of supervised, uncompensated, law-related public service work during his or her law school career as a prerequisite to graduation. This requirement may be fulfilled by registering for, and passing, an externship for credit at a government agency, judicial chambers, or nonprofit organization via the Legal Externship Office, as long as no financial compensation of any kind whether from the employer or outside source was received for the externship.

**LAWS 5999 Law Consortium Visit (0-18 Credits)**

This is a placeholder course that allows students to remain actively enrolled at Sturm College of Law for purposes of enrollment reporting and financial aid disbursement while students are participating in an approved visit at another ABA approved law school per a consortium agreement. Credits associated for this course are replaced by transfer credit once a final transcript is received by the host institution.

## Legal Administration (MSLA)

**MSLA 4050 The Impact of Court Governance (1 Credit)**

This course informs students on the policy making process of local court governance and the impact of the process on court operations and public services. Various governance structures are explored to include the benefits of principle based governance. Students gain in-depth insight into the roles and relationships of judges and court administrators as leaders and governing authorities within the judicial system. Course knowledge is applicable to all levels of national and international court jurisdiction.



**MSLA 4080 Law Firm Information Technology (2 Credits)**

This course is designed to inform the student on the complexities of information technology in a law firm setting. Topics include time and billing, assessing the IT needs of the office, networking abilities, creating a paperless office, security, case management, outsourcing, and knowledge management.

**MSLA 4090 Court Information Technology (2 Credits)**

This course is designed to introduce students to the intricacies of information technology in a court setting and the importance of an efficient and effective system. Topics include communications technology (internal and external), virtual courthouses, electronic case filing, legal research systems, information and systems security, networking abilities and needs, court reporting/recording and accessibility to the public (website).

**MSLA 4100 Court Fiscal Management (3 Credits)**

This course focuses on the key aspects of fiscal management in a court setting. Students learn models of public budgeting, internal controls, procurement, outsourcing, RFPs, internal and external auditing, and government funding models. Prerequisite: MSLA 4410.

**MSLA 4121 Human Res & Performance Mgmt (3 Credits)**

This course will provide a broad overview of the field of human resource and performance management. Students learn what managers and administrators need to know to effectively address Human Resource issues in today's workplace. The course will provide major concepts and techniques of performance management in law and court environments. By employing perspectives of both the employer and employee the class will focus on "best practices" utilized by managers and administrators and emphasize decision-making skills and processes in the context of Human Resources law and policy. Students will learn how to achieve organizational goals via management of a company's most precious resource, their people. This textbook provides an overview of the content upon which the most common HRCI certifications (SPHR, PHR) are based.

**MSLA 4151 Applied Leadership and Management Theory (3 Credits)**

This course is designed to provide the student with an understanding of the importance of effective leadership and management in the workplace. Students will learn the tools necessary to manage conflict, build strong teams, function as a team, manage performance, create and maintain a positive work environment, and motivate others.

**MSLA 4180 Court Case Flow and Load Management (2 Credits)**

This course is designed to provide the student with the fundamental principles of managing an effective case management system. Students will learn the importance of an efficient case flow management system, the history of case management, electronic case filing, civil and criminal rules of procedure, case assignment, quality assurance and time standards and major case, records management and reporting systems, strategies necessary to gain judicial support, leadership and cooperation to effectuate effective case flow management practices, and improve judicial performance as it relates to the disposition of actions.

**MSLA 4181 Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts (1 Credit)**

Diversity and inclusiveness are hot topics in the legal profession. This highly interactive course will educate students about the state of diversity and inclusiveness within the legal profession, the systemic underpinnings of the lack of diversity, how to create inclusive environments for successful retention and advancement of female and diverse attorneys and staff, as well as the importance of diversity and inclusiveness to the viability of the legal profession. Students will be challenged to draw upon their own life experiences, to consider different perspectives, and provide thoughtful analysis on how they can incorporate diversity and inclusiveness practices with their career path and future legal organizations.

**MSLA 4200 The Business of Courts (3 Credits)**

This course is designed to provide the student with the fundamental principles and elements of the key functions performed by the courts. These functions include jury management, court based mediation and arbitration programs, court reporting, client expectations, contingency planning, continuity of operations planning, needs and expectations of litigants without lawyers, interpreter services, court and staff performance measurement and management, and the role of the court administrator.

**MSLA 4201 Law Firm Administration (3 Credits)**

This course informs the student of the fundamental principles, elements and day-to-day operational processes of law office management. Topics covered in this course include law office culture, law firm organization, succession planning, practice areas, client communication flow, collection challenges, and understanding and working with law office timekeeping, accounting, and billing systems.

**MSLA 4205 Lawyer Recruitment, Development, and Advancement in Law Firms (2 Credits)**

This course will focus on the key aspects of lawyer recruitment, development and advancement in law firms. Students will learn the primary methods for recruiting and hiring lawyers at all experience levels, and the most important elements of lawyer development, including orientation, integration, legal and core skills training, experiential learning, mentoring, performance management, and evaluations. Traditional compensation and advancement models, as well as emerging trends in all of these areas, will also be covered during the course.

**MSLA 4215 Court Space, Facilities and Security (2 Credits)**

This course is designed to inform the students of the fundamentals of managing the court's space, facilities and security. Aspects of this course include: facilities management, operational standards and management, safety and security, assessing courthouse building needs, developing space planning reports, the management of all types of space projects, building and personnel security issues, contingency planning, and disaster recovery.

**MSLA 4300 Introduction to the United States Judicial System (3 Credits)**

This course provides the student with an overview of the United States judicial system. Students learn the fundamentals of our legal system, historical basis of the U.S. judicial system, the foundation, structure, purpose, what it stands for, and the varying levels of the U.S. court system.

**MSLA 4301 Judicial Performance and Evaluation (1 Credit)**

This course informs students on the complexities of judicial performance and evaluation. Students learn the fundamentals of developing a judicial performance program, measuring the effectiveness of performance recommendations, commissions on judicial performance, and the components of the evaluation process.

**MSLA 4310 World Judicial Systems (3 Credits)**

The goal of this course is to compare and contrast the role of the judiciary in various legal systems. Topics include types of courts and court systems (including domestic, supranational, i.e., the European Union, and international courts), judicial independence, separation of powers, and challenges facing the judiciary such as miscarriages of justice. Students also compare court procedures (civil, criminal, appellate review) in different types of legal systems.

**MSLA 4320 Fundamentals of Comparative Law (3 Credits)**

This course introduces the classifications of the world's legal systems: (civil law, common law, Islamic law, customary law, and mixed law systems). Students will learn the general elements of a legal system then compare and contrast these features in different types of legal systems as they are used in various countries or other jurisdictions including the European Union. Students will also explore internet and electronic resources to research and analyze foreign legal systems.

**MSLA 4330 Specialty Courts (2 Credits)**

This course will provide the students with an understanding of the purpose, functionality and effectiveness of specialty courts. Topics will include the types of specialty courts and how to create them, maintaining sustainability, treatment options, demographics, budgeting and measuring specialty court performance.

**MSLA 4380 Communication, Writing, and Research in Legal Business (3 Credits)**

This is a foundation course is designed to provide students with effective, productive, and relevant communication, writing, and research skills used in legal business today. Topics will include writing press releases, social media news/headlines/updates, executive summaries, email strategies based on audience, etc.

**MSLA 4384 Court Comm & Media Relations (2 Credits)**

This course will inform the students how to address communications and manage media relations for the courts. Topics will include views of the court from multiple perspectives, communicating to different constituencies, public relations and customer satisfaction, and educational outreach programs.

**MSLA 4385 Law Firm Communications and Technology (3 Credits)**

This course is designed to build student's foundation knowledge of technology in the legal environment. The competitive landscape<sup>3</sup> in the law firm setting is stronger than it ever has been, and this competitiveness forces law firms to find efficient and innovative ways to conduct business in this new landscape through the use of technology. Topics of this course will include identification of technologies used in law firms and legal departments as well as thoughts about how to leverage those technologies to help gain efficiencies.

**MSLA 4386 Law Firm Client Services and Satisfaction (2 Credits)**

This course is designed to inform the student of the importance of client service and satisfaction and its value to the law firm. Topics covered in this course include external communication, client feedback, partnering with clients, client relationship management, and evaluation and survey design.

**MSLA 4410 Accounting and Financial Management in Legal Business (3 Credits)**

This course will explore the principals and practices of financial accounting including the standards that govern the preparation of financial statements in legal business. Students will gain a comprehensive overview of double entry accounting, a detailed understanding of assets, liability, equity, revenue and expenses and how they affect the income statement, balance sheet, and statement of cash flows. Special attention will be given to the unique attributes of financial reports related to law firms.

**MSLA 4415 Statistics for the Legal Administrator (2 Credits)**

This course will introduce the fundamentals of statistics for the legal administrator. Students will learn how to measure efficiencies and work performance, perform and analyze needs assessment, track productivity; measure cases flows, and assess client needs.

**MSLA 4420 Legal Practice Seminar-Law as a Business (3 Credits)**

This course provides an overview of the business functions of a law practice. Students learn how effective law practice administrators and managers base policy and management decisions on a comprehensive understanding of the law firm as a complex and interdependent equation. MSLA course, open to JD students with approval from Associate Dean.

**MSLA 4640 ADR for the Court and Law Firm Administrators (3 Credits)**

This course has been designed for the Court/Legal Administrator to explore and understand the skills essential when negotiating/mediating conflict and to examine the ADR system designed for court-annexed, Federal/state agency and private sector arbitration/mediation programs. Students will have an opportunity to explore issues related to ADR in the public and private sector by actively participating in weekly online discussions and experience hands-on learning by developing an ADR system to include the process for selecting a panel of ADR specialists, and a process for implementing and managing the program.

**MSLA 4700 Special Topics (1-5 Credits)**

Special topics courses are used for timely offerings of specialized courses not otherwise found in the course catalog. Titles will vary. Please see [law.du.edu/registrar](http://law.du.edu/registrar) for more information.

**MSLA 4901 Law Firm Financial Management (3 Credits)**

This course focuses on the key aspects of financial management in a law firm setting. Students analyze financial reports/data, work flow analysis and assessment, understand trust accounts, client billing and internal controls, to ultimately recognize and understand the financial health of the law firm. Prerequisite: MSLA 4410.

**MSLA 4950 Strategic Planning in Courts (2 Credits)**

This course is designed to prepare the student in creating a strategic plan for the courts. Students learn to think strategically, design surveys, perform an environmental analysis, set goals, develop action plans, and measurement tools.

**MSLA 4954 Project Management (3 Credits)**

This course is designed to provide students with the tools to effectively manage a project regardless of its size. Topics include clarifying the project goals, using objectives to define responsibilities, understanding GANTT and PERT charts, goal setting, prioritization, time management, consensus building, developing creative teams, empower the project team, motivating the team, communications tools, how to handle conflicts, and how to celebrate your success.

**MSLA 4999 Directed Research MSLA (1-3 Credits)**

MSLA Directed Research is an opportunity for students to research and write on any area of legal administration approved by an approved faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality that is delivered to the supervising faculty member by the last day of exams for that semester. A Directed Research application form (available in the Registrar's Office) signed by both the faculty supervisor and student is required for enrollment.

**MSLA 5010 Capstone: Externship/Project (3 Credits)**

The externship or creative project is designed to complement the student's area of study. The externship enables the student to work in a practical setting and acquire the experience in a legal environment. The creative project option provides students, already working in the legal environment, an opportunity to complete a project or research paper on a topic determined by student and MSLA office. A grade of "pass" is given after the work is completed, and a letter from the supervisor summarizing the student's experience is submitted to the MSLA Office.

**Law Courses****LAWS 4001 Introduction to Law for Non-Lawyers (1 Credit)**

This course is designed to introduce non-lawyers to legal tools and methodologies so that they become competent at reading, understanding, and applying the law to new scenarios. It will also introduce them to legal research and writing. The course will cover reading and briefing cases, understanding and interpreting legislation, applying legal rules to new fact situations, and the relationship between different legal sources.

**LAWS 4002 Accounting for the Small Legal Practice (3 Credits)**

This course will provide an introduction to basic accounting fundamentals, provide key concepts that apply to attorneys and solo practitioners, and explore situations where accounting plays a role in the practice of law. Topics include: understanding the balance sheet, income statement, statement accounting; partnership vs. LLC; income tax accounting; money management and cash flow in a law practice; retainers; trust accounts; income measurement; auditing; and billing/fees/timekeeping.

**LAWS 4003 Appellate Advocacy (3 Credits)**

This course focuses on developing skills necessary for effective appellate advocacy. It includes discussion of the critical differences between trial and appellate practice and techniques for presenting a persuasive case on appeal. Students will write appellate briefs and present oral argument to a panel of judges. Students will also observe oral arguments presented in Colorado appellate courts.

**LAWS 4006 Accounting for Lawyers (3 Credits)**

This class introduces students to accounting principles and practices to prepare them for the manner in which transactional and other lawyers will be presented with accounting, auditing, and financial matters that must be understood to enable them to provide effective legal representation to clients. The course includes an introduction to basic concepts of bookkeeping and financial accounting, reading and understanding traditional financial statements, financial statement analysis and the use of financial ratios, and legal issues involving accountancy. The class will also examine the role and responsibilities of the independent auditor and the concept of full and fair disclosure of financial information as required by generally accepted accounting principles.

**LAWS 4007 Business Development: Marketing and Client Service (3 Credits)**

This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and, referrals.

**LAWS 4008 Privacy Law (3 Credits)**

This Privacy Law seminar examines the development of privacy rights as a key consideration in the business and governmental policy debates within the U.S. and E.U. These debates range from the appropriate role of government collection retention and usage of personal identifiable information (PII) as well as regulating the private sectors' usage of PII. The E.U. has taken the lead in establishing an all-encompassing privacy policy for both the public and private sectors, whereas the U.S. has established a sectorial approach to establishing privacy law and regulations. Lawyers will continue to play a significant role in shaping governmental privacy policy, drafting statutes and regulations, as well as business drafting and negotiating technology contracts.

**LAWS 4009 Community Expectations in Sustainable Development of Natural Resources (3 Credits)**

The spread of democracy, the rapid development of open information regimes, and the Internet means that it is increasingly important what local communities want, and how they view natural resource production. Sustainable development is a set of concepts that attempts to harmonize a number of seemingly competing goals. These include providing better conditions of life and more opportunities for people, especially the poor. They also include bringing production and consumption within limits that an ecosystem can tolerate in the long run. The new legal challenges need to be understood on a variety of levels: 1) the emerging set of international standards and requirements governing foreign direct investment; 2) changing national priorities in mineral legislation and the laws governing the extraction and use of mineral products; and 3) meeting community expectations for sustainable development.

**LAWS 4010 International Dispute Resolution (3 Credits)**

This class addresses critical topics for the attorney representing clients in international business transactions, including the role of the international lawyer, performing international research and locating international and foreign law resources, jurisdiction, provisional relief, choice of law, proof of foreign law, choice of forum or arbitration, service of process, obtaining the evidence, act of state, sovereign immunity, law of the seas, and enforcement of judgments. The class will consider relevant treaties and U.S. law, including the Hague Convention on Choice of Courts Agreement, the Uniform Foreign Country Money-Judgments Recognition Act, and potential litigation under such laws as the U.S. Foreign Corrupt Practices Act. The course addresses topics relevant to both litigation and arbitration.

**LAWS 4011 Labor and Employment Writing Seminar (3 Credits)**

The goal of this class is for students to research and write a scholarly law review article of publishable quality. Students will select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students will present their papers to the class toward the end of the semester. The top two papers will be selected for entry in the Jackson, Lewis National Labor and Employment Writing Competition.

**LAWS 4012 Protecting Intellectual Property in International Business Transactions (3 Credits)**

The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties are designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement and a manufacturing agreement. Students will then choose a topic from a selection of hypothetical problems, such as filing for patent protection in various jurisdictions, service of process on a foreign corporation, enforcing an arbitral award, resolving conflicts of laws, pre-litigation options. Each student will prepare a presentation for the class on the topic. The students will use the class feedback their research for the presentation to complete a paper on their topic. The drafting and paper will take the place of the final exam.

**LAWS 4013 Trial Practice II - Juries and Expert Witnesses (3 Credits)**

This course is for students who have already taken Trial Practice I. It will teach you more about how trial practice really works, build on what you learned in TP I, and allow you to sharpen and refine your skills. Since this class is taught using principles and methods developed by the National Institute for Trial Advocacy (NITA), you will accomplish this by actually doing the work, asking questions, introducing exhibits, working with experts, selecting juries and making arguments that help your client get a verdict. The class will have a focus on experts and juries. We will have real experts – psychiatrists, psychologists, and financial experts – for the expert witness exercises. We will also focus on juries and jurors: how to select them, how to persuade them and (I hope) how not to make them angry. In addition, you will prepare and conduct direct examination, cross examination, introduce exhibits, do opening and closing arguments, etc. In addition, we will cover redirect examination, dealing with difficult or obstreperous witnesses, working with interpreters, working with court reporters, and presentation of difficult issues such as damages.

**LAWS 4014 Emerging International Standards for Sustainable Development of Natural Resources (3 Credits)**

This course will focus on emerging international standards, legal, and "law-like" instruments designed to form the "rules of the road" in the dealings among private investors, host country governments, local communities, and other actors involved with sustainably developing natural resources. We will look at the track record of development: to what extent have natural resource projects helped make the world's poor better off? And what is meant by "better off?" What is a "fair deal" between a corporation from, for example, Europe or North America and a developing country government in Africa? How are disputes resolved?

**LAWS 4015 Intermediate Legal Analysis (3 Credits)**

Intermediate Legal Analysis will provide students with instruction in analytical skills in substantive areas of the law taught in the first year curriculum. Students will do multiple short assignments, primarily practice exams, in small sections. The course is a skills-based course, designed to develop analytical strategies necessary for success in law school, including rule synthesis and application, statutory interpretation, case analysis and briefing, fact evaluation, discernment of legal principles and theories, and effectiveness in written communication. The course will provide multiple opportunities for practice and feedback with exercises designed to help students learn, understand, and recall course materials with a particular emphasis in developing writing approaches and strengths for solving hypothetical legal problems. Upon successful completion of the coursework, students should be able to separate relevant from irrelevant facts, analyze statutory and case materials, apply relevant law to material facts in a competent manner to solve hypothetical legal problems, communicate effectively in writing, and complete analytical tasks within limited time constraints. The course will conclude with a final exam.

**LAWS 4018 Criminal Law (Advanced) (3 Credits)**

This course examines actual criminal cases from around the world and the application of the law at the time and place of the crime. The students will then compare this to the law today in the same jurisdiction and the Model Penal Code as applied to the same facts. This course also reviews current Colorado Law as it relates to liability and punishment based on the same fact pattern. The course will encourage analysis of what the law is and should be, and the aftermath of each case will lead to discussion about what actually happened to the defendant and why.

**LAWS 4019 Animal Rights (3 Credits)**

Students who have participated in the Civil Litigation Clinic for one semester are eligible to enroll in the Advanced Civil Litigation Clinic. The purpose of the advanced clinic is to provide students who have developed fundamental trial skills in the areas of landlord-tenant, domestic violence, and workplace law to further develop those skills and to work on cases and matters with greater independence for an additional semester without repeating the seminar component of the clinic.

**LAWS 4022 Criminal Clinic (Advanced) (3 Credits)****LAWS 4023 Civil Litigation Clinic (Adv.) (1-10 Credits)****LAWS 4025 Administrative Law (3 Credits)**

This class provides an introduction to the administrative process of government. Topics include Constitutional issues of separation of powers; delegation of legislative and judicial power; legislative and judicial authority in government agencies; agency exercise of policy-making functions; and controls imposed on agencies by administrative procedure legislation, Constitutional principles, and judicial review of agency action. Pre-req or co-req: LAWS 4164-Constitutional Law. Non-JD students must request permission to register.

**LAWS 4026 Criminal Procedure (Adv.) (3 Credits)**

From the commencement of formal proceedings to collateral attacks on convictions, this course guides students through the laws regulating criminal prosecutions. The course topics typically include pleas; trial rights; discovery; bail procedures; sentencing; double jeopardy; the death penalty; and habeas corpus. The focus of the course is on the federal constitutional rights and the federal rules of procedure that are applicable to each stage of a criminal proceeding. Prerequisite: LAWS 4200.

**LAWS 4027 Trial Practice II: Voir Dire (3 Credits)**

This course covers the practical process of jury selection including the court rules and statutes that apply as well as Constitutional issues including fair cross-section and discriminatory challenges. An exploration of the demographic, legal, and case-specific issues that can be addressed in jury selection. The course couples traditional lectures with emphasis on student exercises. The course culminates in a final voir dire where the student is given a case problem and required to incorporate persuasive introductions, law questions, case-specific questions, and conclusions. Student participation throughout the class is required as both the inquiring attorney and as a juror.

**LAWS 4028 Civil Procedure II: Trial and Post-Trial (3 Credits)**

Topics for this course include post-trial procedure, injunctions, and other advanced civil procedure matters.

**LAWS 4030 Family Law (Adv.) (3 Credits)**

Advanced Family Law is a practicum oriented class. This class has some lecture components, but there will be significant practicum aspects for students interested in learning about the practice of family law. Students will gain a general knowledge of family law, and more specifically the substantive and procedural aspects of dispute resolution oriented domestic relations practice. The subjects covered are divorce, custody and child support jurisdiction (intrastate and interstate); domestic case procedure, meeting with and managing your client; working with opposing counsel; temporary status conferences and agreements, Domestic Violence, discovery and use of experts, unbundled legal services, access to justice issues, and the permanent orders (final orders in the divorce); and attorney's fees. Prerequisite: LAWS 4240.

**LAWS 4031 Mediation (3 Credits)**

Students who have completed the basic Alternative Dispute Resolution course may enroll in this program that focuses on clients with more complex cases in both the civil and criminal arenas. Clients will be selected based on both public interest aspect and the propriety of the case as a learning vehicle for planning, pleading, negotiation, discovery, research and trial work. Prerequisite: LAWS 4060.

**LAWS 4032 Legal Analysis Strategies (3 Credits)**

This course provides last semester graduating students with instruction, guidance and feedback to develop foundational skills necessary to achieve success on both the bar exam and in the legal profession as skilled legal analysts. Substantively, the course will focus on core bar exam subjects (constitutional law, contracts, property, evidence, torts and criminal law/procedure) using practical problems in all three examination formats of the bar exam - essays, performance tests, and multiple-choice questions. Initially, the course provides a diagnostic evaluation of analytical and communicative strengths using a performance test and multiple-choice questions. Subsequent classes require submission of written practice exams with follow-up class presentations by students of analytical strategies used to solve hypothetical problems posed in essay questions, performance tests and multiple-choice questions. The course includes a final exam given during the final exam period designed to simulate bar exam protocols.

**LAWS 4033 Representing the Spanish Speaking Client (3 Credits)**

This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

**LAWS 4034 Legal Research and Writing for Graduate Students (2 Credits)**

This course will introduce students to the fundamentals of legal analysis in a common law system and various forms of legal writing. The course will also introduce students to current practice in legal research in the US legal system. This course is available to non-JD students only.

**LAWS 4035 Legal Research for Practice (2 Credits)**

Most new lawyers spend the bulk of their time conducting legal research. This course provides students with the practical research skills needed to succeed in today's law practice settings. The course follows an innovative sequence of classes structured around the most important research methods, tools, and search techniques for legal research proficiency. This approach teaches students the skills they need to be as effective and efficient as possible in their research, regardless of the research platform selected or the type of legal source one wishes to search. This course also uses a problem-based approach designed to simulate the types of research requests made in law practice settings. Course assignments include a variety of exercises, both in-class and outside of class, as well as four research assignments that demonstrate students' understanding of practice-focused research. Laptops are required for this course.

**LAWS 4037 European Union Environmental Law and Policy (3 Credits)**

The European Union (EU) has become a leading player in the context of European environmental legislation and policy making. Of particular interest has been the underpinning of the EU's single market, and environmental protection, the importance of which is clearly set out in the European Community Treaty. Matters dealing with climate change, genetically modified organisms, and recycling are now dealt with on a regular basis at EU level.

**LAWS 4042 Trial Practice II - Persuasion and Communication (3 Credits)**

This course is for students who are already skilled in the basic techniques of trials. This course will focus more on the "art" of advocacy. This course will focus on presentation and persuasion techniques that go beyond just getting the facts out. Students will practice storytelling techniques throughout trial, learn more persuasive use of visuals in storytelling, and think more critically about the use of case analysis and development of themes in advocacy. Prerequisite: LAWS 4635.

**LAWS 4048 Agency Partnership & LLC (4 Credits)**

This course investigates the structure and implications of various unincorporated business entities within three main categories: agency relationships, partnerships, and limited liability companies. Through the readings and various practice-oriented exercises, students will learn to understand and apply the rules, statutes, and doctrines that establish the governing framework for those entities, which range from some of the most basic to some of the most sophisticated forms of doing business. In addition to enhancing their ability to think critically and strategically about a variety of unincorporated business organization structures, students will develop practical skills that will improve their readiness upon graduation for the practice of law in various business contexts.

**LAWS 4050 Topics in Constitutional Law: Individual Rights (3 Credits)**

This course is an advanced constitutional law course, focusing on a selection of individual rights: equal protection; substantive due process; speech; the free exercise of religion; and the free establishment of religion. In each area, the course will seek to achieve a deep, descriptive understanding of the doctrine, and the ability to evaluate the doctrine in that area from a normative perspective.

**LAWS 4051 Topics in Constitutional Law-First Amendment (3 Credits)**

This is an advanced course in constitutional law that focuses on the law of the First Amendment. Most of the course will examine topics concerning the Free Speech Clause, including the theories of free speech, regulation of incitement, fighting words, defamation, offensive speech, hate speech, sexually explicit speech, and speech in the context of new communication media. It will also cover free speech doctrine and how it applies to symbolic speech, speech on government property, government compelled speech, speech in schools and by public employees as well as some topics concerning freedom of the press. The last part of the course will cover issues of freedom of religion under the First Amendment's Free Exercise Clause and Establishment Clause.

**LAWS 4055 Environmental and Agricultural Law (3 Credits)**

Agriculture contributes more than \$800 billion to the U.S. gross domestic product and provides 11 percent of US employment. As important as the food and fiber industries are to the American economy, devoting land to agriculture significantly affects the environment. Crop production can diminish habitat for wildlife, destroy wetland areas, erode the soil, cause nutrient and pesticide runoff, and pollute the air and water. This course addresses the complex and interconnected relationship of agriculture and environmental law, agriculture's historical roots in the United States, the evolution of agricultural policy, and modern developments in agriculture and environmental protection. The course is divided into three parts. In Part I, we will explore agriculture in a historical legal context and discuss USDA and Farm Bill programs. In Part II, we will focus on key environmental statutes and regulatory schemes that affect agriculture, including the Swampbuster program designed to prevent soil erosion and protect wetlands, the Clean Water Act, and the problems presented by Confined Animal Feeding Operations (CAFOs). In Part III, we will focus on emerging food systems in the United States, including certification and labeling programs, regulation of genetically engineered crops, the challenges (and opportunities) presented to farmers by climate change, as well as current and future trends in food production. We will discuss key policy and legal issues that surround each of these topics, with a particular focus on administrative law. Case studies of specific lawsuits will often be used to illustrate fault lines in how our society attempts to balance the need to produce cheap and abundant food against the need to protect the environment and public health.

**LAWS 4060 Alternative Dispute Resolution (3 Credits)**

The course examines the full range of contemporize dispute resolution processes: negotiation, mediation, arbitration and formal litigation. Conceptual and functional similarities and distinctions between these processes are explored. Additionally the processes; impacts upon disputants, role of the lawyer, the legal system and social order are reviewed.

**LAWS 4064 Introduction to the American Legal System (2 Credits)**

This course is designed for international LLM students who have not previously had exposure to either the US legal system or other common law systems. It focuses on the American legal system, include the three branches of government, federalism, the hierarchy of courts, and the anatomy of a law suit. Students will get a rigorous writing experience, drafting at least on legal document, such as a memorandum or a brief. In doing so, students will learn about legal research, analysis, writing, and Bluebooking. Students may also be asked to deliver and oral argument.

**LAWS 4065 American Legal History (3 Credits)**

This course concerns itself with the interaction between the legal system and social change in what is now the United States. Chronologically, the course materials run from the colonial period to the New Deal, although the nineteenth century will receive particular emphasis. A principal focus is the interrelationship of law, social life, economy, and ideology.

**LAWS 4070 Antitrust and Unfair Competition (3 Credits)**

The expansion of our economy over time has required the federal government and the courts to rethink their respective roles in regulating business conduct in the United States. The laws regulating business conduct are as dynamic as the notion of competition itself. This course teaches the history and fundamentals of antitrust and unfair competition laws in the United States. This course discusses the competitive problems which arise from monopolization, price and supply agreements, tying arrangements, exclusive dealings, cartel activity and mergers. The course also examines the interplay between federal, state and private enforcement of these laws.

**LAWS 4080 Real Estate, Title and Finance (3 Credits)**

This is an introduction to real estate transactions as they are encountered in the practice of law. We have shortened the course to a two-hour format to make it more accessible. Our emphasis will be on the representation of a client or an institution in the title and finance aspects of the real estate deal, which are central to every transaction. We will spend less time on contract formation and the role of brokers.

**LAWS 4085 Trial Practice III: Trial Practicum (3 Credits)**

Trial Practice III - The Trial Practicum (TP) is based upon the same educational platform as Trial Practice III - The National Trial Team (NTT). They are the same course, with the only difference being the TP students do not travel to compete against other schools, rather TP students compete in intra-school tournaments. TTP was created in response to the students who desire to benefit from the intensive study and simulated pre-trial and trial experience received by students on the National Trial Team course, and be "practice ready" upon licensure. This year-long, nine credit (three per semester), course is by invitation-only, and is demanding and intensive.

**LAWS 4089 Business Development: Marketing & Client Services (3 Credits)**

This course provides students with the tools to effectively market a solo practice and connect with the client. Topics include: client relationship management; social media; building a brand; networking fundamentals; website development; managing client expectations; effective communications; and referrals.

**LAWS 4090 Bankruptcy (4 Credits)**

This course introduces the federal bankruptcy system and Bankruptcy Code, including both the law of consumer bankruptcy and the law of corporate reorganizations. Topics include the rights of creditors in bankruptcy law and state law, the scope of the automatic stay, the treatment of executory contracts, the sale of assets in bankruptcy, the avoiding powers, bankruptcy planning, the restructuring of corporations in Chapter 11, and the procedure for confirming plans of reorganization.

**LAWS 4095 Real Estate Transactions (3 Credits)**

This is a problem-based course that covers both residential and commercial real estate transactions. Students will learn about the different phases of a real estate deal and examine sample documents that are involved in real estate transactions including purchase and sale agreements, brokerage arrangements, deeds of conveyance, and title insurance policies. Students will also address topics that appear on the bar exam such as the recording system and the financing of real estate acquisitions through mortgages and other tools.

**LAWS 4096 Patent Law (3 Credits)**

This course review the major patent law doctrines. Topics include patentability requirements under 35 U.S.C. 101, 102, 103, and 112, claim construction, various infringement doctrines, affirmative defenses and remedies.

**LAWS 4100 Basic Tax (4 Credits)**

This course provides students with a general understanding of tax law. Materials cover topics from personal and business deductions, to property basis and depreciation.

**LAWS 4101 Fundamentals of Taxation-JD (4 Credits)**

This class will cover fundamental concepts of the federal income tax system, including the definition of income, adjusted gross income, taxable income, exclusions from income, business and personal deductions, tax credits, basis, amount realized, gain and loss, capital gains and losses, depreciation, involuntary conversions, like-kind exchanges. This class is also intended to give the student a familiarity with the source materials of the tax law, including the Internal Revenue Code, Treasury regulations, case law and administrative materials.

**LAWS 4105 Business & Commercial Law Sem (1-3 Credits)**

Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority- and women-owned business firms. Prerequisite: LAWS 4190.

**LAWS 4108 Governance Workshop: Transparency and Privacy (2 Credits)**

This seminar will focus on cutting-edge legal issues related to governance, with a special focus on information: transparency, government accountability, information collection, and privacy. It will also provide an opportunity for students to engage in substantial scholarship of their own, improving their writing skills and providing insights into avenues for publishing written work. Most weeks, the Workshop will host a professor from another school to present a draft of a paper that has not yet been published. Students will carefully read the draft and participate in an in-depth discussion with the author. Through this process, students will have the opportunity to engage with many of the leading thinkers in the field. Some weeks, substantive material will be covered related to the course topics, including topics related to writing legal scholarship. Students will develop their own writing both in the workshop itself, and in scholarship groups of other students that will be assigned for the semester. Students will be expected to produce a significant piece of scholarship related to the topical area of this course by the end of the semester.

**LAWS 4110 Business Planning (3 Credits)**

The course introduces students to the transactional lawyering considerations involved in forming and representing an emerging growth business. The course examines the life cycle of a start-up company, including selecting the appropriate entity form, structuring the economic interests and managerial control among various owners, considering the lawyer's duties to the entity in dealing with its founders and management, and documenting various approaches to raising capital. Using a simulated deal format, students will draft, review and analyze documents typically used in organizing and financing a start-up business.

**LAWS 4112 Trademark Law (Advanced) (2 Credits)**

This seminar focuses on complex practical and legal issues confronted by today's trademark practitioners, ranging from brand protection strategies to litigating equitable relief claims for trademark infringement. The course also covers how trademark principles are being applied to the internet and e-Commerce. The course focuses on U.S. trademark law, but includes exposure to the aspects of international trademark law that are most frequently encountered by U.S. trademark practitioners. The course calls for students to participate in hands-on exercises, such as developing a new brand and arguing a preliminary injunction motion. The course requires a basic familiarity with trademark law, but the specific Trademark Law class is not a prerequisite. Prerequisite: LAWS 4310 or equivalent.

**LAWS 4115 Trademark Law (3 Credits)**

This course covers common law doctrines. Topics include the acquisition and preservation of trademark rights, false advertising claims, infringement doctrines, defenses, and remedies, with attention to internet issues and recent developments in the law. Recommended prerequisite: LAWS 4310.

**LAWS 4117 Taxation of Property Transactions (3 Credits)**

This course includes basis of property; capital expenditures and current expense comparison; depreciable status; amortization of intangible property; depreciation methods; property casualties and losses; profit or loss computation and characterization for taxable property dispositions; limitations on passive losses; lessor and lessee reporting; tax-deferred dispositions. Cross listed with TAX 4110.

**LAWS 4119 Animal Law Survey (2 Credits)**

This class is an introduction to the field of law referred to as "animal law." It is a survey course; we will study a range of legal topics that implicate the status and well-being of non-human animals. The course will not simply look casually or superficially at a spattering of areas where the law intersects with animals. Rather, the goal is to demonstrate that the field of animal law, like all great topics of legal study, is relevant to understanding general trends and overarching themes in U.S. law and policy. The course is a blend of theoretical and doctrinal materials, of historical reflections and future strategies. We will explore a variety of animal law topics and approaches for understanding "animal rights," but an overriding theme of the course is to understand whether and to what extent animal protection should be considered a civil rights movement. What is the role of activists versus lawyers? What is the role of criminal law in advancing the agenda of the movement? What is the role of constitutional law, and of science? And, do some species deserve more legal protections than others, and if so why?

**LAWS 4120 Civil Procedure (4 Credits)**

This required introductory course examines how Constitutional statutory and judicial rules frame the determination of court controversies. They also explore the doctrines, remedies, and other principles pertinent to judicial dispute resolution.

**LAWS 4129 Comparative Corporate Law Seminar (2 Credits)**

Comparative Corporate Law examines the system for forming and managing businesses in the United States and overseas. We examine the impact of culture and other factors on legal regimes and examine whether a uniform international system is developing. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4131 Commercial Law Survey (4 Credits)**

This course provides an introduction to the concepts and methods of commercial law. As a survey course, it explores the major Articles of the Uniform Commercial Code, namely, Article 2 (Sales), Article 9 (Secured Transactions), Article 3 (Payment Systems), as well as Article 5 (Letters of Credit) and Article 7 (Documents of Title). In addition, the intersection of Article 9 and Bankruptcy Law will be discussed in some depth. The completion of this course gives students a firm footing for any advanced course in commercial law. Students taking only one course in commercial law receive broad exposure to the basics of commercial law.

**LAWS 4132 Colorado Legal Research (2 Credits)**

This course introduces students to legal materials generated by executive/administrative, legislative, and judicial branches of Colorado government. Students develop research strategies for answering legal questions using primary and secondary resources and learn to relate the various sources of authority to the structure of Colorado government. Students are required to bring laptop computers to class.



**LAWS 4133 Corporate Social Responsibility (3 Credits)**

Corporate Social Responsibility represents the integration of a various environmental, social, ethical, and even political considerations into basic business strategies to produce a positive impact on society while still earning profits. With increasing frequency, consumers and investors reward companies that embrace CSR by purchasing their products and stock. This seminar in Corporate Social Responsibility explores a variety of pressing legal issues involving corporate governance, sustainable development, shareholder activism, executive compensation, the role of religion in the boardroom, international regulation, and CSR certification, among other topics. Through the readings and discussions, students examine the American approach to CSR in light of international regulatory efforts and models of socially responsible business practices in various countries around the world. Students gain a greater sense of the special role lawyers play in burgeoning CSR movement by examining some sophisticated examples of corporate strategy, planning, and litigation on CSR matters. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4135 Comparative Law (3 Credits)**

Comparative Law is the study of the foundation of legal traditions and systems which exist in the world today. The major topics covered in this course are legal history and culture; legal structures; legal actors; and procedure and sources of law. The interactive course begins with an overview followed with coverage of each of the topics in relation to the United States legal system. We then cover the same topics in relationship to the common law tradition and the civil law tradition.

**LAWS 4137 Comparative Environmental Law (3 Credits)**

Comparative Environmental Law is an introduction to the growing network of international law (multilateral and bilateral treaties, customary law, adjudications, etc.) that govern environmental law. The course focuses on international legal issues including global climate change; trans boundary pollution; resource depletion; toxic waste export; biodiversity and wildlife/plant extinction; deforestation; desertification; ocean pollution; sustainable development; etc. (The internal domestic environmental laws of individual countries receive some attention as does trade law, but these are covered with more detail in Comparative Law and International Business Transactions, respectively).

**LAWS 4139 Commercial Law for Foreign Investors in Guatemala (2 Credits)**

This class uses the Dominican republic-Central America-United States Free Trade Agreement (CAFTA-DR) and the North American Free Trade Agreement (NAFTA) to examine the legal framework regulating foreign investment in Central America and Mexico. With Guatemala's ratification of CAFTA-DR, Guatemala opened its doors not only to trade but also to foreign investment, including from U.S. companies looking to do business in Guatemala. While the CAFTA-DR includes norms that govern the relationship between foreign investors and Member States, the domestic laws of each Member State continue to provide the central regulatory structure that governs relations among the parties, including in the areas of commerce, intellectual property, labor and the environment. This is an introductory course that examines the principle commercial norms that would apply to foreign investors in Guatemala, with a special emphasis on the law of contracts. The course examines the comparable norms applicable under NAFTA and introduces the topic of how CAFTA's ratification has promoted rule of law reforms in Guatemala in the areas of commerce, intellectual property, labor and the environment. This course is taught in Spanish.

**LAWS 4143 Commercial Paper (2,3 Credits)**

This course introduces students to Article 3 of the Uniform Commercial Code, Negotiable Instruments. After studying this part of the UCC at the beginning of the semester, students will engage in a simulated, complex business transaction for the remainder of the course. The simulation involves problem solving, extensive document drafting, client counseling and professionalism, among other topics. The simulation involves transactions in a business/banking context, but is not an overview of banking law.

**LAWS 4144 Comparative Free Speech and Access to Information in the Americas (2 Credits)**

This course looks at the history and text of the guarantees of free speech in the constitutions of the United States and Latin American countries, including Guatemala; at judicial decisions interpreting them; and at the actual scope of those guarantees of free speech in practice, with emphasis on the function of free speech in facilitating democracy. The course also looks at the impact of globalization on free speech guarantees, including the impact of international treaties, the activities of NGOs, and speech on the Internet. The course compares the systems for providing citizens access to government information in the U.S. and Latin America, particularly Guatemala, and looks closely at areas where interest in disclosure and secrecy conflict.

**LAWS 4145 Computer and Internet Law (3 Credits)**

Computers and Internet Law is designed to consider the areas in which computer technology and the legal environment intersect. This includes legal protection of computer software; contracting for computer services; computer data banks and privacy; the check-less society; and the relationships between Federal Communications Commission policies and computers.

**LAWS 4160 Conflict of Laws (3 Credits)**

Conflict of Laws is an analysis of legal problems arising in cases when at least one of the operative facts cuts across state or national boundaries. Topics covered include problems of interstate jurisdiction over parties and subject matter the application of principles of full faith and credit and comity on the recognition and enforcement of interstate and multinational judgments; the comparison of various theories of law choice in the context of the Constitutional threshold constraints of the due process and full faith and credit clauses.

**LAWS 4164 Constitutional Law (4 Credits)**

This required introductory course examines the role of the United States Supreme Court and, in particular, the Court's power in exercising judicial review in cases interpreting the U.S. Constitution. The course focuses primarily on two topics. First is the doctrine of Separation of Powers: examining the structure and interrelationship of the three branches of the federal government, Congress, the Executive Branch, and the federal judiciary. Second is the doctrine of Federalism: the relationship and power distribution between the federal government and state governments. In addition, all sections devote part of the course to an introduction to at least one aspect of the large field of individual constitutional rights. The specific rights covered vary by instructor. Among the possible topics are: the Equal Protection Clause and Due Process Clause of the Fourteenth Amendment, the First Amendment, and/or the Fifth Amendment's Takings Clause. Students who wish to gain a deeper understanding of these topics are strongly encouraged to take Constitutional Law II.

**LAWS 4166 Constitutional Law II (3 Credits)**

This course provides upper level students exposure to a range of constitutional issues not covered in the basic required Constitutional Law course. At the discretion of the faculty, and in addition to a survey of constitutional law issues, this course may emphasize one or more specific topics, including but not limited to Sexuality, Causation, Poverty, First Amendment and Individual Rights.

**LAWS 4168 Constitutional Litigation Seminar (3 Credits)**

This course examines individual and class action litigation brought against government officials for the violation of constitutional rights under 42 U.S.C. section 1983, the primary federal civil rights statute, and other civil rights statutes. The historic interplay between substantive Constitutional law and traditional doctrines of tort liability has developed into an entire body of law under section 1983 that any civil rights or government lawyer must regularly confront. The seminar focuses on the most critical substantive issues in pursuing Constitutional litigation. This includes the history and purposes of section 1983; the elements of constitutional torts; rules governing liability of government officials and municipal liability; immunity doctrines; remedies; jurisdictional and procedural barriers to section 1983 litigation; and recovery of attorney's fees. The class also discusses the availability and viability of alternative remedial mechanisms to section 1983. Prerequisite: LAWS 4164.

**LAWS 4169 Constitutional Law Writing Seminar (3 Credits)**

This course satisfies the Upper Level Writing requirement (ULM). Permission by instructor only.

**LAWS 4175 Contracts (4 Credits)**

Consideration of the restatement of contracts and the relevant provisions of the Uniform Commercial Code. Legal protection accorded contracts: remedies and measure of recovery; damages; specific performance; restitution. Elements of agreement: preliminary negotiations; agreements unenforceable for indefiniteness; mutual assent. Consideration and the seal; bases of contractual liability; consideration; reliance and estoppel; mutuality. Problems of offer and acceptance; termination of offeree's power of acceptance; contracts concluded by correspondence; unilateral contracts—notice, knowledge, revocation of offer; contracts implied from conduct. Special problems of consideration. Third-party beneficiaries. Assignment. Effects of changes or unforeseen circumstances. Conditions in contracts—problems of draftsmanship: express and implied conditions; conditions precedent, subsequent and concurrent; severability of contract provisions. Procedures after default. The Statute of Frauds.

**LAWS 4178 Contracts Drafting (3 Credits)**

This course addresses the perspectives and skills that a lawyer must develop in order to assist clients with transactional work and aligning business objectives and contracts. In addition to delving deeper into selected areas of substantive contract law, students read materials that focus on writing and interpreting contractual provisions. Because a core focus of the class is writing for contracts, students regularly engage in drafting exercises to hone their drafting skills. The course also focuses on negotiation in a transactional setting, and how discussions with both clients and other parties can distill the key business terms that are to be reflected in a contract. Although substantive law and theory is utilized throughout the course, the primary objective of the course is exposing students to some of the practical, real-world skills essential to a transactional law practice.

**LAWS 4179 Construction Law (3 Credits)**

This course examines the legal relationships, obligations, rights, and remedies that govern the diverse parties to a construction project, including owners, lenders, contractors, material men, sureties, insurers, subcontractors, laborers, and others. A substantial portion of construction law (and accordingly, the primary focus of this class) is advanced contract law. Experience in the construction industry is not required, but those students who are unfamiliar with construction will benefit from spending a little extra time learning basic construction concepts and processes.

**LAWS 4181 Corporate Drafting Seminar (3 Credits)**

Corporate drafting focuses on writing responsive, lucid, unambiguous corporate documents. Students assume the role of the in-house counsel and other members of the corporate negotiating team as the team structures, negotiates, drafts, and implements corporate transactions. This course requires extensive writing. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4182 Negotiation and Drafting in an International Business Context (4 Credits)**

This course will focus on the basic principles of negotiation and contract drafting, as applied to international business transactions. Special emphasis will be placed on financial and corporate contracts, with a focus on a cross-border merger and acquisition transaction. The class will have three major components. First, we will cover the basic principles of effective contracts negotiation, paying particular attention to issues of cultural understanding and inter-cultural communication. Second, we will cover the basic principles of clear and unambiguous contract drafting and we will study and apply the basic 'geography' or building blocks of a cross border merger contract. Finally, we will draft and revise specific documents and agreements necessary to complete a cross border merger transaction. The seminar is taught through a combination of lectures, simulations, and hands-on drafting and negotiation exercises. This class requires extensive writing and team-based negotiations.

**LAWS 4185 Business Entities (4 Credits)**

The course provides an overview of the differences in the operation of a trade or a business as an LLC/LLP, an S-Corporation and a C-Corporation. The class offers an overview of the state law requirements for the operation of each type of business (Model Business act and LLC/LLP state statutes) and the difference in the tax treatment for each type of business. The objective is to give students a basic understanding of some of the do's and don'ts for each business and how they might advise a client as to the preferred business form in typical factual situations. The class explores both the legal and tax effects during the life cycle of any business, including formation, operation, distribution, redemption, sale of an interest, liquidation, mergers and divisions, and the death of the owner. Prerequisite: LAWS 4100.

**LAWS 4186 Corporate Taxation I (3 Credits)**

The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distribution to shareholders, stock dividends and redemptions, personal holding company, and accumulated earnings tax. Cross listed with TAX 4200.

**LAWS 4187 Corporate Taxation II (3 Credits)**

A continuation of Corporate Taxation I with emphasis on corporate reorganizations, operation, liquidation of subsidiary corporations and corporate division, and carryover of tax attributes. Cross listed with TAX 4300. Prerequisite: LAWS 4186.

**LAWS 4188 Corporate Taxation III (3 Credits)**

Advanced corporate taxation problems with emphasis on collapsible corporations; liquidations; detailed study of sections 305, 36, 307; loss carryovers and Subchapter S corporations. Cross listed with TAX 4330. Prerequisite: LAWS 4186.

**LAWS 4190 Corporations (4 Credits)**

Corporations provides students with a basic introduction to corporations, including the roles of shareholders and creditors. The instructor also covers the various duties and liabilities of officers and directors, and supplies a brief overview of the applicability of the federal securities laws.

**LAWS 4195 Criminal Law (4 Credits)**

The course explores the definition of crime and criminal liability.

**LAWS 4197 Victim's Rights (3 Credits)**

Victim's rights has emerged as an important arena for the criminal justice field in the 21st Century. Anyone planning a career in criminal justice will want to engage in this seminar class to learn about the law and its application to victim's rights. This class is designed to explore beyond advanced criminal procedure the role of the criminal justice system and its response to victim's. In-depth discussions will be held about victim's rights and criminal procedure.

**LAWS 4200 Criminal Procedure (3 Credits)**

Criminal Procedure outlines Constitutional and other rules regulating pretrial evidence acquisition by government officials in criminal matters. The course commonly includes the following topics: an overview of criminal justice administration; arrest; search and seizure; the exclusionary rule and its administration; wiretapping electronic eavesdropping; entrapment; interrogation; and confessions and lineup practices.

**LAWS 4201 Death Penalty Jurisprudence (3 Credits)**

The course is designed to make students aware of the substantive body of law surrounding the modern death penalty and the policy issues raised by the law. The course begins with the class constructing a fair death penalty. Students decide whether they, as the omnipotent legislature, want a death penalty. Then, students construct one that is fair, just and humane, and that achieves the goals that they have established for their death penalty.

**LAWS 4202 Disability Law (2-3 Credits)**

This course covers theories of disability and provides a brief history of disability rights in the United States. The course will explore the major federal laws protecting individuals with disabilities in various contexts such as housing, public accommodations, schools, and employment. Relevant federal statutes we will examine include Section 504, the Americans with Disabilities Act, the Fair Housing Act, and the Individuals with Disabilities Education Act. The course will also provide an overview of the Supreme Court's landmark decision in *Olmstead v. LC*.

**LAWS 4203 Elder Law (3 Credits)**

The course explores a range of issues relevant to legal counseling of elderly clients, such as mental and physical impairments, public assistance, Medicaid, social security, nursing homes, guardianships, trusts, and right to die issues.

**LAWS 4205 Employment Law Survey (3 Credits)**

This course provides a broad overview of the field of employment law. It begins with an exploration of the employer/employee relationship and the "at will" rule. It then addresses various constitutional, statutory, and common law doctrines that tend to be applied to the employer/employee relationship, often as exceptions to the "at will" rule. Contract, tort, and anti-discrimination doctrines will be covered, as well as constitutional doctrines addressing free speech and privacy in the workplace, and regulatory regimes addressing wages and hours. Finally, this course explores the post-employment relationship, including trade-secrets and non-competition agreements. These topics are addressed at both a theoretical and practical level.

**LAWS 4206 Environmental Law Clinic (3-6 Credits)**

The goal of the Environmental Law Clinic of the Student Law Office (SLO) is to protect the environment and public health, while teaching students practical legal skills that will translate into any practice area. Students applying for the Environmental Law Clinic are asked to select between two tracks: the Federal Wildlife Project or the Colorado Urban Project. Students who select the Federal Wildlife Project (FWP) track in the Environmental Law Clinic will work on the preservation of endangered species and their habitats throughout Colorado and the western United States. Students who select the Colorado Urban Project (CUP) track in the Environmental Law Clinic will work to address the emerging environmental issues along Colorado's urban Front Range. This course may satisfy the Upper Level Writing Requirement (ULW). Corequisite: LAWS 4802. It is recommended, but not required, that students complete Evidence and Legal Profession before registering for this clinic.

**LAWS 4210 Energy Law (3 Credits)**

Energy Law presents the regulation of production, conversion, transportation, distribution and pricing of fossil, hydro, nuclear, and other conventional sources of primary energy. It also offers insight into the regulation of renewable energy resources, including energy from the sun, wind, biomass, oceans, earth (geothermal), and rivers (including low-head hydro). There is an emphasis on new legislative and judicial development relating to these various energy sources. The course is taught in a seminar format, and students present and critique classmate papers as part of the class. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4212 Public Interest Capstone (0 Credits)**

This is a zero-credit opportunity for JD students nearing graduation that will allow for the informal community building that is so critical for sustaining student commitment and public interest attorneys for the long term. It will be a time for sharing, reflection, camaraderie, and connections, as well as advising and planning for a career in the public sector.

**LAWS 4214 Copyright Law (3 Credits)**

This course covers the major copyright law doctrines. Topics include the subject matter of copyright, the scope of protection, rights conferred, infringement doctrines, defenses, remedies, and attention to particular industries and recent development in the law. Recommended prerequisite: LAWS 4310.

**LAWS 4215 Entertainment Law (3 Credits)**

Entertainment Law focuses on issues that have an impact on the entertainment industry. Topics include copyright; service and trademark; licensing; publishing; unfair competition; antitrust; agency; and labor law. The class also explores publishing agreements.

**LAWS 4218 Discovery Practicum (3 Credits)**

Most civil litigations never get to trial. Instead, these cases are settled after the discovery period has revealed the strengths and weaknesses in the case. This course focuses on the instruments, rules, and case law governing discovery of information in litigation: interrogatories, document requests, requests for admissions, and depositions. It is taught in the form of a "whole-course simulation," which means students will represent a party and have an opposing counsel in a simulated litigation throughout the course. Students prepare and serve discovery documents (just as in practice), take, defend, and act as a witness in a deposition, and reach a settlement of the case at the end of the course. Because of the nature of the course and the many practice documents prepared during the semester, there is no final examination. This course will satisfy the Upper Level Writing requirement (ULW). This course is a "Carnegie Integrated Course."

**LAWS 4219 Environmental Justice (3 Credits)**

This course will introduce students to environmental injustice - the disproportionate environmental impacts to low-income and of color communities. The study of environmental injustice delves into environmental, civil rights and poverty issues. Specifically, environmental justice seeks to remove these disproportionate impacts through a combination of laws, most notably civil rights, environmental and tort. Students completing this course will understand what environmental injustice is, the history of the Environmental Justice movement in the United States and the tools used to try to level the playing field regarding environmental justice decision-making. The class will include hands-on exposure to those facing such environmental injustices. The grade for this course will be based on class participation, short assignments and a final paper.

**LAWS 4220 Environmental Law (3 Credits)**

Environmental Law covers the major federal laws and programs for environmental protection. These laws and programs include the National Environmental Policy Act; Clean Water Act; Clean Air Act; Resource Conservation and Recovery Act; and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although the course focuses primarily on federal statutory law, it also incorporates some discussion of common law remedies. Recommended prerequisite: LAWS 4025.

**LAWS 4221 Navigating the National Environmental Policy Act (NEPA) (2 Credits)**

The National Environmental Policy Act (NEPA) was the first major environmental law enacted in the United States, requiring Federal agencies to evaluate the environmental impacts of their proposed actions prior to making decisions. Both scorned and praised, familiarity with NEPA is must-know territory for any environmental lawyer. This class will leave you with a solid understanding of NEPA regulations and caselaw, categorical exclusions, environmental assessments and environmental impact statements, public involvement and public comment, interaction with other environmental laws and processes, recent and far-reaching streamlining efforts, how to write a NEPA document, and advice for working with Federal land management agencies.

**LAWS 4224 Employment Law Benefits (3 Credits)**

This course is a statute and case law course that introduces students to Employment Retirement Income Security Act (ERISA), the important federal law that controls the design and operation of virtually all employee benefit plans. The course offers students an understanding of the application of ERISA and how ERISA issues arise in business and private law practice. The classroom scenarios include lecture, problem solving and role playing to identify the kinds of experiences students are likely to experience in private practice.

**LAWS 4225 Estate and Gift Taxation (3 Credits)**

This class is a study of the federal estate tax; federal gift tax; and federal generation skipping transfer tax.

**LAWS 4227 Employment Discrimination Law (3 Credits)**

This course concerns federal constitutional and statutory law that prohibits discrimination in the workplace, including regulation of both private employers and the federal government. The course covers theoretical issues, such as the definition of equality, and practical problems that involve the complex procedural requirements of the applicable statutes.

**LAWS 4229 Employment Law Seminar (3 Credits)**

Students select topics relating to current issues in labor and employment law and will write publishable articles based on independent research. Students present their papers to the class toward the end of the semester. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4230 Estate Planning (2 Credits)**

Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts, including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed.

**LAWS 4232 European Union Law (3 Credits)**

The European Union (EU) has been described as the 21st century's newest superpower. Bearing in mind the rapidly growing importance of the EU, this course introduces EU law, and emphasizes its historical underpinnings, institutional framework, legal procedures, and internal market. Moreover, emerging policies (e.g. enlargement, environment) are considered. The course examines these topics in the context of European political integration and where appropriate, the ongoing tension in the trans-Atlantic relationship between the EU and United States.

**LAWS 4235 Evidence (4 Credits)**

This required course is an introduction to procedural rules that regulate the use of evidence at trial, including coverage of the mode of examination, relevance, impeachment, character evidence, hearsay, expert evidence, and privileges. Particular attention is paid to the Federal Rules of Evidence. Non-JD students must request permission to register. Non-JD students must request permission to register.

**LAWS 4236 Election Law (3 Credits)**

This course examines federal and state election laws. Topics to be covered include the Voting Rights Act, redistricting, the Electoral College, gerrymandering, ballot initiatives, and campaign finance. Time permitting, we'll also cover open records laws and regulations around lobbying.

**LAWS 4237 Evidence Practicum (3 Credits)**

This practicum is designed to help students build trial skills and make the transition from evidence law learned in the classroom to evidence used in the courtroom. It provides simulation-type experiences requiring students to understand the foundations required to admit different kinds of evidence, to anticipate evidentiary issues, to make and to respond to objections, and to prepare examinations designed to avoid objections. The course supplements Trial Practice by focusing heavily on the rules of evidence. Prerequisite: LAWS 4235.

**LAWS 4238 Exempt Organizations (2 Credits)**

The statutory exemption for "charities," social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions. Crosslisted with TAX 4430.

**LAWS 4240 Family Law (3 Credits)**

This course is an examination of laws that involve and/or regulate families. Students learn the legal rights of families in cases incidental to marriage or without marriage. This includes child-parent relationships and the dissolution of marriage. This class also provides students with an understanding of new familial relationships.

**LAWS 4250 Federal Courts (3 Credits)**

This is an advanced public law course that examines the role of the federal courts in our constitutional system. It focuses on the federal courts' role and power in relation to the other branches of the national government (separation of powers) and in relation to state and local governments (federalism). Specific topics include: the organic judicial powers of the federal judiciary, including Article III's Case or Controversy requirement; congressional power to restrict or expand federal jurisdiction, the Supreme Court's power to review state court rulings on federal law by direct appeal and on collateral review (habeas corpus), federal question jurisdiction, federal civil rights law under 42 U.S.C. § 1983, and many of the doctrines that limit federal judicial power to provide remedies to parties whose federal constitutional and civil rights have been violated, including official immunity, state sovereign immunity, and the abstention doctrines. It is highly recommended for students interested in pursuing federal judicial clerkships and/or careers in federal civil rights litigation, government representation, or other federal litigation.

**LAWS 4251 Wildlife Law (3 Credits)**

This course covers wildlife law, with a focus on federal wildlife law. The course will cover the constitutional underpinnings of federal wildlife law and its core statutory framework, as well as looking at different conservation approaches. Time permitting, the course will also cover some state and international wildlife law.

**LAWS 4259 Global Climate Change Law and Policy (3 Credits)**

As concern over the threat of global climate change spreads, action on greenhouse gas emissions (GHGs) is increasingly commanding attention. This seminar consists of supervised research and writing on the issue of climate change and the legal and policy responses. The course focuses on the effects of climate change on development and the environment in industrialized and developing countries and the laws in the international, regional and domestic arenas that address the problem.

**LAWS 4260 Gender and the Law (3 Credits)**

This course examines the role of gender in many areas of the law, including employment discrimination and reproductive rights. Provides perspectives on the effects of gender-based hierarchy on the structure of the law and legal processes. Explore contemporary feminist jurisprudence and the impact of women in the legal profession.

**LAWS 4262 Sexual Orientation Law Seminar (3 Credits)**

This seminar offers an opportunity for students of any or no sexual orientation to study the relationship between law and sexual orientation. Historically, law in the United States consistently and pervasively regulated the realm of human identity and behavior we call sexuality. Questions and claims challenging traditional assumptions about sexual orientation surfaced in the last twenty-five years. Our study of sexual orientation and law allows us to view the relationship between law and society through a new lens, that of sexual orientation. Specifically, we examine issues of sexual orientation arising in areas ranging from constitutional law criminal law, employment law, family law, health law, immigration law, to tax law. We discuss some or all of the currently controversial issues relating to sexual orientation and law, including such topics as the proliferation of both nondiscrimination laws and anti-gay initiatives like amendment 2 in Colorado, the constitutionality of laws prohibiting specified sexual behavior between different-sex and same-sex adults, the constitutionality of laws limiting the right to speak about sexual identity, public and private employment discrimination against gays and lesbians including the military ban on persons who are openly gay or lesbian, and discrimination against same-sex couples with respect to marriage, parenting, health benefits, and taxes.

**LAWS 4265 Government Contracts Seminar (3 Credits)**

This seminar provides an in depth examination of the unique statutory, regulatory and administrative process used by the U.S. Government when it annually spends more than \$1 trillion taxpayer dollars to contract for goods and services used by Federal departments and agencies. Topics include the contract award and contract administration processes, with an emphasis on practical solutions to issues which routinely confront attorneys who advise businesses that do business with the Government.

**LAWS 4270 LLCs and Operating Agreements (1 Credit)**

This course provides an overview of limited liability companies, including the attributes and characteristics of LLCs, the pros and cons of the LLC form, and a comparison of LLCs to other types of entities. The course also covers the structure and components of the operating agreement, including an in-depth examination of various provisions included in operating agreements. In conjunction with the course content, students will also be exposed to client interview techniques for in person client meetings, as well as client conference calls.

**LAWS 4276 Health Law (3 Credits)**

This survey course introduces students to how the legal environment of health care shapes both its quality and its distribution. The course begins with a foundation in how health care is both provided and financed in the U.S., including managed care, Medicare, and Medicaid. This foundation sets the stage for studying the laws and policies that impact health law, including ERISA, antitrust, fraud and abuse, the False Claims Act, Stark, and HIPAA. This course does not focus on bioethics or medical malpractice. Students must submit a publishable quality paper on a health law topic approved by the professor.

**LAWS 4277 Holocaust Seminar (2-3 Credits)**

This class focuses on conceptions of individual and state accountability. By understanding how the Holocaust occurred, and how individual and collective acquiescence combined with affirmative conduct, we can begin to grasp the complex web that created a moment in time where morality and civilization were abdicated and almost eradicated. We examine how law, culture, power, ignorance and fear combined to create the Final Solution, and how conceptions of moral agency and accountability were forged in flames that marked the death camps. Students read narratives of resistance and collaboration and historical accounts of how the U.S., Europe and religious institutions interacted with the Third Reich. Through the readings and discourse that follow, students have the unique opportunity to question what constitutes moral agency and how individuals and cultural systems should be held accountable for circumstances that created the Third Reich and its ideology. This class is interdisciplinary thereby integrating law with literature, political theory and philosophy. Prerequisite: instructor's permission.

**LAWS 4278 Lawyering for Racial Justice (1 Credit)**

This seminar provides a unique opportunity for Denver Law students to earn one credit by studying a significant topic related to the law and racial justice. The seminar will allow students to begin to develop 1) a substantive understanding of the application of critical race theory to a variety of contemporary legal and social issues, and 2) a sense of professional identity through the examination of lawyering practice in the context of critical race theory. Topics discussed generally change each semester to respond to current events and pressing needs and interests. The course may include guest lectures from faculty and practitioners in other disciplines. Students will thus have an opportunity to interact with an array of professors who have expertise and interest in critical race theory and practice.

**LAWS 4279 Access to Justice (3 Credits)**

This class will explore the justice gap in the United States, focusing primarily on the civil side. We will first consider what has caused the dearth of legal services available to low and moderate income people. We will then examine what solutions states have tried to address the justice gap and why those solutions have been only modestly effective. Finally, while the class is focused primarily on the civil justice gap, we will spend some time discussing the inadequacy of criminal representation for indigent defendants.

**LAWS 4280 Huges Research Seminar (1-5 Credits)**

Topic of Seminar to be determined by Hughes Research professor teaching the course.

**LAWS 4285 Legal Research Skills - Specialized (0 Credits)**

This zero-credit course introduces students to sources and methods for administrative law and legislative history research as well as subject-specific research on selected topics such as securities, natural resources, intellectual property, immigration, environmental and international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4287 Legal Research Skills - Basic (0 Credits)**

This zero-credit course introduces students to the basic primary sources of American law (cases and statutes), secondary sources, the Bluebook and citators and other tools for updating research. Print and electronic materials are used throughout the course. Students must attend eight (8) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4288 International and Human Rights: Indigenous Peoples (3 Credits)**

This course explores some of the major contemporary legal issues facing indigenous peoples across the globe. The course covers issues as far ranging as: how indigenous groups are defined under the law; ethical and legal issues pertaining to indigenous self-governance including the tension between minority rights, individual rights, and democratic precepts; the uneasy application of self-determination law to indigenous self-governance; the implications of human rights, environmental, intellectual property, and international trade regimes for indigenous peoples; and international legal texts affecting indigenous peoples, such as the United Nations Declaration of the Rights of Indigenous Peoples. At the option of the individual student, this course can be used to satisfy the Upper Level Writing requirement (ULW).

**LAWS 4289 Legal Research Skills - International (0 Credits)**

This zero-credit course introduces students to sources and methods for international, comparative and foreign law research. Topics may include treaty research, international trade law, human rights law, international intellectual property law, customary international law and private international law. Topics change each semester. Print and electronic materials are used throughout the course. Students must attend twelve (12) classes and pass the post-class assignments to complete the course successfully.

**LAWS 4290 Human Rights Law (2 Credits)**

The course provides an introduction to international civil and political rights and economic, social, and cultural rights in the international arena. It also covers the means available to protect such rights of the individual and groups. The focus is on the implementation part at the United Nations and other international, regional and national settings. Prerequisite: LAWS 4320.

**LAWS 4292 Individual Tax Problems (3 Credits)**

Using the Internal Revenue Code and the Federal Income Tax Regulations as a basis, substantive issues relating to individual taxation are covered. Areas included are general concepts of gross income, individual employee benefits and deductions, charitable deductions, alternative minimum tax, deductibility and classes of interest, office in home and vacation homes, and a general overview of the interrelationships of various statutory and non-statutory principles. Cross listed with TAX 4020.

**LAWS 4295 Immigration Law (3 Credits)**

This is a study of the historical development and current jurisprudence in American immigration law. The course examines such concepts as sovereign authority, exclusion, expulsion and asylum, and current developments in the area.

**LAWS 4297 Forced Migration & Human Trafficking (3 Credits)**

This course will examine the laws and policies governing forced migration. Students will get an overview of the scale, scope, and causes of forced migration, and will explore what it means to be a refugee according to the international conventions and U.S. law. We will ask and try to answer questions including: what conduct constitutes "persecution"? How is someone fleeing violence different from a refugee? What kinds of durable solutions exist to address the refugee crisis? In this participatory class students will also learn about human trafficking and the national and international efforts to respond to this crime. In addition to the normal substantive course work, students are required to observe 4-6 hours of refugee-related hears at the Executive Office of Immigration Review in Denver.

**LAWS 4298 Immigration Law Advanced (3 Credits)**

This course provides theoretical and practical approaches to the representation of non-citizens in removal proceedings. This course is designed for students who have an interest in practicing immigration law with a focus on deportation and removal practice before the Department of Homeland Security, the Executive Office for Immigration Review, and the federal courts. The goal of this course is to give students a theoretical framework for identifying and assessing immigration issues, including immigration consequences of criminal convictions, and for formulating strategies for effective prosecution and representation of non-citizens in removal proceedings. The instructor also teaches the practical tools and procedures, which students may apply to actual case representation. Prerequisite: LAWS 4295 or an immigration related externship.

**LAWS 4300 Native American Tribes and Federal Law (3 Credits)**

This course introduces the legal relationship between Native American tribes and the federal government. This body of law, consisting of hundreds of treaties and Presidential executive orders, thousands of Congressional statutes, and tens of thousands of reported court decisions, is also known as Federal Indian Law. The course explores the legal development of Native American tribal sovereignty and self-determination from the British Crown to the present day, including tribes' rights to land and natural resources; the federal government's trust responsibility to tribes; tribe's inherent powers of self-government; modern civil and criminal jurisdiction; the relationship of tribes to state and local governments; the federal government's legal obligation to consult with tribal leaders on decision-making by executive branch departments and agencies, including with respect to cultural resource protection; and the legal and political status and civil rights of individual Native Americans and Alaska Natives in the federal constitutional system.

**LAWS 4303 International Criminal Law Practicum (3 Credits)**

In this course, the class collectively analyzes the genocide, war crimes and crimes against humanity charges against an accused in a major international tribunal prosecution. Each student is assigned witnesses in the case and is expected to analyze that testimony and record their work in the case database using Casemap software meticulously following previously established protocols. The work involves the students learning the nature of the conflict generally, thoroughly learning the indictment against Taylor, getting up to speed on the law of war crimes and crimes against humanity, and finally assessing the witness testimony for relevant facts and attributing those facts to the legal outline in the case.

**LAWS 4304 Insurance Law (3 Credits)**

A comprehensive overview of laws, standards, concepts and remedies related to Insurance, including: interests protected by Insurance; selection and control of risks; insurable interest; the principle of indemnity; types and classifications of Insurance; making, dealing with and termination of insurance contracts; underwriting and claims handling; regulation of Insurance and insurers; subrogation; and extra-contractual liability. This course will satisfy the Upper Level Writing requirement (ULW).

**LAWS 4309 International Law and the Use of Force (3 Credits)**

This course deals with the two aspects of the use of force by countries: the initial decision to resort to force and then the regulation of that force once the conflict begins. In 1945, the United Nations Charter set out to prohibit the resort to force by its member states except in two limited situations: self-defense or where authorized by the Security Council. The Geneva Conventions and its protocols, as well as customary international law, regulate how that force is applied. The subject of this course is how these provisions have been interpreted since 1945 and trends in the law that will guide us in the future.

**LAWS 4310 Introduction to Intellectual Property (3 Credits)**

This survey course covers the basics of United States intellectual property law, including patents, copyrights, trademarks, and trade secrets. The course addresses the policies underlying the protection of intellectual property and compares the different ways organizations and individuals can use intellectual property to protect their interests. This course is intended both for students who want an introduction to intellectual property and for those who intend to pursue a career in intellectual property law.

**LAWS 4315 International Business Transactions: Survey Course (3 Credits)**

This course provides students with a general overview of international business transactions. The course examines the legal framework of international sales transactions including the commercial terms of the sales agreements, shipping contracts, insurance, financing arrangements and customs documentation. The course also examines the foreign direct investment transaction, international franchise and distribution agreements. The regulation of international business is reviewed, with special attention to the World Trade Organization agreements and regional trade areas.

**LAWS 4317 International Environmental Law (3 Credits)**

This is an introduction to International Environmental Law – the expanding field of multi-nation treaties, laws, judicial decisions, policies, practices, and politics governing the global environment. IEL backgrounds students on the 21st century's hottest international law topics – sustainable development, climate change, transboundary air and water pollution, natural resources development, international trade, toxic waste and recycling, and protection of wildlife, ecosystems, human life, and human rights.

**LAWS 4318 International Business Transactions: Federal Regulation (3 Credits)**

IBT: Federal regulation examines the ability of the federal government to control international trade. The focus of the course is US export controls, embargoes, anti-terrorism regulations that apply to international commerce, and the Foreign Corrupt Practices Act. Students prepare a compliance program integrating these regulations into a workable framework for a company.

**LAWS 4319 International Human Rights (3 Credits)**

The seminar begins with a general overview of international human rights as put forth in the International Bill of Rights. The second part of the course focuses on the emerging area of corporate social responsibility and human rights. The last part of the seminar consists of student presentations on the topics of the research papers required for the course.

**LAWS 4320 International Law (3 Credits)**

International Law is the foundational course in public law, treaties, systems, and policies that bind nations into a world community of law. The class places special emphasis on the origins of international law; statehood; international responsibility and claims; use of force; and human rights.

**LAWS 4341 International Commercial Arbitration Moot (3 Credits)**

This course uses the Willem C. Vis International Commercial Arbitration Moot Competition to give students practical skills-based training in the most important aspects of international commercial arbitration and international sales law. The Vis Moot is based on a problem governed by the U.N. Convention on Contracts for the International Sale of Goods (the "CISG").

**LAWS 4342 International and Comparative Mining Law (3 Credits)**

The course deals with basic concepts of mineral law, as practiced in various jurisdictions. This includes exploration, mining and environmental protection and reclamation issues. It then focuses on the current evolution and legal and policy status of mining legislation, mineral investment agreements, and major actors. Students completing this course develop a basic understanding of the general approaches, legal frameworks, policies and agreements used to regulate the mining industry in key jurisdictions outside the United States. This course is taught in Spanish.



**LAWS 4343 International and Comparative Petroleum Law (3 Credits)**

The course deals with basic concepts of international law relating to petroleum investment, current elements of petroleum legislation, and petroleum investment agreements (production-sharing, concession, joint venture, service, management contracts). Also, students explore such aspects of petroleum law as dispute settlement and legal status. The instructor will discuss the major actors (international petroleum companies, state petroleum enterprises, Ministries of Energy) and their legal and policy status. Students completing the course leave with a basic understanding of the general approaches, policies, and agreements used to regulate the petroleum industry in key selected jurisdictions outside the United States.

**LAWS 4344 International Tax (3 Credits)**

Introduction to U.S. international taxation with an equal emphasis on inbound and outbound transactions. Resident and nonresident alien taxation, withholding taxes, effectively connected (business) income, foreign investment in U.S. real estate, tax treaties, branch taxes, earnings stripping, conduit financing rules, foreign earned income exclusion, classification of foreign entities, foreign tax credit, foreign personal holding companies, controlled foreign corporations, passive foreign investment companies, export transactions, Subpart F manufacturing rules, outbound property transfers, and transfer pricing. Cross listed with TAX 4420.

**LAWS 4345 Jurisprudence (3 Credits)**

The course is designed to introduce several contemporary modes of legal thought. The course is an exploration and critical evaluation of these differing perspectives on law are pursued to foster an understanding of the interdependency between legal philosophy and legal decision process, the role law plays in our culture, and the social and philosophical impediments to law's effectiveness.

**LAWS 4346 International Sales (3 Credits)**

This course will examine the laws governing the international sale of goods, including the Unidroit Principles, the relevant rules adopted by the United Nations Commission on International Trade Law, the Convention on the International Sale of Goods (CISG), and the International Chamber of Commerce (ICC) Modern International Sale Contract. Special emphasis shall be given to the CISG as well as to comparing the law of international sale of goods with United States contract law. Issues such as international payments methods, letters of credit, customs clearing procedures, and dispute resolution will also be discussed. Two large topics - (1) the CISG and (2) letters of credit and other means of financing cross-border transactions - comprise the bulk of the course.

**LAWS 4347 International Environmental Law in Latin America (2 Credits)**

This course examines the role of international law in promoting cooperative solutions to some of the most pressing environmental problems confronting the planet. The course begins with an introduction to the international law framework within which international environmental law has developed, and emphasizes the relationship between international environmental law and international human rights law. The course then uses several case studies to analyze the legal regimes that have developed to address environmental problems of particular relevance to Latin America, including protection of biodiversity, climate change adaptation and mitigation, and protection of water resources. This course is taught in Spanish.

**LAWS 4348 International Criminal Procedure and Practice (3 Credits)**

The International Criminal Court and the various international and internationalized tribunals such as the International Criminal Tribunal for Rwanda and for the former Yugoslavia prosecute a unique and evolving set of international criminal laws designed to end the impunity of military and political leaders engaged in mass violence. The post-World War II Nuremberg trials were the first attempt to use tribunals to hold individuals criminally responsible. Later, the Nuremberg present was the basis of the creation of ad hoc war crimes tribunals for the former Yugoslavia and Rwanda in the early 1990s, which then opened the door to other tribunals such as the Special Court for Sierra Leone, the Extraordinary Chambers for Cambodia and the International Criminal Court. The practitioners of the tribunals represent the range of cultures, mores and legal traditions of the world. These varied experiences create different expectations as to the conduct of proceedings and what amounts to procedural fairness. This course studies the rules of procedure and practice that have developed at the international tribunals in the multi-cultural context.

**LAWS 4350 Juvenile Law (3 Credits)**

This course examines the legal parameters surrounding juveniles. Students gain a basic understanding of juvenile law, such as the legal definition of who is considered a child and the allocation of power between the state, parent(s), and the children. The class examines what protection the Constitution provides children and the historical development and philosophy of juvenile justice to understand the foundation of juvenile law. The focus of the class also includes an examination of rights of abused children and children who are delinquents and status offenders.

**LAWS 4351 International Mergers and Acquisitions (3 Credits)**

Using recent articles as case studies, students will consider what motivates corporations to undertake cross-border acquisitions and divestitures, why most transactions ultimately fail to meet expectations, and how lawyers structure transactions to avoid these pitfalls, including (i) corporate forms worldwide (corporations, partnerships, LLCs); (ii) the timeline of M&A transactions from the initial idea through transfer of ownership and the 5 years thereafter; (iii) forms of acquisition (merger, asset purchase and stock purchase); and finally (iv) negotiation of the pertinent legal documents. This course has become increasingly relevant as the world becomes less open and congenial, while businesses continue to seek geographically and culturally diverse markets. This course is appropriate for both students with no business background and students with extensive business and legal experience.

**LAWS 4355 Labor Law (3 Credits)**

Labor Law provides a background of modern labor relations law and union pressures with an historical review of the laws that shape this field. Laws covered include the National Labor Relations Act; National Labor Management Relations Act; Labor-Management Reporting and Disclosure Act of 1959; Civil Rights Act of 1964; employer unfair labor practices; union unfair labor practices; internal affairs of labor organizations; collective bargaining and settlement of labor disputes; and state labor legislation. Also, it explores employer and union labor practices and manners in which disputes concerning these practices may be resolved.

**LAWS 4358 Land Conservation Transactions (3 Credits)**

This course covers the fundamental law and principles related to land conservation. It is a research based class, and students are responsible for researching, presenting information and drafting regarding a specific conservation project. This course provides all the background necessary to allow students to conduct a meaningful research foray in and to create conservation easements for land conservation.

**LAWS 4360 Land Use Planning (3 Credits)**

This course examines government controls used in the regulation of land use and development and the urbanization of the built environment in cities and metropolitan areas in the United States. The course includes an analysis of state and local laws and federal constitutional issues related to the use of master plans, zoning and land development codes, growth management and smart growth development techniques, as well as the topics of subdivision regulation, eminent domain and urban renewal. Special problems in land use planning studied include exclusionary zoning, regulation of aesthetics, design controls and visual beauty, signs and billboard, religious land use, protection of natural lands and wildlife habitat, regulation of natural resources development, fair housing laws, and the protection of private property rights in the urban regulatory process.

**LAWS 4362 Latin American Law (3 Credits)**

This course seeks to provide students with a basic understanding of Latin American legal traditions. Intended for students who will come into contact with Latin American law in their work as lawyers, international civil servants, business executives and diplomats. The course examines the civil law tradition and constitutional law issues and current developments, such as Latin American economic integration, reform of the public sector, and the emergence of the Inter-American system for the protection of human rights.

**LAWS 4365 Law and Economics (3 Credits)**

This course is an examination of selected common law, regulatory law, and Constitutional law issues from the perspective of economic efficiency analysis.

**LAWS 4370 International Investments (3 Credits)**

The global investor is faced with a complicated task. He must deal with multiple currencies, multiple markets, multiple cultures, and multiple regulatory environments. However, the most important aspect of international investment is the use of multiple currencies. Accordingly, the first module of this course lays the foundation of foreign exchange rates: the basic facts of foreign exchange quotations, international parity conditions and arbitrage implications, and exchange rate forecasting. The second module covers the various assets and markets available for global investing: international bonds, equities, alternative investments, and optimal international portfolio selection. The third and final module develops risk control techniques available with derivatives: forwards, futures, options, and swaps. Overall, this course will emphasize conceptual understanding and applications, rather than lengthy theoretical exposition and mathematical analysis.

**LAWS 4371 International Investment Arbitration Practice & Procedure (3 Credits)**

International investment arbitration has a few names. It has been referred to as investor-state arbitration, investor-state dispute settlement (ISDS), and sometimes simply international arbitration. Investor-state arbitration is a powerful and relatively new form of dispute resolution. It largely originates from the many bilateral investment treaties (BITs) developed in the 1950s, and has expanded to larger and more complicated international treaties such as NAFTA, CAFTA, and the Trans Pacific Partnership (TPP). Today, this is the fastest growing field for international legal practitioners. Any international transaction with the characteristics of a foreign investment implicates investment treaties. With the development of new trade agreements such as the TPP and Transatlantic Trade and Investment Partnership (TTIP) the field will only continue to grow. This course is experiential in nature. It examines the field of investor-state arbitration from the perspective of an investment dispute. The class will simulate an investment dispute in the context of an International Centre for the Settlement of Investment Disputes (ICSID) proceeding. The course will move through a typical ICSID case from beginning to end (in an abbreviated format) and focus on key areas in the field of investor-state arbitration. This course will only be taught in the spring semester and serves as the gateway to the University of Denver Foreign Direct Investment Moot Team (<http://www.fdimoot.org>). Students with a strong interest in joining the FDI Moot Team and attending the FDI Moot as counsel the following fall semester will be given preference to join the class.

**LAWS 4373 International Practice and Procedure (3 Credits)**

This course is only open to members of the current Jessup Team and focuses upon the practice and procedure before the International Court of Justice. Students will examine the ICJ's history, organization, competence, and role as the primary judicial organ of the United Nations and permanent institution for the pacific settlement of disputes between States. The course will be split between both theory and practice, wherein students will study the major landmark cases of the ICJ affecting the practice of international law, and be exposed to the rules of procedure and style of practice before the ICJ through the use of a hypothetical contentious case between two States. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4375 Law and Society (3 Credits)**

The primary focus of this seminar is on law as a product of the structure of society. The subject matter can be divided into four distinct sections: 1) What factors affect the development of substantive law? This section examines the influence of values, beliefs and norms. 2) Given the existence of substantive law, what organizations develop to carry out the administration of law? Here concentration is on the phenomena classified as legal roles, organizations, institutions, and inter-institutional relations -e.g., juries, the legal profession, courts, legislature, etc. 3) How does law affect social behavior? and 4) What is the role of law in social change?.

**LAWS 4376 Law and Emerging Technologies (3 Credits)**

Technological innovations have created challenges for regulators and policymakers. This course focuses on recent emerging technologies and introduces law students to ways law interacts with technology. Students are encouraged to think creatively to address the current challenges and anticipate future legal impacts. It also familiarizes students with the recent legal scholarship in this field. Topics covered in this course include autonomous vehicles, AI and facial recognition, big data, digital privacy, deep fakes, platform governance, and quantum computing.

**LAWS 4378 Race, Class & Reproductive Justice (2,3 Credits)**

This course examines how race and class status affect women's reproductive rights and how both legal rules and medical practices in this area rely on stereotypes and enforce norms of "good motherhood" on women. Topics covered include some or all of the following: abortion, contract parenthood ("surrogacy"), cloning, sterilization, embryo freezing, pregnancy-based employment discrimination, criminal prosecutions of women for prenatal substance abuse, and court-ordered Cesarean sections.

**LAWS 4379 International Trade Law (3 Credits)**

This course examines the law of international trade in goods and services, focusing principally on the law of the World Trade Organization and the General Agreement on Tariffs and Trade. We examine the trading system's rules restraining national restrictions on trade that address, among other things, tariff and non-tariff barriers, discrimination, regionalism, anti-dumping, countervailing duties, and safeguards. The course also spends time considering the relationship between trade and other regulatory areas or social values, such as environmental protection, health and safety standards, human rights, intellectual property protection, and other facets of globalization. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4380 Hazardous Waste and Toxic Substances (3 Credits)**

This practical, hands-on course reviews the major federal environmental protection programs, with an emphasis on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") and the Resource Conservation and Recovery Act (RCRA). It also covers Toxic Torts, Underground Storage Tanks, the Clean Water Act, Safe Water Drinking Act, and the Clean Air Act. Other materials may be distributed by the instructor on OSHA, NEPA, TSCA, OPA, the Colorado state voluntary cleanup program (VCUP), toxicology, and immunity issues. The course emphasizes practical application of major environmental laws. Students become familiar with statutory and regulatory schemes, and are expected to be able to identify environmental legal issues and apply environmental laws and regulations to hypothetical problems. JD student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495. LLM and MRLS student prerequisites: LAWS 4220, LAWS 4450, or LAWS 4495, or be registered to take any of these.

**LAWS 4382 Legislative Process: Institutions & Interpretations (3 Credits)**

This course is designed to be a three credit introductory course on the legislative process. This course focuses on theories of the process through an examination of theories of representation, theories of deliberation, direct democracy, and due process of lawmaking. Finally, this course will also explore legisprudence. Legisprudence explores theories of statutory interpretation and constitutional/statutory provisions which govern the political process and its participants. This course is intended to serve very practical goals. Students considering careers as legislative drafters, legislative staffers, elected officials, lobbyists or activists should emerge from this course with an understanding of the legislative process and a sense of how courts, agencies, and the executive branch are likely to interpret statutes. This course provides litigators with the tools to convince the courts that their interpretation of a statute is the correct one. For those students whose careers will require advising others about the meaning of statutes, this course helps provide the skills needed to perform that task.

**LAWS 4383 Doing Business-Latin America (3 Credits)**

Taught in Spanish, this course acquaints students with the legal framework of business transactions in Latin America. The course exposes students to the civil law system used in most Latin American countries and covers selected topics of importance to lawyers advising clients doing business, or seeking to do business in Latin America. Topics may include the development of Latin American law, types of corporate and partnership organization, trade law, foreign investment, intellectual property, taxation of foreign income, environmental and labor standards, and dispute resolution.

**LAWS 4385 Lawyering Process I (3 Credits)**

The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis.

**LAWS 4386 Lawyering Process II (3 Credits)**

The Lawyering Process Course provides first-year law students with a foundation in the essential lawyering skills that are necessary to be an effective, ethical, and professional member of the legal community in a rigorous, supportive learning environment that uses a client-centered approach. The first semester focuses on introducing students to the legal system, legal research, and providing client advice through written analysis. The second semester builds on students' research, writing, analytical, and oral presentation skills in the context of advocating for a client.

**LAWS 4387 Professionalism and Well-being Skills for the Effective Lawyer (2 Credits)**

The objective of this course is to support professional identity formation and growth in the professionalism and well-being skills of future lawyers as they progress toward growing competence as professionals. The first half of the course focuses on law student well-being and optimizing brain health and mental strength to enhance performance. The second half of the course is devoted to the development of professionalism skills such as professional development, self-awareness, bias, social proficiency, wisdom, and leadership, essential attributes of a high-performance legal practice.

**LAWS 4390 Law and Neuroscience (3 Credits)**

In this survey course, we will cover some neuroscience basics, including a brief history of neuroscience, how neurons and neurotransmitters work, what is currently known about how the brain is organized, both structurally and functionally, how modern neuroscience views the so-called Cartesian dichotomy between emotion and cognition, and the basics of the most common types of neuroimaging. We will then explore the law and neuroscience of pain, memory, lie detection and criminal responsibility, discussing how neuroscientific discoveries might or might not change how the law handles these discrete problems, and the related evidentiary issues of how to get neuroscientific evidence admitted or excluded in cases involving these problems. We will finish, time permitting, with some speculations about artificial intelligence and neuroprosthetics.

**LAWS 4395 Military Law (3 Credits)**

This course will review the history, nature and sources of military law; the Uniform Code of Military Justice and the functions and procedures of military courts-martial, including the rights and status of military personnel. It will also cover an overview of the laws of armed conflict; national security and domestic application of operational military law; and the policies and international treaties affecting the detention and prosecution of enemy combatants and other foreign nationals. The course materials will rely on primary sources including statutes, cases, treaties, and selected law review and other articles, which will be provided electronically to each student. The course will review these military law topics with an emphasis on case studies and policy discussions in the context of recent current events.

**LAWS 4400 Lobbying Law (3 Credits)**

This course will focus on the role and nature of advocacy and lobbying before state and federal legislative and regulatory bodies. The areas will include but are not limited to the role of financing with emphasis on Citizens United, the issues involved in Department of Interior Policy and public lands, the structure and lobbying of new tax legislation, high frequency trading in securities markets, Dodd-Frank and the new regulations, the JOBS Act and crowdfunding, immigration law and border security, state legislative lobbying and healthcare lobbying. Some guest lecturers will be invited, including former cabinet members at the federal level, judges, former White House counsel, financial analysts who are lawyers, members of Congress and Senators. Students will be required to develop a lobbying and advocacy program in an area assigned by the Professor.

**LAWS 4410 Public Sector Employment Law (2 Credits)**

In Public Sector Employment Law, students will learn the law unique to public employment. Particular emphasis will be placed on constitutional legal claims brought under 42 USC Sec. 1983, including claims for violation of the freedoms of speech and association, equal protection, due process, and privacy. The class will also cover public administrative remedies, various governmental immunities, and open records laws. The course materials will be taught through a combination of traditional Socratic method and practical real world exercises, including the drafting of pleadings, interviewing of parties, and arguing of substantive legal motions.

**LAWS 4411 Mergers & Acquisitions (4 Credits)**

This course investigates the legal framework and strategies for structuring mergers and acquisitions ("M&A"). The class will be taught in the "modern learning" format to help students develop practical skills that will improve their readiness upon graduation for the practice of law in diverse business contexts. Among other topics, the course will address structuring various acquisition transactions, negotiating terms of the deal, drafting deal documents, conducting due diligence, advising boards on fiduciary obligations, interpreting relevant state law and federal securities laws, and exploring litigation to thwart potential business combinations. Throughout the course, students will engage in a variety of research, drafting, interviewing, counseling, and advocacy exercises. Through those exercises, group reflections on various assignments, and class discussions of other assigned readings, students will enhance their ability to think critically about a variety of M&A issues from both transactional and litigation perspectives. Pre-req: LAWS 4190.

**LAWS 4412 Sustainable Cities Practicum (3 Credits)**

Communities around the west are increasingly working to accommodate population growth without promoting sprawl. From transit oriented development in the suburbs to urban infill projects in the city center, cities are exploring ways of promoting new, more sustainable forms of development – sometimes in places that are not ready to accept increased density and amidst changing notions of what Americans really want. This course will explore issues of sustainability, as they relate to land use, and will help prepare students to work in the field of urban planning and development. Partnering with a local organization and utilizing the concept of "Action Learning," students will work in teams as they engage in real-time problem solving of a complex issue involving land use and sustainability. It is anticipated the course will include a field trip and work with practitioners engaged in the issue of concern. A research paper and final presentation will be required.

**LAWS 4413 Trial Tactics (3 Credits)**

This course is intended for those who truly desire to be a trial lawyer. It is an advanced, hands-on course which is designed to teach you how to be successful in trial – not just trial practice, but overall trial strategy. This course will teach you not just what to do in trial, but will also answer the question as to why you do what you do. It involves the strategy of trying cases, including trial themes, as well as preparation and participation in doing voir dire, opening statements, direct and cross examination of witnesses, when to make objections and when not to make objections, as well as closing. You will learn to use various trial techniques included in the text Rules of the Road, and will learn all the ins and outs of trying a case in front of a jury.

**LAWS 4414 Private Equity Seminar (3 Credits)**

In this course students will learn legal doctrine and practical skills through the examination of various aspects of private equity groups. The class will focus on legal issues arising in private equity investment cycles, including raising a fund, investing the fund, managing the investment, and exiting the investment. Students will consider the legal foundations of fund formation, business law, and structuring investments, including state and federal laws affecting business associations and corporate transactions. The class will also highlight tax and regulatory considerations of private equity groups and their investments. The class will have a heavy emphasis on practical skills, including critical thinking, and best practices for beginning lawyers, including structuring transactions, drafting transactional documents, and negotiating deals.

**LAWS 4415 Protecting Intellectual Property in International Business Transactions (3 Credits)**

The first portion of this seminar will cover topics such as general international conventions and treaties designed to protect intellectual property; conventions and treaties designed specifically for patents, trademarks and copyrights. Students will determine what protections to try to seek for a variety of intellectual property examples and, in pairs, if possible, negotiate and draft a licensing agreement, a manufacturing agreement, an employment agreement or some other agreement that embodies international intellectual property issues. Students will then choose a topic, such as patent, trademark or copyright issues in a particular region or particular industry. Each student will prepare a presentation for the class on the topic. Then the student will use the class feedback in conjunction with research for the presentation to complete a paper on the topic. The drafting and paper will take the place of a final exam. The paper qualifies for the Upper Level Writing Requirement.

**LAWS 4416 Representing the Marijuana Client (3 Credits)**

This class is designed to provide students with an understanding of the realities of representing a marijuana client (either private or public) in the current turbulent legal environment. We will study the background of marijuana regulation at the state and federal levels in the United States, with particular attention paid to the federalism implications of the dispute between state and federal law in this area. We will then turn to specific areas of law impacted by marijuana law reform in the states, from legal ethics, to regulatory compliance, to criminal law enforcement, to the financial and tax aspects of running a marijuana business in the current legal regime.

**LAWS 4417 Representing the Spanish Speaking Client (3 Credits)**

This course is a survey of the substantive law of matters likely to be encountered by attorneys representing Spanish-speaking clients in the United States. Topics may include, among others, immigration law, family law, criminal law, employment law, wills and estates, and consumer rights. The course will introduce vocabulary required to communicate with Spanish-speaking clients in the United States, as well as, survey the basic substantive law in each area. The course will be taught in Spanish.

**LAWS 4418 Workplace Law Practicum: Sports & Entertainment Law (3 Credits)**

This course will expose students to contemporary sports law practice as an aspect of general entertainment law from a of labor and employment perspective. Students will learn relevant doctrine regarding such matters as collective bargaining, individual contract rights, administrative law, interest and grievance arbitration and the impact of the anti-trust laws on labor and employment relations at the professional and collegiate levels. They will have the opportunity to develop practical skills by drafting documents for a simulated NLRB union organizing or unfair labor practice proceeding, reading and interpreting actual transcripts of NLRB or arbitration proceedings, acting as an advocate in a mock baseball arbitration, and engaging in simulated negotiations by drafting bargaining proposals and arguing for those proposals in a bargaining session among classmates.

**LAWS 4421 Introduction to Small Practice Management (3 Credits)**

This course provides an introduction to the administrative needs necessary to open and operate a solo or small legal practice. Topics include: administrative needs specific to various types of legal practice; space and facilities; technology; document management systems; malpractice insurance; outsourcing; health insurance; conflicts; and human resources issues.

**LAWS 4423 Legal Databases Research (3 Credits)**

This course introduces students to a variety of legal databases, both fee-based and free, that can be utilized for conducting effective legal research as a student and practicing lawyer. Students learn to analyze and critically evaluate whether or not a database provides accurate information and resources. Students learn to determine which legal databases are most useful for specific types of information and resource needs. Students learn to construct successful search strategies that can be employed to search a database and find the information required. This course equips students to become expert searchers in the online environment.

**LAWS 4424 Legal Spanish for Lawyers (2 Credits)**

This course prepares students with basic Spanish proficiency to represent Spanish-speaking clients in the U.S. legal system or to work in Spanish on transnational matters involving Latin America. It combines one-on-one Spanish immersion instruction with a structured classroom component. The Spanish immersion component introduces and builds on each student's legal Spanish vocabulary in areas of law likely to require lawyering in Spanish or in areas identified as priorities by the student. The structured classroom component allows students to practice skills in Spanish, such as client interviewing, intake, and client counseling, through simulations and group exercises. This course is taught in Spanish.

**LAWS 4425 Legal Profession (3 Credits)**

This required course is the study of the legal profession in American society. Topics include the history, structure, and function of the legal profession; the role of lawyers in the delivery of legal services; standards of professional ethics (including the Code of Professional Responsibility and the Rules of Professional Conduct); professional responsibility problems that confront the legal profession; developments in the delivery of legal services; disciplinary procedures; and admission to the practice of law. Non-JD students must request permission to register.

**LAWS 4430 Mediation and Arbitration Clinic (3 Credits)**

This is a course offering clinical experience in both mediation and arbitration. The student learns mediation skills, performs mediation simulations, and mediates actual cases. Students are oriented to the role of arbitrator, perform arbitration simulations, and attend actual arbitrations. By gaining experience in both roles, students learn which process to choose for resolving a particular dispute. In addition, students learn lawyering skills such as communication, negotiation, problem solving, and drafting agreements. Application must be sent to the Student Law Office for admission to this course. Students will earn 3 out of class credits for this course and 2 in class credits through the corequisite course L4803, Mediation and Arbitration Clinic Seminar. Corerequisite: LAWS 4803. Prerequisite: permission of faculty supervisor.

**LAWS 4433 Media Law (3 Credits)**

This course addresses the First Amendment, statutory, and common law regimes under which the news media operate in the United States, ranging from the seminal *New York Times v. Sullivan* to the recent decisions on anonymity for online bloggers. This course is designed to provide opportunities for serious study/discussion of legal issues affecting the news media, as well as opportunities for practical experience in the tasks confronted by today's media lawyers. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4436 Litigation Technology (3 Credits)**

Litigation Technology gives students up-close, hands-on learning to prepare and effectively use electronic illustrative aids and demonstrative exhibits in trial and alternative dispute settings. Each student prepares opening statements, closing arguments, and direct and cross-examinations, utilizing litigation software. Students learn to create their own presentations, and how to advocate most effectively using technology.

**LAWS 4440 Mental Health and the Law (3 Credits)**

This course will help students understand how mental illness and psychopathology interface with the legal system, in both the civil and the criminal justice systems. Taught by a practicing lawyer and a board-certified forensic psychiatrist, the course will begin with an overview of approaches to diagnosing and treating mental disorders, a brief discussion of psychotropic medications, and a description of the process for conducting forensic mental examinations of the sort used in court proceedings. We then will survey the many different contexts in which mental health intersects with the law before examining some of those contexts in detail. Specific areas of focus will include risk assessment and civil commitment, the right to treatment, informed consent and the right to refuse treatment, special competency issues involving children and older people, workplace discrimination based on mental illness, and a series of criminal law issues, including competency to stand trial and mental status defenses, sentencing, mental health and the death penalty, the evaluation and incarceration of sexual predators, and mental health issues involving incarcerated persons.

**LAWS 4442 Trial Practice III: Mentors Practicum (3 Credits)**

Advanced Trial Practice: Mentors Practicum is a year-long, skills-based course for law school students seeking to refine their trial skills, and improve their understanding and application of evidence and criminal procedure, through teaching these skills to local area high school mock trial students. The course consists of two classes a week. The first takes place at the law school. This weekly class involves case analysis and evidentiary discussion, resulting in the law students preparing their lesson plans to be taught to the high school students. Lesson plans include trial topics such as case analysis and evidentiary discussions, direct and cross-examination, objections and the rules of evidence, opening statements, closing arguments, and development of theme and theory. The second weekly class takes place at a local area high school, where the law students act as mentor-coaches to high school mock trial teams.

**LAWS 4444 Medical Malpractice (3 Credits)**

This course is a study of the various types of medical malpractice claims, and special issues encountered in medical malpractice litigation. Students learn how to select and prepare medical negligence cases for trial, with focus on the use of discovery tools in medical cases, hiring and working with medical experts, and explore settlement, subrogation, and probate approval for the settled claims of a minor. Medicine is central to medical malpractice litigation, so students are also exposed to concepts in anatomy, physiology, pathology, medical terminology, and medical records in this course.

**LAWS 4445 Mining Law (3 Credits)**

This course provides the basic framework of mining law. It begins with the acquisition of title to and development of deposits of hard minerals and energy resources under the mining and mineral leasing laws of the federal and state governments in the western United States. Next, it emphasizes the practices and procedures of the various proprietary and regulatory agencies responsible for the management and administration of public lands. Finally, students learn how to resolve competitive demands for exclusive and multiple use of public lands for mineral production and conservation.

**LAWS 4446 Multiculturalism, Race and the Law Seminar (3 Credits)**

This course is designed to examine the interstices of cultures, race, identity and the law as manifested in legislation and jurisprudence. Through case law and articles, we uncover and examine the ways in which legal systems define and promote certain racial and cultural activities, identities, and classifications and discourage others. Some are advanced as legitimate, and deserving of protection, and others not so. These endorsements have a significant impact on the makeup of American society. We see ourselves as a melting pot of cultures and peoples from all over the world, but do our laws really promote this vision? Have our laws evolved to promote racial and cultural harmony, or to discourage it? While most discussion focuses on these issues as they appear in the United States, we also discuss cases and materials from other nations, including Australia, Canada, India, Israel, Europe and Africa. Race and culture have played a pivotal role in historical and current political events and these will also be examined from a global perspective. There is no final exam, but written work is assigned throughout the term, and a final research paper is required.

**LAWS 4450 Natural Resource Law (3 Credits)**

The course is designed primarily for students who wish to have an introduction to and an overview of the entire natural resources law area in one course. Students survey the primary natural resources subject matter areas: water law; mining law; oil and gas law; public land law; environmental law; and energy law.

**LAWS 4452 Economics of Natural Resource and the Environment: Policy, Markets, and Economic Measurement (3 Credits)**

This course deals with the basic concepts of financial evaluation of a natural resources project. The emphasis is on financial evaluation topics and issues relevant to a lawyer's participation in a project. Students are introduced to the time-value of money; spreadsheet analysis; discounted cash flow; and spreadsheets, with relevancy to negotiations. Students are encouraged to consult with the director of this program before enrollment.

**LAWS 4454 Psychiatry and the Law (3 Credits)**

This course explores the relationships between psychiatry, psychology, medicine and the law. Subjects to be covered include: DSM-IV diagnoses and psychopharmacology; sanity and competency determinations; role of mental health experts in the court; special issues involving the mentally ill and death penalty; issues particular to juvenile offenders; third party protections and reporting requirements in child abuse and danger to third parties; civil commitment and involuntary treatment of the mentally ill; malpractice including professional misconduct and sexual boundary violations, and standards of mental health care; professional ethics in medicine and the law; law of informed consent and proxy decision making for medical treatment; confidentiality; clinical and legal aspects of end of life care; and prisoners' rights in correctional settings including sex offender treatment. Readings include landmark state and federal decisions shaping each of these areas, along with readings from legal and mental health literature.

**LAWS 4460 Negotiation and Mediation (3 Credits)**

The course examines principles of negotiation, bargaining and dispute problem solving. Builds the development of skills in negotiation and later mediation. Principles of problem solving introduced in negotiation are further developed in an exploration of mediation, it's legal, economic, skills context and its propriety as a process to resolve disputes in varying circumstances.

**LAWS 4462 Negotiating Natural Resources Agreements (3 Credits)**

Students completing this course leave with an understanding of the general approaches, and primary issues and motivations pertaining to the negotiation of large, internationally funded petroleum and mining projects. They particularly gain a perspective on the negotiation of first-tier agreements between trans-national companies and governments, and joint venture agreements between private parties.

**LAWS 4463 Qualified Pension and Profit Sharing Plans (3 Credits)**

An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business. Cross listed with TAX 4120.

**LAWS 4464 Natural Resources Distinguished Practitioner Seminar (3 Credits)**

The Distinguished Natural Resources Practitioner in Residence Seminar is a "capstone seminar" taught each year in the Spring Semester by a different but prominent natural resources or environmental law lawyer who has extensive experience in energy, resources, or environmental law work. The focus of the Seminar is on skills training, where the skills taught are those that all lawyers need in order to have a successful career in the practice of law. Among the "how-to" skills typically addressed are (1) how to obtain a job, either as a lawyer or as a law-trained worker; (2) how to obtain and retain clients; (3) how to work in the private sector, government sector, business sector, and in-house sector; (4) how to write; (5) how to work with associates and colleagues; (6) how to deal with technical or scientific matters in a legal context; (7) how to work in the litigation arena, before trial and appellate courts; (8) how to practice or appear before administrative agencies; (9) how to organize and refine a mass of complicated information so that a decision-maker can make sense of it. There is no final exam or paper expected; the grade is usually by class participation and small writing exercises. Prerequisite: permission of instructor.

**LAWS 4465 Oil and Gas Law (3 Credits)**

This course surveys the various characteristics of oil and gas interests. Topics include mineral rights, and how ownership leases and transfers of these rights should be handled. The instructor also distinguishes the field of oil and gas law on private lands from those in the public domain.

**LAWS 4468 Pre-Trial and Discovery Practicum (3 Credits)**

This "hands-on" course provides students with a practical understanding of the pretrial process and how discovery procedures shape and impact civil litigation today. The progression of class topics mirror the pretrial process within the context of a hypothetical case. Starting with initial client interviews, class topics include interrogatories, requests for production, electronic discovery, depositions, and expert discovery. Students also consider ethical issues relating to discovery and the pretrial process, and what remedies or sanctions are available for discovery abuses. This course will satisfy the Upper Level Writing requirement (ULW).

**LAWS 4470 Banking Law (3 Credits)**

This course provides an overview of the banking system, including the economic function of banks, the role of the central bank, and U.S. banking history. This course will cover the evolution of banking regulation, as well as recent developments that have intensified scrutiny on banks. Additionally, a "Real Deal" Workshop will provide students with an opportunity to a) gain hands-on training in transactional practice, (b) experience a "deal" from a lawyer's perspective and learn about what transactional practice entails and (c) learn to draft stock purchase agreements, credit documents and other fundamental transactional agreements. Topics that will be covered include permissible activities of banks, the role of the FDIC, the Federal Reserve Board, and the Comptroller of Currency; and the regulatory response to crises in the banking system.

**LAWS 4474 Patent Prosecution (2-3 Credits)**

This course explores practical and procedural aspects of patent law. These aspects include application drafting, patent examination and prosecution, and patent appeals. Students will be expected to do some role playing as inventor, patent attorney, and/or examiner. While Patent Law is not a formal prerequisite for this course, students who have not taken Patent Law should be prepared to do extra reading in the first few weeks of the semester to familiarize themselves with the basic concepts of patent law.

**LAWS 4480 Professional Ethics Seminar (3 Credits)**

This seminar begins with brief introductions to ethics in general and professional ethics specifically, and then turns to in depth consideration of theoretical perspectives on lawyer's ethics. For the remainder of the semester the seminar focuses on: (1) Comparative professional ethics: comparing the ethics of other professions—medicine, journalism and business, for example—with the ethics of lawyering. (2) Narrative ethics: stories (from literature, biography, or tradition) and how they inform ethical perception and choice. (3) Topics chosen by students for research and presentation.

**LAWS 4481 Partnership Taxation (3 Credits)**

Tax treatment of partnership income in the hands of the partner; the conduit rule; problems associated with the formation, operation, and dissolution of the partnership; sale of the partnership interest; withdrawal and retirement of partners; basis adjustments, unrealized receivables, and substantially appreciated inventory. Cross listed with TAX 4320.

**LAWS 4483 Patent Litigation (3 Credits)**

This is an in-depth study of laws, strategies and tactics of patent litigation. Topics include legal principles, procedures and strategies associated with patent claim construction, infringement, invalidity and unenforceability. Also, students cover patent trial practice with a focus on both the knowledge and practical skills necessary to litigate patent cases.

**LAWS 4485 Business & Commercial Law Seminar (3 Credits)**

Topical seminars scheduled periodically to afford students the opportunity for focused study of business and commercial law matters such as: consumer credit; mergers and acquisitions; corporate practice; bankruptcy; antitrust; quantitative evidence; representation of minority—and women—owned business firms.

**LAWS 4487 Prosecutor as Protagonist (3 Credits)**

This seminar is an in depth examination of the role of the prosecutor in our justice system. Attorney General Suthers leads wide ranging discussions about crime and punishment. Topics discussed and debated include the purpose of criminal sentencing, minimum mandatory sentences, the death penalty, the juvenile justice system, plea bargaining, prosecutor ethics, special prosecutors, criminal justice interest groups, prosecution oversight of police, forensic science, federalization of crime, attorney general activism, jury reform, reform of drug laws, and mental illness in the criminal justice system. Some of the top experts in Colorado on these subjects speak to the seminar participants.

**LAWS 4489 Civil and Criminal Tax Procedure (2-4 Credits)**

Statute of limitations on assessment/collection of deficiencies, definition of deficiency, restrictions on assessment and collection; statute of limitations on overpayments, claims and suits for refund, and limitations for criminal prosecutions; regulations and rulings—retroactive revocation; administrative settlements, closing agreements and compromises; civil penalties; tax return preparer penalties; civil litigation—injunctions, jurisdiction of Tax Court, District Court, and Court of Claims, small claims procedure, authority to increase deficiencies, choice of forum; jeopardy assessments and termination of taxable years; criminal tax investigations—administrative summons, document production (taxpayer and third party), constitutional protections, common law privileges, strategies; professional responsibilities and ethics for the tax practitioner. Cross listed with TAX 4310.

**LAWS 4490 Property (4 Credits)**

This course introduces selected topics relating to rights and interests in land and personal property. These topics include estates in land and future interests; private and/or public restriction of land use; conveyancing; interests and estates in land; and landlord/tenant relations.

**LAWS 4495 Public Land & Resources Law (3 Credits)**

This course provides an overview of law, policy, and procedures governing the third of United States land managed by the federal government for the benefit of all the people. The course traces the interwoven law, history, and economics controlling acquisition and allocation of public lands and resources and examines a selection of significant commercial uses and resource categories of land use practices. Recommended prerequisite: LAWS 4025.

**LAWS 4497 Law & Popular Culture (3 Credits)**

Why are there so many jokes about lawyers? Why is John Grisham so popular? What explains the success of the "Law and Order" franchise? Does popular culture affect the outcomes of trials? This seminar explores the role law plays in popular culture (for example, how law and lawyers are portrayed and perceived; how law shapes and defines pop culture) and the role popular culture plays in law and in the lives of lawyers (for example, the impact of cameras in the courtroom); should lawyers be allowed to write books and sell their clients' stories? The reading list includes traditional materials (case law and legal scholarship) as well as movies, novels and other popular culture materials. Recommended prerequisite: LAWS 4425.

**LAWS 4498 Public Interest Practicum (1 Credit)**

The Public Interest Practicum is one option for students to satisfy the Public Service Requirement. The only satisfying course offered for only zero or one credit, it requires participation of the JD student in a 50-hour, non-compensated, law-related, public interest placement under the supervision of an attorney or judge who has been in practice or on the bench for a minimum of three years. A practicum student must complete the minimum of 50 hours in one of the following settings: judicial internship; government agency; private law firm doing pro bono or low bono work; non-profit (501(c)(3)) organization; or pre-approved uncompensated research project for a faculty member. A student may decide to take the Public Interest Practicum for 1 credit or 0 credit. The Public Interest Practicum for 1 Academic Credit requires a Public Interest Practicum Online Seminar component to supplement the practical experience. The Public Interest Practicum is beneficial for students who are not planning on satisfying the Public Service Requirement through other opportunities.

**LAWS 4500 Public Utility Regulation (3 Credits)**

This intensive, 1-week course presents law practitioners with recent innovations in the economics and policy of utility regulation. Course features guest lectures with individuals from industry and government sectors that are involved with utility regulation. Students learn the social science of utility regulation and gain insight into how utility regulation is conducted.

**LAWS 4506 Energy & Project Finance Law (3 Credits)**

This course explores the legal, economic, technological, and policy underpinnings of the Renewable Energy Industry, global warming, and associated implications to the electric utility and transportation sectors. The course addresses both domestic and international perspectives on renewable energy development.

**LAWS 4508 Renewable Energy for the 21st Century: Law, Policy & Markets (3 Credits)**

Renewable Energy for the 21st Century helps prepare students for future involvement in this dynamic sector. Students are introduced to the policy and legal framework involving renewables and energy efficiency as well as important technological and market-based issues.

**LAWS 4509 Renewable Energy: Project Development and Regulation (3 Credits)**

This course examines the broad range of legal topics that a renewable energy lawyer must understand in order to practice effectively. We examine the structure, regulation, and functioning of the electric energy industry in the United States. We explore in detail the law applicable to the development, ownership and operation of renewable projects across the spectrum of technologies. Significant emphasis is placed on the practical "real world" issues encountered in developing, financing and operating these projects.

**LAWS 4510 Transactional Legal Research (2 Credits)**

This course will introduce the legal material, research methodologies, and resources used in conducting transactional legal research. Students will gain experience locating and using law and guidance produced by government agencies, business-oriented legal treatises, transactional materials, and company/industry research. This class will take an integrative approach between the different business-related disciplines to provide students with a well-rounded knowledge base.



**LAWS 4511 Renewable Energy Law (3 Credits)**

The development of renewable energy sources has grown exponentially both nationally and worldwide. The increased appetite for renewable energy sources has driven a need for more information about those sources and the significant legal implications arising from the development of those sources. This course is organized by resource—solar, wind, hydropower, biomass, and geothermal. It focuses primarily on critical legal issues in tort, property, and contract areas raised by the expansion of these key renewable energy sources. The course also addresses the role of energy efficiency and some of the broader legal hurdles facing renewable energy use from a nationwide perspective.

**LAWS 4520 Remedies (3 Credits)**

Remedies provides students with the basic principles and problems of damages, restitution, and equity. Students enter into an investigation of fundamental concepts, such as remedial goals, problems of proof, and the relationship between remedies and substantive rights. The course also explores equitable remedies and alternative remedial devices available in any given situation.

**LAWS 4524 Russian for Lawyers I (3 Credits)**

This is a unique chance to break stereotypes about Russia! This sequence of courses introduces students to the fundamentals of the Russian language, with emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance, international trade, stock exchange, and with a special focus on Natural Resources and Environmental Law in Russia. No prior knowledge of Russian is required.

**LAWS 4525 Russian for Lawyers II (3 Credits)**

This course picks up where Russian for Lawyers I leaves off by continuing to introduce students to the fundamentals of the Russian language, but with an emphasis on legal and economic vocabulary. More specifically, this includes vocabulary and reading assignments that involve finance and banking, insurance, international trade, and stock exchange/securities matters. Prerequisite: LAWS 4524.

**LAWS 4526 Sales and Leases (3 Credits)**

This course examines the formation and terms, as well as remedies for breach, of contracts for the sale of goods under Article 2 of the Uniform Commercial Code (UCC). The course completes the coverage of Article 2 of the UCC that was introduced in the first-year Contracts course. In addition, the course also examines the provisions on leases in Article 2A, sales transactions involving the use of documents of title (Article 7) and letters of credit (Article 5).

**LAWS 4527 School of Mines Exchange (3 Credits)****LAWS 4528 Securities Law (3 Credits)**

Students in this course study the statutes and regulations regulating the offer and sale of securities by private and public corporations. Course material information pertaining to the Securities Exchange Act of 1934; federal regulation of the public securities markets; insider trading; broker-dealer regulation; tender offers; and public corporations. Recommended prerequisites: LAWS 4190 or LAWS 4048.

**LAWS 4529 Securities Litigation (3 Credits)**

The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions. Students who have taken the Commercial Law Survey course should not take this unless they wish to study this subject in greater depth.

**LAWS 4530 Secured Transactions (3 Credits)**

This course covers the law of secured transactions in personal property. It is not a securities course. Students who have taken the Commercial Law Survey course should not take this unless they wish to study this subject in greater depth. The main focus of this course is the granting of a security interest in collateral in exchange for a loan and the priority among creditors to the collateral in case the debtor defaults on its obligation to repay. Secured transactions can be involved in a wide variety of legal representations, including transactional matters and litigation. The Secured Transactions Class is designed to provide students with a working understanding of Article 9 of the Uniform Commercial Code and how it comes into play in these transactions.

**LAWS 4539 Social Change Lawyering (2 Credits)**

This seminar explores the role of law and the legal profession in pursuing broader social causes across the political spectrum, such as the pursuit of civil rights for racial minorities or the effort to overturn the constitutional right to abortion. Distinguished from the practice of law solely advocating the interests of individual clients, social change lawyering is a major component of the legal profession of the 21st century. Known variously as “public interest law,” cause lawyering, and by numerous other labels, this area of practice implicates many important issues worthy of serious scholarly consideration. Some of the topics that may be examined include: the competing definitions of social change lawyering and the relevance of such definitions; the history of American law and social change; the role of progressive/conservative ideologies in social change lawyering; the role of government and private firm lawyers in effectuating social change; strategies and organizational models for social change lawyering groups; the relationship between social change lawyers and their clients; the economics and financing of social change lawyering; ethics and social change lawyering; legal education and social change. Throughout the course, students are asked to critically examine the role of lawyers in social change, and question whether and how lawyers have been effective agents of social change in American society. The course does not use a traditional casebook. Rather, students study a set of materials comprised of excerpts from law review articles and books, historical and sociological materials, and problems. Students are required to write short, reflective discussion board posts on each week’s readings, as well as a more comprehensive final paper. Students may elect to use this seminar to fulfill the upper level writing requirement if they submit a draft of the final paper and do a substantial rewrite after receiving the instructor’s feedback. Prerequisite: permission of instructor.

**LAWS 4543 Sexual Orientation and the Law (3 Credits)**

This seminar offers an opportunity for students to study the relationship between law and sexual orientation. Historically, law in this country consistently and pervasively regulated the realm of human identity and behavior we call sexuality. However, questions and claims challenging traditional assumptions about sexual orientation have surfaced in the last twenty-five years. Our study of sexual orientation and law allows students to view the relationship between law and society through a new lens, that of sexual orientation.

**LAWS 4545 Sports Law (3 Credits)**

The course studies the legal problems of professional athletics. It applies the application of contract law, antitrust, labor law and income tax to the functioning of a professional league. The question of governmental regulation of professional sports is a constant focus of students' work. Special attention is given to the impact of these questions on negotiating players' contracts.

**LAWS 4550 Local Government Law (3 Credits)**

Although barely touched upon in many law school courses, states and local governments play an important role in our everyday lives. They enjoy substantial law-making power; are responsible for financing and providing many public goods and services; and are the location of a great deal of political participation. This course will examine the theory behind and sources of local government power as well as the advantages and disadvantages of decentralized decision-making. Specific topics include: voting rights, local government formation and boundary change, state-local relations and local home rule, interlocal conflicts, school finance reform, and regional governance.

**LAWS 4552 Securities Law Seminar (3 Credits)****LAWS 4553 The Spanish Speaking Lawyer: Introductory Legal Skills and Vocabulary in Spanish (3 Credits)**

This introductory course will provide law students an avenue to become more comfortable speaking about legal matters in Spanish. Students will acquire Spanish-language vocabulary relating to the lawyer-client relationship, litigation, and various substantive areas of law, with the opportunity to utilize this vocabulary. Students can expect to gain legal skills in Spanish, including performing intake, managing good phone etiquette, interviewing clients, drafting correspondence, communicating fees, explaining civil and criminal court proceedings, and understanding ethics and confidentiality. The course will also provide students with an opportunity to begin to achieve cultural competency when representing Spanish-speaking clients. The class will be interactive, and may include: discussions of readings, small group discussions, simulations, presentations, arguments, speakers on different substantive areas of law and viewing of law-related films. This course will primarily be taught in Spanish.

**LAWS 4555 Street Law (3 Credits)**

Under faculty supervision, students in two-person teams will teach law in urban high schools. An underlying principle of the course is that one of the best ways to learn is to teach. There will be weekly seminars and field performances supervised by the instructor. Students will develop skills in: practical application of legal concepts; substantive topics in federal and Colorado Law; teaching techniques; classroom management; and the multi-faceted roles of lawyers in the community. Each student will participate in researching, drafting, and presenting a course in a particular field of substantive law.

**LAWS 4556 Sustainable Dev & Trade (3 Credits)**

This seminar is designed to give an introduction to the convergence of trade, environment, and development issues and law, addressing areas of conflict and synergies among them. It focuses on rules, procedures, and institutions aimed at making globalization compatible with sustainable development by integrating trade policy and law with policies that address other aspects of "human development", such as, environmental concerns, social concerns, human rights, gender issues, and governance. This course satisfies the Upper Level Writing requirement (ULW).

**LAWS 4560 Colorado Legal Research (1 Credit)**

This course will focus on Colorado-specific primary and secondary sources using a problem-based approach, so as to simulate the type of work performed at law firms. It is geared toward students who have some experience with research and want to improve their skills and writing ability before they finish law school. Students will gain hands-on experience researching judicial (case law), legislative (statutory), and executive (administrative) legal materials and will learn research methodologies and strategies to tackle research problems effectively. Classes will combine instruction with hands-on scenarios using print and electronic resources and students will complete research and writing projects for this course, which runs for the first seven weeks of the semester. Students are required to bring their laptops to class.

**LAWS 4561 Crimmigration Law Seminar: The Intersection of Criminal Law and Immigration Law (3 Credits)**

This seminar addresses the historical and contemporary relationship between criminal and immigration law. In particular, the course explores how individuals perceived to have violated a criminal offense are treated in the immigration law system, how individuals thought not to be citizens of the United States are uniquely affected by criminal procedure norms and substantive criminal law, and how states and the federal government have sought to police criminal activity by noncitizens. In the process, course participants will learn to analyze constitutional, statutory, and regulatory provisions concerning immigration, as well as procedural and substantive requirements concerning criminal proceedings as they affect noncitizens. Participants will also consider the motivations that resulted in various enforcement policies grounded in civil or criminal law related to immigration and immigrants.

**LAWS 4562 E-Discovery (3 Credits)**

Litigation is undergoing a significant transformation as technology continues to evolve and Society transitions from a "paper" to a "digital" world. That transformation inevitably impacts the legal community, confronting lawyers and clients with the choice of conducting discovery on a pre-computer, "business as usual" basis or embracing the challenges and opportunities presented by "e-discovery." This course provides students with an understanding of the legal and practical challenges presented by "e-discovery" and how electronically stored information ("ESI") shapes and impacts litigation and the pretrial process.

**LAWS 4563 Environmental Law, Energy, & Natural Resources in Indian Country (3 Credits)**

This Seminar explores energy and natural resources development on Native American tribal lands in the United States, and how tribes, states and the federal government regulate and enforce environmental quality within Indian Country. The Seminar is open to all interested students and does not require any previous study or experience in American Indian law. It provides an introduction to tribal sovereignty and self-determination, along with some of the basics of Indian Country jurisdiction and tribal sovereign immunity. Students will examine the federal governments trust responsibility to Indian tribes and nations. The Seminar also examines the legal framework used to regulate and enforce environmental quality, traditional and renewable energy development, and the use and stewardship of other natural resources on Indian lands. The goal of this Seminar is for students to gain a greater awareness of Indian tribes and nations and the critical role they play in overall U.S. environmental, energy, and natural resource law and public policy.

**LAWS 4564 Immigration Law in Spanish (3 Credits)**

Immigration Law in Spanish is a survey of the fundamental concepts of U.S. immigration law. In addition, students learn and practice the vocabulary required to appropriately communicate these concepts to Spanish-speaking clients. The class is taught entirely in Spanish, and requires a working-level written and spoken proficiency in the language.

**LAWS 4565 Intellectual Property Capstone (1-3 Credits)**

The intellectual property capstone is a simulation based course that crosses different intellectual property disciplines. Several different adjuncts are asked to prepare real world problems in different substantive and procedural contexts. The problems vary from year to year, but generally deal with patent, copyright and trademark law from litigation, administrative (i.e. representation before the patent and trademark office) and business perspectives. Students are expected to have taken at least one prior intellectual property course. This course fulfills the experiential component of the IP Certificate requirement.

**LAWS 4570 Introduction to Contracts and Torts (3 Credits)**

This online course provides an introduction to the foundational principles of Contract Law, including the restatement of contracts and the relevant provisions of the Uniform Commercial Code, and foundational principles of Tort Law, including intentional torts, negligence, and strict liability. This course is available to non-JD students only.

**LAWS 4571 Introduction to Forensic Engineering and Construction Dispute Resolution (3 Credits)**

This online course introduces students to the forensics industry and how forensics applies to claims and disputes in design and construction issues. The course addresses common disputes such as insurance claims, contract disputes, negligence claims, etc. This course will also discuss the different dispute resolution forums and venues, from insurance appraisals, to mediation, to arbitration or litigation. This course is available to non-JD students only, and is required for students in the Master of Legal Studies in Forensic Engineering.

**LAWS 4572 Forensic Scheduling (1 Credit)**

This online course covers the five standard forensic scheduling methods: Impacted As-Planned Method, As-Planned v. As-Built Method, Time Impact Analysis, Windows Analysis, and Collapsed As-Built Method. This class will use Primavera P6 scheduling software. This class is limited to non-JD students only.

**LAWS 4574 Expert Report Preparation (1 Credit)**

Forensic consultants need to understand how to outline, assemble, and clearly communicate issues and opinions within expert reports. This course reviews standard report templates and covers how to prepare report sections including-but not limited to-executive summaries, summary of opinions, assignment, documents reviewed, analysis, conclusions, and demonstratives.

**LAWS 4575 Civil Trial Practice-Forensic Engineering (3 Credits)**

This online class will cover the main aspects of civil litigation and trial practice as they relate to forensic engineering including discovery, trial, examination and cross-examination, and expert testimony. Pre-requisite: LAWS 4571.

**LAWS 4576 Building Envelop & Civil Construction Review (1 Credit)**

This course would review the components of building envelope and civil design. It would also review standard contract drawing details, manufacturer's recommendations, and code requirements for various building components.

**LAWS 4577 Introduction to Contract Law (2 Credits)**

This online course provides an introduction to the foundational principles of Contract Law, including the principles and law governing the formation of contracts (offer, acceptance, and consideration), contractual terms and duty, breach of contract, and some discussion of remedies. This course is available to non-JD students only.

**LAWS 4578 Introduction to Tort Law (2 Credits)**

This online course provides an introduction to the foundational principles of tort law, including intentional torts, negligence, and strict liability. This course is available to non-JD students only.

**LAWS 4579 Expert Witness Role (2 Credits)**

Expert witnesses play a number of roles as they take on their role, including serving as consultants, writing expert reports, and providing testimony. This course will focus on the core requirements needed for this role, providing an overview of the dispute resolution setting in which they work, with particular emphasis on ethical responsibilities and the task of writing an expert report. It will also cover how to write an expert report by outlining, assembling, and clearly communicating issues and opinions within expert reports. This online course will review standard report templates and cover how to prepare report sections including-but not limited to-executive summaries, summary of opinions, assignment, documents reviewed, analysis, conclusions, and demonstratives.

**LAWS 4580 Forensic & Scientific Evidence (3 Credits)**

This course will cover the key elements of Evidence Law with a particular focus on evidence law governing forensic and scientific evidence. This includes an introduction to the preparation of scientific evidence, rules governing admissibility of forensic and scientific evidence in the courtroom, and rules applicable to expert witnesses and their testimony.

**LAWS 4581 Remedies in Construction Law (2 Credits)**

This course will address the remedies that are applicable in construction law disputes, including remedies applicable to contracts and torts disputes. It will cover the basic principles and problems of damages, restitution, and equity. Prerequisites: LAWS 4179.

**LAWS 4589 LLM and Master's Internship (0 Credits)**

The Sturm College of Law encourages students to gain practical experience and to develop professional skills in the legal and policy fields. Some students may elect to pursue externships for credit while others may choose to pursue paid opportunities during their study in the program. Internships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The internship should provide a new learning experience for the student intern and must be related to their field of studies (e.g. business and commercial law; environmental law and policy). Satisfactory completion of the internship will result in a passing grade for the externship. The Program Director and/or GLS Advisor may serve as Supervisor for non-JD interns.

**LAWS 4590 JD Internship (0 Credits)**

The Sturm College of Law encourages students to gain practical experience and to develop professional skills in the legal and policy fields. Some students may elect to pursue externships for credit while others may choose to pursue paid opportunities during their study in the program. The internship should provide a new learning experience for the student intern and must be related to their field of studies (e.g. business and commercial law; environmental law and policy). Satisfactory completion of the internship is determined by review of an Internship Assessment Form submitted to the externship office at the end of the term.

**LAWS 4599 Expert Witness Practicum (3 Credits)**

This class will cover the main aspects of civil litigation and trial practice as they relate to forensic engineering and the process of being an expert witness including discovery, trial, examination and cross-examination, and expert testimony. The course will be taught in a practicum style, with students taking on the role of expert witness. Prerequisites: LAWS 4579.

**LAWS 4605 Taxation of Natural Resource (2 Credits)**

This course outlines the financial, business, and legal tax problems that may be encountered during the acquisition, operation, and disposition of natural resources properties. It is a strong course for students to develop skills in general tax planning for natural resources ventures.

**LAWS 4610 Torts (4 Credits)**

This introductory course considers compensation for private wrongs, covering harm to persons and property, with attention to legal theories of intentional torts, negligence and strict liability.

**LAWS 4615 Torts (Advanced) (3 Credits)**

Advanced Torts combines practical and theoretical discussion of issues that personal injury lawyers face in practice. The topics in the seminar vary but generally include fee agreements, damages, use of experts, medical malpractice, hospital and other liens, subrogation, and governmental immunity. The seminar emphasizes the empirical reality of injuries, claims, and litigation. Prerequisite: LAWS 4610.

**LAWS 4618 Representing Clients Before the SEC (3 Credits)**

SEC insiders explain the processes and practices of the Division, intertwined with discussion and analysis of SEC enforcement actions past and present. This course gives students critical information to effectively represent a wide variety of clients before the Division, among them public companies, regulated entities, defrauded investors, and perpetrators of crime.

**LAWS 4631 Commercial Space Law (2 Credits)**

This course is designed to provide a basic understanding of legal principles and issues in international and domestic space law, with a focus on commercial space law. You will study issues of importance to the Colorado space industry. Those issues, however, touch everyone in the world. For example, we will evaluate issues relating to the use of GPS timing and location signals, remote sensing of the earth from space, and the use of satellite communication. These technologies and associated legal issues reach every country in the world. We start with a survey of the international laws that govern outer space activity. You will be introduced to space law treaties addressing the use of outer space for peaceful purposes, liability for damage caused by space objects, jurisdiction and control of space objects, the rescue and return of astronauts and space objects, property rights in space, and other matters. We will discuss the influence on space laws of cold war politics, developing versus developed country tensions, and the impact of sovereignty interests on technologies that can broadcast television signals direct to homes and extract information about a country's natural resources – all from space. Then we will address U.S. space laws and regulations impacting space activities. Finally, the class will explore specific commercial space activities such as satellite communication, space stations, space tourism, space launches, remote sensing of the earth from space, and the financing and insuring of space activities.

**LAWS 4633 Day One: Civil Practice Lab (3 Credits)**

Day One: Civil Practice Lab is designed to take students from client intake through to the eve of trial, simulating the research, analysis, drafting, and verbal argument that lawyers encounter every day in civil cases. Through the course, students learn about the practical aspects of running a firm, valuing cases, and managing client and firm expectations. They also learn how to draft memoranda, disclosures, discovery, motions and mediation statements, while practicing the skills of examining witnesses, negotiating, and oral argument through mock depositions, mediation, and evidentiary hearings. The classes provide a procedurally chronological picture of a civil case and weave throughout practical considerations and application of the rules of professional conduct. In short, the class prepares students to practice on day one of their new career.

**LAWS 4634 Motions Practice (3 Credits)**

In this class, students learn how to present and argue pre-trial motions. These motions include motions from civil practice (motion for preliminary injunction, motion to dismiss, motion for summary judgment, etc.) criminal practice (motion to suppress, Rule 35 (c), etc.) and evidentiary motions (Rules 403, 404, and 405.) In addition, the course covers both legal and evidentiary motions in limine. Each student is asked to prepare, present, and argue a motion, as well as decide motions presented by others after making appropriate findings of fact and conclusions of law. Because a number of the motions involve the presentation of witnesses and appropriate case and statutory law, students learn trial skills, as well as refresh their knowledge of criminal and civil procedure, and the rules of evidence. Students are not asked to draft motions or prepare written briefs.

**LAWS 4635 Trial Practice I: Basic Courtroom Skills (2-3 Credits)**

The course is designed to teach the concepts and organizing principles of the formal trial process. It emphasizes the understanding necessary to develop, evaluate, prepare, and present a case for trial before a judge, jury, or other fact-finder. Exercises and simulations are used to demonstrate the importance of theory building and teach the functions of each stage of a trial. Students develop the advocacy skills appropriate to adversary adjudication. Prerequisite or corequisite: LAWS 4235.

**LAWS 4637 Civil Litigation Practicum (3 Credits)**

This course provides students a practical, hands-on approach to civil pretrial litigation. Students draft pleadings, motions and discovery requests essential in the litigation process prior to the actual trial stage.

**LAWS 4638 Trial Practice III: Mentor's Practicum (3 Credits)**

The Mentor's Practicum employs and relies upon integrated teaching, feedback, student collaboration, and multiple assessment. The practicum is designed for law school students who have exhibited advanced skills in trial advocacy, client advocacy, case analysis and communication.

**LAWS 4639 Survey of Trusts and Estates (3 Credits)**

This course will provide a broad introduction to trusts and estate planning, including an overview of property disposition through intestate succession, wills, and trusts.

**LAWS 4640 Trusts and Estates (4 Credits)**

Students enrolled in this course learn the ins-and-outs of trusts and estates planning. The course surveys everything involving succession wills, trusts, the role of third parties to a trust or estate, and property disposition.

**LAWS 4651 Advanced Legal Writing and Research (3 Credits)**

This course provides students with practical experience in drafting various documents they will likely encounter in the practice of law, including both objective and persuasive writing. Students will learn the advanced research skills they need to locate relevant legal materials, including an in-depth knowledge of legal research methods and resources. Students will then use their research results to create precise, clear, effective, and legally sound written documents for a series of modern law practice situations. There will be in-class exercises designed to develop student expertise with particular legal research and writing skills. Course assessments include an internal memorandum, a pleading, a motion, and a decision. This course satisfies the upper-level writing requirement. Laptops are required for this course.

**LAWS 4660 Scientific Evidence (3 Credits)**

The course begins with the U.S. Supreme Court decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (113 S.Ct. 2786 (1993)). This decision threw out the Frye Rule that had governed the admission of scientific evidence in federal courts since 1923. While the Daubert rule now applies in all federal courts, states are free to either stay with the Frye Rule, adopt the new Daubert Standard or adopt some combination of the two. Students discuss the implications of these evidentiary changes in a number of areas of legal controversy. The course concentrates primarily on the use of social science evidence; however, topics include tort litigation involving Bendectin, and the controversy over the use of DNA testing in criminal cases. Other topics include the use of scientific evidence in consumer confusion cases; obscenity cases and the question of community standards; and the number of syndrome evidence cases, including post-traumatic stress disorder, battered woman syndrome, and rape trauma syndrome. Constitutional law cases include coverage of death penalty issues, jury size cases, and school segregation by race and gender (including the controversy over single-sex education, and the ending of school busing mandates by the federal courts). The goal of this course is to increase the proficiency of lawyers to use scientific evidence on behalf of clients and be able to defend against such evidence when presented by the opposing counsel.

**LAWS 4670 Water Law (3 Credits)**

Water Law is an introductory course for students interested in pursuing water law. It covers private property rights in water, and the legal and environmental controls surrounding it. Recommended prerequisite: LAWS 4025.

**LAWS 4672 International Water Law (3 Credits)**

This course presents a global overview of water law, systems, and practice in the modern world. It includes coverage of hydrology, history, national legal systems, and modern international treaties and cases. It has a special emphasis on sustainable development, equitable utilization, pollution control, and ecosystem protection utilized for multi-nation water basins. LAWS 4670 Water Law and LAWS 4320 International Law courses are not a prerequisite, as basics will be covered.

**LAWS 4674 White Collar Crime (3 Credits)**

This course is designed for students with an interest in advanced criminal law practice, particularly the growing legal field of white collar crime. This seminar course will introduce students to the major substantive legal areas that make up the white collar field, including mail and securities fraud, bribery, health care fraud, conspiracy, and money laundering. In addition, students will learn the basics of conducting a corporate internal investigation, dealing with search warrants and subpoenas, criminal pre-trial matters, special considerations for criminal discovery, and common ethical issues. By the end of the course, students will have learned the basic substantive and procedural issues involved in white collar practice. Students will learn from and interact with a variety of practitioners drawn from the private and government sector. Instructor permission is required for enrollment.

**LAWS 4686 Wills Lab (1 Credit)**

This lab is designed to provide students with practical experience with interviewing and drafting for a real client while under the close supervision of a practicing attorney. Clients come primarily from Legal Aid. Each student is individually supervised by a volunteer attorney or by Prof. Marsh. The attorney goes with the student to the first interview with the client to assist the student if any difficulties come up in the interview. Then the student drafts the appropriate documents from scratch, and the attorney helps the student determine what revisions are necessary. When documents are in final form the attorney assists the student in having the documents properly signed. Documents include will, living will, and medical or financial powers of attorney, as appropriate. Letter grades are given by Prof. Marsh. Note that no student is allowed to drop the Wills Lab after the first interview with the client unless there is a severe medical emergency. There will be one introductory meeting scheduled during lunch time. All the rest of the work is scheduled individually by the student, supervising attorney, and client. NOTE: Students will NOT be allowed to drop the course after the first interview with the client. Prerequisite: LAWS 4640 or LAWS 4639.

**LAWS 4700 Special Topics (1-5 Credits)****LAWS 4701 Special Topics (1-5 Credits)****LAWS 4702 Special Topics (1-6 Credits)****LAWS 4703 Special Topics (1-5 Credits)****LAWS 4704 Special Topics (1-5 Credits)****LAWS 4705 Special Topics (1-5 Credits)****LAWS 4706 Special Topics (1-5 Credits)****LAWS 4707 Special Topics (1-5 Credits)****LAWS 4708 Special Topics (1-5 Credits)****LAWS 4709 Special Topics (1-15 Credits)****LAWS 4800 Criminal Defense Clinic (3-6 Credits)**

This clinic offers students the opportunity to defend low-income clients charged with various criminal offenses. These offenses include DUI/DDWAI; domestic violence; assault; theft; disturbance; child abuse and neglect; menacing; etc. Students represent their clients in various municipal and county courts in the area. This course requires numerous court appearances for arraignments, pre-trial motions, and sentencing. Students should be prepared for an intense litigation experience in misdemeanor criminal defense. Corequisite: LAWS 4801. Prerequisite: permission of faculty supervisor.

**LAWS 4801 Criminal Defense Clinic Seminar (3-4 Credits)**

The Criminal Law Clinic Seminar must be taken in conjunction with the Criminal Law Clinic. Class sessions will be devoted to a variety of topics, including classes on lawyering skills, substantive law, issues of lawyering and society, and case review sessions, in which student attorneys will present information about their cases/projects to each other and give and solicit feedback about issues they are confronting in the representation of their clients. The classes include simulation exercises that are critiqued by faculty, and field exercises that involve trips to the Denver jail. Classes are taught by clinical faculty and by guest speakers who include area judges, practitioners, interpreters and other court personnel. Co-requisite: LAWS 4800.

**LAWS 4802 Environmental Law Clinic Seminar (3 Credits)**

THE ELCP clinic seminar must be taken in conjunction with the ELCP Clinic. During class, students will review federal civil procedure through a lecture series entitled "anatomy of a lawsuit," have specific lectures on effective legal writing, and commonly used statutes such as the Freedom of Information Act, and Endangered Species Act. Each student must also prepare a class presentation on their assigned major case, and participate in random, less formal docket meetings. Students must also attend four guest lectures from lawyers and other professionals on environmental law advocacy issues. Students earn 3 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4206.

**LAWS 4803 Mediation & Arbitration Clinic Seminar (2 Credits)**

The Mediation and Arbitration Clinic Seminar must be taken in conjunction with the Mediation and Arbitration Clinic. The seminar meets once a week for 90 minutes. Students read articles on mediation issues and receive intensive training in the classroom that is reinforced with classroom simulations. Students are also required to critique each other in the simulations. The seminar focuses upon identifying and resolving issues that arise during actual mediations. Students will earn 2 in class credits for this course and 3 out of class credits through the corequisite course. Corequisite: LAWS 4430.

**LAWS 4805 Civil Litigation Clinic (5 Credits)**

The Civil Litigation Clinic students represent low-income clients in a variety of civil disputes. The clinic permits students to participate in the selection of cases and problems they work on. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Civil Litigation Clinic requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 5 out of class for this course and 4 in class credits through the co-requisite course. Corequisite: LAWS 4806.

**LAWS 4806 Civil Litigation Clinic Seminar (4 Credits)**

The Civil Litigation Clinic students represent low-income clients in a variety of civil disputes. The clinic permits students to participate in the selection of cases and problems they work on. Students have represented clients in areas involving wage and hour claims, housing discrimination, eviction defense and domestic violence protection orders. Additionally, the Civil Litigation Clinic requires some form of community outreach project enabling the student to learn about the client populations they serve. Students will earn 4 in-class credits for this course and 5 out-of-class credits through the co-requisite course. Corequisite: LAWS 4805.

**LAWS 4807 Child Advocacy Seminar (2 Credits)**

The Child Advocacy Externship Seminar is a course and taught by the Rocky Mountain Children's Law Center. In the fall semester, the seminar course focuses on the laws surrounding advocacy for children in dependency & neglect, delinquency, civil protection order, and education cases. In the spring, students can enroll in a 2-credit Advanced Child Advocacy seminar to expand on the fall semester with topics such as the overlap of child welfare and family law, immigration advocacy, appellate advocacy for children, trial practice in the child welfare context, ethical issues in the representation of children, and a variety of other hot topic child advocacy issues. Students can choose to also enroll in a corresponding externship for credit. For more information on the field work component, please visit <http://www.law.du.edu/index.php/legal-externship-program/specific-externship-programs/child-advocacy-externship-program>.

**LAWS 4809 Civil Rights Clinic (3-6 Credits)**

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and the prison's refusal to provide meaningful process to individuals placed in long-term segregation. Co-requisite course LAWS 4812, Civil Rights Clinic Seminar. Pre-requisite or co-requisite course: LAWS 4425, Legal Profession. This course meets the Upper Level Writing requirement (ULW).

**LAWS 4812 Civil Rights and Disability Law Clinic Seminar (3 Credits)**

The Civil Rights Clinic (CRC) represents individuals and groups in civil and human rights matters. The CRC's current cases address a range of complex constitutional issues litigated before the Federal District Court for the District of Colorado. Some of the claims currently being litigated in the CRC will impact constitutional jurisprudence nationwide. The current CRC docket is focused on the constitutional rights of prisoners. These cases challenge prison conditions and policies pursuant to the First, Fifth, Eighth and Fourteenth Amendments on issues such as: indefinite solitary confinement, failure to provide prisoners with adequate medical or mental health care, long-term denial of outdoor exercise, and prison's refusal to provide meaningful process to individuals placed in long-term segregation. Students will earn 3 in class credits for this course and 3 out of class through the corequisite course L4805, Civil Rights Clinic. This course meets the Upper Level Writing requirement (ULW).

**LAWS 4813 Low Income Taxpayer Clinic-JD (1-4 Credits)**

Using a focused series of classes related to issues facing individual low income taxpayers embroiled in conflict with the Internal Revenue Service or in litigation before the United States Tax Court (innocent spouse relief, earned income credit, dependency exemptions, appeals of audits and collection due process issues, tax litigation), this course first prepares tax students to represent taxpayers regarding such issues, then provides the opportunity to practice before the IRS and in the Tax Court. In a clinical setting, students are trained in all facets of practice before the IRS and the Tax Court. Once trained, under the supervision of clinical staff, the students undertake representation of low income taxpayers in tax audits, appeals, collection proceedings, and, if necessary, before the Tax Court. All facets of client representation, including initial client meetings, representation agreements, client advocacy, and ending the representation, are experienced by each clinic participant. Cross listed with TAX 4415.

**LAWS 4825 Immigration Law and Policy Clinic (5 Credits)**

For the fieldwork component of the Immigration Law and Policy Clinic (ILPC), student attorneys appear in immigration court representing indigent, detained clients in bond and/or removal proceedings. Students may also provide consultations with student counsel in the Criminal Defense Clinic on the immigration consequences facing CDC clients. There may be additional opportunities for advocacy in post-conviction and/or federal habeas litigation, and in matters in which the ILPC will provide counsel and legal assistance to non-profit advocacy organizations pursuing policy or legislative reform or other non-litigation (or possibly litigation) matters. Throughout their fieldwork, student attorneys apply knowledge gained through the ILPC seminar by practicing lawyering skills such as interviewing, client counseling, fact investigation, legal research and writing, oral advocacy, negotiation, policy advocacy, and preparation for, and advocacy in, contested hearings. Through the ILPC fieldwork, students will have opportunities to explore systemic problems in the immigration enforcement system—particularly where immigration and criminal enforcement are conflated and entwined—such as racial and economic bias, law enforcement accountability, hyperincarceration, and access to justice. Credit Hours: 5 out-of-class credits (Fall term) / 2 to 7 out-of-class credits (Spring term) ULW: This course does not automatically meet the Upper Level Writing (ULW) requirement. Students who, in the course of their fieldwork, complete written work sufficient to meet the ULW requirement may obtain certification from their instructor.

**LAWS 4826 Immigration Law and Policy Seminar (2-4 Credits)**

The Immigration Law and Policy Clinic (ILPC) seminar provides timely instruction in topics relevant to student attorneys appearing in immigration court representing indigent, detained clients in bond and removal proceedings. In seminar, students will learn lawyering skills such as interviewing, client counseling, fact investigation, legal research and writing, oral advocacy, negotiation, policy advocacy, and preparation for, and advocacy in, contested hearings. Some classes may address issues that have not yet arisen in their clinic cases, with the goal of exposing students to different lawyering methods and advocacy tools. Through the ILPC seminar classes and related fieldwork, students will have opportunities to explore systemic problems in the immigration enforcement system—particularly where immigration and criminal enforcement are conflated and entwined—such as racial and economic bias, law enforcement accountability, hyperincarceration, and access to justice. This course does not meet the Upper Level Writing (ULW) requirement. Credit Hours: 4 in-class credits (Fall) / 2 in-class credits (Spring).

**LAWS 4835 Community Economic Development Clinic (3 Credits)**

The Community Economic Development ("CED") Clinic is a clinical legal education program that provides free transactional (non-litigation) legal services to small businesses, low-wealth entrepreneurs, community-based enterprises, nonprofit organizations, and artists. The Clinic is designed to simultaneously teach student attorneys the fundamentals of transactional practice while providing high-quality and invaluable legal representation to its clients. Through the representation of the Clinic's clients, student attorneys are exposed to the intersection of business law concepts and CED practice. Student attorneys learn that transactional lawyering is preventive lawyering, which involves avoiding conflict, litigation, and other negative outcomes. The Clinic's focus on the legal practice of CED will expose student attorneys to the variety of social systems, government programs, and federal, state, and local government laws that impact their clients. Client work includes drafting corporate formation documents; assisting nonprofit organizations with tax-exempt applications and maintenance of tax-exempt status; drafting and negotiating contracts; and acting as general counsel to both small businesses and non-profit organizations. In addition, students may research issues related to public policies that affect clinic clients and provide community education workshops on substantive law issues pertinent to one of the clinic's practice areas. Co-req: LAWS 4836, co-req/pre-req: LAWS 4425.

**LAWS 4836 Community Economic Development Clinic Seminar (3 Credits)**

The Community Economic Development ("CED") Clinic is a clinical legal education program that provides free transactional (non-litigation) legal services to small businesses, low-wealth entrepreneurs, community-based enterprises, nonprofit organizations, and artists. Clinic students are required to attend this bi-weekly 75 minute seminar while participating in the clinic. The seminar focuses on both substantive corporate law and transactional lawyering skills and is reinforced with complex simulations that students perform and then critique with faculty. Co-req LAWS 4835, pre-req/co-req LAWS 4425-Legal Profession.

**LAWS 4867 Advising the Adviser: Compliance and Enforcement under the Investment Advisers Act (3 Credits)**

This class will focus generally on investment adviser (IA) compliance with the federal securities laws and the Securities and Exchange Commission's (SEC) role with respect to that compliance. We will focus on how to advise an IA with respect to SEC regulations, touching on topics such as an IA's role as a fiduciary and an IA's requirements with respect to marketing, best execution, and principal and cross trading. We will also focus on what's necessary to establish and operate a robust IA compliance program.

**LAWS 4880 DU Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4884 Int'l Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4885 Preventive Law Journal (0-6 Credits)**

An enrollment card obtained from the Managing Editor is required.

**LAWS 4888 Transportation Law Journal (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4889 Water Law Review (0-3 Credits)**

Scholarly journals are edited at the College of Law, allowing students to participate in research in various fields. Permission to enroll is obtained from the managing editor for credit of 0-3 semester hours.

**LAWS 4900 Introduction to Clinical Pedagogy & Scholarship (1-2 Credits)**

The purpose of this yearlong, two-credit (total) seminar is to introduce graduate teaching fellows to fundamental concepts of teaching and scholarship. Upon completion of this course, students understand: theoretical frameworks for supervision of J.D. students in the fieldwork portion of a clinic; the goals of seminar teaching, including the theory of backward design and the use of case rounds and other signature pedagogies; and the key differences between legal writing and academic scholarship, with an emphasis on developing a habit of and timeline for scholarly writing.

**LAWS 4905 Scholarship Seminar I (4 Credits)**

This is a semester-long, four-credit, intensive course taken after completion of the first academic year in which students produce and present drafts of scholarly articles along a timeline set out at the start of the semester.

**LAWS 4910 Co/Shadow Supervision Practicum (1-8 Credits)**

During their first academic year enrolled in the clinical LL.M. program, fellows will "shadow" or "co-supervise" law students with experienced faculty. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.

**LAWS 4920 Supervision Practicum II (1-4 Credits)**

During their first academic year enrolled in the clinical LL.M. program, fellows "shadowed" or "co-supervised" law students with experienced faculty (for which they will receive four credits per semester). In their second year, fellows supervise on their own two students and in their third year, four students. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.



**LAWS 4921 Clinical Pedagogy & Design I (1 Credit)**

The purpose of this yearlong, two-credit course is to explore more deeply the pedagogy and methods for teaching in both student supervision and classroom seminar settings. This series of courses accomplishes two important goals: (1) building a learning community through which a group of faculty come together and increase faculty collaboration around a shared enterprise of teaching; and (2) improving teaching. Graduate fellows will talk about events in their classrooms/supervision sessions, present "problems" to be unpacked and re-conceptualized, solicit ideas about what and how to teach, and share innovative assessment tools. Fellows reflect with supportive colleagues about the relationship between what they have done and their teaching goals and formulate plans with the benefit of the insights of others. The objective of this course is to have discussions that will facilitate the development of both concrete solutions and broader themes in the fellows' teaching.

**LAWS 4925 Scholarship Seminar II (4 Credits)**

This is a semester-long, four-credit, intensive course taken after completion of the second academic year in which students produce and present drafts of scholarly articles along a timeline set out at the start of the semester.

**LAWS 4930 Supervision Practicum III (1-6 Credits)**

The expectations for student supervision increase in the third year. Throughout the fellowship term, the fellows will receive instruction and feedback about their supervision that will continue to facilitate their development as clinical teachers. Clinical fellows are expected to participate in mid-semester or mid-year evaluation sessions with students and to participate in a traditional grading process.

**LAWS 4931 Advanced Clinical Pedagogy & Design (1 Credit)**

The purpose of this yearlong, two-credit course is to explore more deeply the pedagogy and methods for teaching in prior years; hone methods to fellows' unique professional, academic identities; and reflect on these and their experiences teaching in both supervision and classroom settings to articulate and design their own clinics. This course accomplishes two important goals: (1) building a learning community through which a group of faculty come together and increase faculty collaboration around a shared enterprise of teaching; and (2) improving teaching. During rounds, graduate fellows talk about events in their classrooms/supervision sessions, present "problems" to be unpacked and re-conceptualized, solicit ideas about what and how to teach, and share innovative assessment tools. Fellows reflect with supportive colleagues about the relationship between what they have done and their teaching goals and formulate plans with the benefit of the insights of others.

**LAWS 4950 Scholarship (1 Credit)**

The transition from legal advocacy writing to academic legal scholarship is challenging. In addition to learning a new style of writing and new methods of research, fellows must devote substantial time to the academic writing endeavor. Most students (and faculty) reflect in hindsight that writing a law review article for the first time takes substantially longer than they anticipated. Over the course of the fellowship, fellows earn one credit per semester for making progress toward completion of a paper of publishable quality. In this course, fellows apply theories of research and writing to the activities of writing (choosing topics, creating timelines, researching, and drafting sections of their articles).

**LAWS 4991 Corporate Apprenticeship Program (4 Credits)**

The Corporate Apprenticeship Program's purpose is to provide the opportunity for law students to learn about the distinct challenges facing corporate counsel. This program is offered solely in the spring term and consists of four mandatory seminars and 15 hours of work per week (preferably on consecutive days) in the legal department of sponsoring corporations. The interactive seminars are designed to introduce students to the practice environment and operations of an in-house corporate legal department.

**LAWS 4996 Thesis (1-10 Credits)**

The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and the community. Example placements include public defenders' offices; prosecutors' offices; the Attorney General's office; Legal Service offices; judicial clerkships; and selected private firms. Need special enrollment permission from Internship/Externship Office. A maximum of 10 credit hours may be awarded for this program.

**LAWS 4999 Directed Research (1-5 Credits)**

Directed Research is an opportunity for students to research and write on any area of law approved by a full-time faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality. A copy is delivered to the supervising faculty member for grading and a second copy is delivered to the associate dean for academic affairs by the last day of exams for that semester. Students may petition for either two or three semester hours. A maximum of five semester hours credit for Directed Research is permitted in satisfaction of the 90-credit degree requirement. A Directed Research application form (available in the registrar's office) signed by both the faculty supervisor and student is required for enrollment. The registrar's office will register the student for his or her directed research once the student's application form has been approved. All directed research projects must conform with the upper level writing requirement, which involves a mandatory rewrite, in addition to any other requirements. This course satisfies the Upper Level Writing requirement (ULW). Permission is required from the faculty supervisor and the Assistant Dean for Student Affairs to increase credit hours to 4 or 5.

**LAWS 5025 Externship (1-10 Credits)**

The program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. Externship Seminar: In conjunction with the above field placement each student shall meet in a seminar under the supervision of a member of the law faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

**LAWS 5026 Trial Practice III: National Trial Team (3 Credits)**

The Trial Teams Course is for the new and veteran students who are selected to represent the school on one of the national trial teams. The course meets one night a week during the summer session for five hours each night. The course is split into two sections, one for returning team members, and one for the newly-selected team members. The course is an advanced courtroom-simulation course in which students work intensely with other students and the instructor, delving into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. The veteran section begins the first class with students presenting both sides of a criminal case. The new member section begins with refreshers on case analysis, evidence, and courtroom strategies, and culminates with final trials. There is weekly out-of-class case analysis, drafting, and preparation required. Grading is based on classroom participation, written homework, simulated courtroom presentations, and a final trial.

**LAWS 5027 American Association for Justice Trial Team (3 Credits)**

Sturm's American Association for Justice Trial Team (AAJ) is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must be invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester, and continuing throughout the entire semester, the AAJ team-course meets once a week in a classroom environment, for a total of 2.5 classroom hours per week. The AAJ team-course also meets a second time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and examination drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the AAJ tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, and simulated courtroom presentations. Prerequisite: LAWS 4635.

**LAWS 5028 ABA Trial Team (3 Credits)**

Sturm's ABA/NTC team is one of four of the school's advanced courtroom-simulation based "team-courses" in which students find themselves working intensely with five other students and an instructor, delving deeply into increasingly complex areas of case analysis, evidentiary interpretation and application, examination drafting and presentation, and ethical dynamics of fact patterns. Students must be invited to be on one of Sturm's National Trial Teams, after tryouts that are held every spring (April). The team-courses meet all three semesters (fall, spring, and summer). Being invited onto one of the teams is a two-year commitment. Starting the first week of each semester and continuing throughout the entire semester, the ABA/NTC team-course meets twice a week in a classroom environment, for a total of five (5) classroom hours per week. The ABA/NTC team-course also meets a third time each week for courtroom simulation performances and video review, for an additional four (4) hours. There is also substantial out-of-class case analysis and drafting required. The team competes on the national level in the fall at an "invitational" tournament, and in the spring in the ABA/NTC tournament against other ranked law schools from around the country. Grading is based on classroom participation, written homework, and simulated courtroom presentations.

**LAWS 5029 Semester in Practice (1-12 Credits)**

The Semester in Practice program is designed to allow students the opportunity to develop practice skills by working full-time in legal programs of concern to the legal profession and community. This is a capstone experience offered to students in their last year of law school, where students have significant exposure to the substantive law in their externship. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; judicial clerkships; and selected private firms. As this is an externship, credit may vary, up to 12 credits, depending on the student. Externship Seminar: In conjunction with the above field placement, each student shall meet in a three-credit graded seminar under the supervision of a member of the externship faculty to explore common and contrasting areas of professional responsibility, professional tasks and skills, decision making and dispute resolution presented in the various extern settings.

**LAWS 5030 Semester in Practice Seminar (3 Credits)**

This seminar is the classroom component of the Semester in Practice (SIP) course. Through class discussion, we explore a variety of issues that provide students with the opportunity to reflect on the legal profession and how they perceive their role in the profession - currently and prospectively. We focus primarily on professional identity and ethical issues of key importance to the practice of law.

**LAWS 5031 Legal Externship Seminar (1-3 Credits)**

The Legal Externship Program is divided into practice-specific programs. Students enrolled in each of these programs are required to also enroll in an accompanying for-credit seminar that addresses topics specific to each practice area.

**LAWS 5035 Public Service Externship (2-6 Credits)**

The externship program is designed to allow students the opportunity to gain experience working in legal programs of concern to the legal profession and community. Example placements include public defenders' offices; prosecutors' offices; the attorney general's office; legal service offices; and judicial clerkships. To ensure that the College of Law remains in the forefront of public service, every Juris Doctor student is required to perform a minimum of 50 hours of supervised, uncompensated, law-related public service work during his or her law school career as a prerequisite to graduation. This requirement may be fulfilled by registering for, and passing, an externship for credit at a government agency, judicial chambers, or nonprofit organization via the Legal Externship Office, as long as no financial compensation of any kind whether from the employer or outside source was received for the externship.

**LAWS 5999 Law Consortium Visit (0-18 Credits)**

This is a placeholder course that allows students to remain actively enrolled at Sturm College of Law for purposes of enrollment reporting and financial aid disbursement while students are participating in an approved visit at another ABA approved law school per a consortium agreement. Credits associated for this course are replaced by transfer credit once a final transcript is received by the host institution.

## Legal Administration Courses

### **MSLA 4050 The Impact of Court Governance (1 Credit)**

This course informs students on the policy making process of local court governance and the impact of the process on court operations and public services. Various governance structures are explored to include the benefits of principle based governance. Students gain in-depth insight into the roles and relationships of judges and court administrators as leaders and governing authorities within the judicial system. Course knowledge is applicable to all levels of national and international court jurisdiction.

### **MSLA 4080 Law Firm Information Technology (2 Credits)**

This course is designed to inform the student on the complexities of information technology in a law firm setting. Topics include time and billing, assessing the IT needs of the office, networking abilities, creating a paperless office, security, case management, outsourcing, and knowledge management.

### **MSLA 4090 Court Information Technology (2 Credits)**

This course is designed to introduce students to the intricacies of information technology in a court setting and the importance of an efficient and effective system. Topics include communications technology (internal and external), virtual courthouses, electronic case filing, legal research systems, information and systems security, networking abilities and needs, court reporting/recording and accessibility to the public (website).

### **MSLA 4100 Court Fiscal Management (3 Credits)**

This course focuses on the key aspects of fiscal management in a court setting. Students learn models of public budgeting, internal controls, procurement, outsourcing, RFPs, internal and external auditing, and government funding models. Prerequisite: MSLA 4410.

### **MSLA 4121 Human Res & Performance Mgmt (3 Credits)**

This course will provide a broad overview of the field of human resource and performance management. Students learn what managers and administrators need to know to effectively address Human Resource issues in today's workplace. The course will provide major concepts and techniques of performance management in law and court environments. By employing perspectives of both the employer and employee the class will focus on "best practices" utilized by managers and administrators and emphasize decision-making skills and processes in the context of Human Resources law and policy. Students will learn how to achieve organizational goals via management of a company's most precious resource, their people. This textbook provides an overview of the content upon which the most common HRCI certifications (SPHR, PHR) are based.

### **MSLA 4151 Applied Leadership and Management Theory (3 Credits)**

This course is designed to provide the student with an understanding of the importance of effective leadership and management in the workplace. Students will learn the tools necessary to manage conflict, build strong teams, function as a team, manage performance, create and maintain a positive work environment, and motivate others.

### **MSLA 4180 Court Case Flow and Load Management (2 Credits)**

This course is designed to provide the student with the fundamental principles of managing an effective case management system. Students will learn the importance of an efficient case flow management system, the history of case management, electronic case filing, civil and criminal rules of procedure, case assignment, quality assurance and time standards and major case, records management and reporting systems, strategies necessary to gain judicial support, leadership and cooperation to effectuate effective case flow management practices, and improve judicial performance as it relates to the disposition of actions.

### **MSLA 4181 Inclusiveness in the Legal Profession - The Next Generation of Diversity Efforts (1 Credit)**

Diversity and inclusiveness are hot topics in the legal profession. This highly interactive course will educate students about the state of diversity and inclusiveness within the legal profession, the systemic underpinnings of the lack of diversity, how to create inclusive environments for successful retention and advancement of female and diverse attorneys and staff, as well as the importance of diversity and inclusiveness to the viability of the legal profession. Students will be challenged to draw upon their own life experiences, to consider different perspectives, and provide thoughtful analysis on how they can incorporate diversity and inclusiveness practices with their career path and future legal organizations.

### **MSLA 4200 The Business of Courts (3 Credits)**

This course is designed to provide the student with the fundamental principles and elements of the key functions performed by the courts. These functions include jury management, court based mediation and arbitration programs, court reporting, client expectations, contingency planning, continuity of operations planning, needs and expectations of litigants without lawyers, interpreter services, court and staff performance measurement and management, and the role of the court administrator.

### **MSLA 4201 Law Firm Administration (3 Credits)**

This course informs the student of the fundamental principles, elements and day-to-day operational processes of law office management. Topics covered in this course include law office culture, law firm organization, succession planning, practice areas, client communication flow, collection challenges, and understanding and working with law office timekeeping, accounting, and billing systems.

### **MSLA 4205 Lawyer Recruitment, Development, and Advancement in Law Firms (2 Credits)**

This course will focus on the key aspects of lawyer recruitment, development and advancement in law firms. Students will learn the primary methods for recruiting and hiring lawyers at all experience levels, and the most important elements of lawyer development, including orientation, integration, legal and core skills training, experiential learning, mentoring, performance management, and evaluations. Traditional compensation and advancement models, as well as emerging trends in all of these areas, will also be covered during the course.

**MSLA 4215 Court Space, Facilities and Security (2 Credits)**

This course is designed to inform the students of the fundamentals of managing the court's space, facilities and security. Aspects of this course include: facilities management, operational standards and management, safety and security, assessing courthouse building needs, developing space planning reports, the management of all types of space projects, building and personnel security issues, contingency planning, and disaster recovery.

**MSLA 4300 Introduction to the United States Judicial System (3 Credits)**

This course provides the student with an overview of the United States judicial system. Students learn the fundamentals of our legal system, historical basis of the U.S. judicial system, the foundation, structure, purpose, what it stands for, and the varying levels of the U.S. court system.

**MSLA 4301 Judicial Performance and Evaluation (1 Credit)**

This course informs students on the complexities of judicial performance and evaluation. Students learn the fundamentals of developing a judicial performance program, measuring the effectiveness of performance recommendations, commissions on judicial performance, and the components of the evaluation process.

**MSLA 4310 World Judicial Systems (3 Credits)**

The goal of this course is to compare and contrast the role of the judiciary in various legal systems. Topics include types of courts and court systems (including domestic, supranational, i.e., the European Union, and international courts), judicial independence, separation of powers, and challenges facing the judiciary such as miscarriages of justice. Students also compare court procedures (civil, criminal, appellate review) in different types of legal systems.

**MSLA 4320 Fundamentals of Comparative Law (3 Credits)**

This course introduces the classifications of the world's legal systems: (civil law, common law, Islamic law, customary law, and mixed law systems). Students will learn the general elements of a legal system then compare and contrast these features in different types of legal systems as they are used in various countries or other jurisdictions including the European Union. Students will also explore internet and electronic resources to research and analyze foreign legal systems.

**MSLA 4330 Specialty Courts (2 Credits)**

This course will provide the students with an understanding of the purpose, functionality and effectiveness of specialty courts. Topics will include the types of specialty courts and how to create them, maintaining sustainability, treatment options, demographics, budgeting and measuring specialty court performance.

**MSLA 4380 Communication, Writing, and Research in Legal Business (3 Credits)**

This is a foundation course is designed to provide students with effective, productive, and relevant communication, writing, and research skills used in legal business today. Topics will include writing press releases, social media news/headlines/updates, executive summaries, email strategies based on audience, etc.

**MSLA 4384 Court Comm & Media Relations (2 Credits)**

This course will inform the students how to address communications and manage media relations for the courts. Topics will include views of the court from multiple perspectives, communicating to different constituencies, public relations and customer satisfaction, and educational outreach programs.

**MSLA 4385 Law Firm Communications and Technology (3 Credits)**

This course is designed to build student's foundation knowledge of technology in the legal environment. The competitive landscape<sup>3</sup> in the law firm setting is stronger than it ever has been, and this competitiveness forces law firms to find efficient and innovative ways to conduct business in this new landscape through the use of technology. Topics of this course will include identification of technologies used in law firms and legal departments as well as thoughts about how to leverage those technologies to help gain efficiencies.

**MSLA 4386 Law Firm Client Services and Satisfaction (2 Credits)**

This course is designed to inform the student of the importance of client service and satisfaction and its value to the law firm. Topics covered in this course include external communication, client feedback, partnering with clients, client relationship management, and evaluation and survey design.

**MSLA 4410 Accounting and Financial Management in Legal Business (3 Credits)**

This course will explore the principals and practices of financial accounting including the standards that govern the preparation of financial statements in legal business. Students will gain a comprehensive overview of double entry accounting, a detailed understanding of assets, liability, equity, revenue and expenses and how they affect the income statement, balance sheet, and statement of cash flows. Special attention will be given to the unique attributes of financial reports related to law firms.

**MSLA 4415 Statistics for the Legal Administrator (2 Credits)**

This course will introduce the fundamentals of statistics for the legal administrator. Students will learn how to measure efficiencies and work performance, perform and analyze needs assessment, track productivity; measure cases flows, and assess client needs.

**MSLA 4420 Legal Practice Seminar-Law as a Business (3 Credits)**

This course provides an overview of the business functions of a law practice. Students learn how effective law practice administrators and managers base policy and management decisions on a comprehensive understanding of the law firm as a complex and interdependent equation. MSLA course, open to JD students with approval from Associate Dean.

**MSLA 4640 ADR for the Court and Law Firm Administrators (3 Credits)**

This course has been designed for the Court/Legal Administrator to explore and understand the skills essential when negotiating/mediating conflict and to examine the ADR system designed for court-annexed, Federal/state agency and private sector arbitration/mediation programs. Students will have an opportunity to explore issues related to ADR in the public and private sector by actively participating in weekly online discussions and experience hands-on learning by developing an ADR system to include the process for selecting a panel of ADR specialists, and a process for implementing and managing the program.

**MSLA 4700 Special Topics (1-5 Credits)**

Special topics courses are used for timely offerings of specialized courses not otherwise found in the course catalog. Titles will vary. Please see [law.du.edu/registrar](http://law.du.edu/registrar) for more information.

**MSLA 4901 Law Firm Financial Management (3 Credits)**

This course focuses on the key aspects of financial management in a law firm setting. Students analyze financial reports/data, work flow analysis and assessment, understand trust accounts, client billing and internal controls, to ultimately recognize and understand the financial health of the law firm. Prerequisite: MSLA 4410.

**MSLA 4950 Strategic Planning in Courts (2 Credits)**

This course is designed to prepare the student in creating a strategic plan for the courts. Students learn to think strategically, design surveys, perform an environmental analysis, set goals, develop action plans, and measurement tools.

**MSLA 4954 Project Management (3 Credits)**

This course is designed to provide students with the tools to effectively manage a project regardless of its size. Topics include clarifying the project goals, using objectives to define responsibilities, understanding GANTT and PERT charts, goal setting, prioritization, time management, consensus building, developing creative teams, empower the project team, motivating the team, communications tools, how to handle conflicts, and how to celebrate your success.

**MSLA 4999 Directed Research MSLA (1-3 Credits)**

MSLA Directed Research is an opportunity for students to research and write on any area of legal administration approved by an approved faculty member who agrees to direct the project. The research project must be completed within the semester for which the student is registered. The research is compiled into a paper of publishable quality that is delivered to the supervising faculty member by the last day of exams for that semester. A Directed Research application form (available in the Registrar's Office) signed by both the faculty supervisor and student is required for enrollment.

**MSLA 5010 Capstone: Externship/Project (3 Credits)**

The externship or creative project is designed to complement the student's area of study. The externship enables the student to work in a practical setting and acquire the experience in a legal environment. The creative project option provides students, already working in the legal environment, an opportunity to complete a project or research paper on a topic determined by student and MSLA office. A grade of "pass" is given after the work is completed, and a letter from the supervisor summarizing the student's experience is submitted to the MSLA Office.

## Graduate Tax Program

The Graduate Tax Program was created at the University of Denver in 1975 in response to the demand for trained tax specialists in both the legal and accounting professions. Initially an evening program catering to the needs of practicing attorneys and accountants employed in the Denver area, it has evolved into one of the few such programs to offer a curriculum designed for both the full- and part-time student. The Graduate Tax Program is offered to qualified students who are graduates in law, accounting, or business in both in-person and online formats.

The Graduate Tax Program prepares students for entry into professional tax practice in both the public and private sectors. Through the interdisciplinary nature of the program, the law graduate learns the accounting aspects of tax practice, and the accounting graduate acquires a thorough understanding of the legal process.

## Graduate Tax Program

Office: Sturm College of Law

Mail Code: 2255 E. Evans Ave., Denver, CO 80208

Phone: 303-871-6249

Email: [gradadmissions@law.du.edu](mailto:gradadmissions@law.du.edu)

Web Site: <http://www.du.edu/tax> (<http://www.du.edu/tax/>)

The Graduate Tax Program at the University of Denver has been providing high-quality education for tax professionals for more than 40 years. The demand for our graduates continues to increase, along with the complexity of our nation's tax laws. Our curriculum combines both the law and accounting aspects of tax practice, giving our graduates the ability to provide practical, results-driven advice to their clients.

We offer degree tracks that meet your academic and professional needs and prepare you to continue your career in Tax, including an LLM for lawyers, Master of Taxation for accountants and other graduate students, and a flexible online program for those who cannot be here in person.

Our Graduate Tax Program continues to update its curriculum to reflect the latest changes in the law and offers an in-depth, cutting-edge tax curriculum that meets students' professional needs. Our academic program focuses exclusively on taxation, and includes courses in international taxation, state and local taxation, estate planning, individual taxation, entity taxation and tax controversy.

You also can earn credit by participating in our Low Income Taxpayer Clinic (LITC), which has served the Denver community since 1982. This hands-on, real-world experience provides students the opportunity to handle work papers, participate in research and represent clients before the IRS and Tax Court. Participation in the clinic creates a multidisciplinary network that lasts long after graduation. LITC participation is available for both online and campus students.

## Master of Laws in Taxation

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### LL.M. Requirements

- The JD degree or its equivalent (such as an LLB) from a college of law approved by the American Bar Association (no GMAT or LSAT score submission) is required. Those pursuing a JD at the Sturm College of Law at the University of Denver may apply to pursue a formal dual JD/LLM in Taxation option. Please see the dual degree policy (<http://bulletin.du.edu/graduate/dual-degrees/formal-dual-graduate-degrees/>).

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Graduate Tax Program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

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## Master of Taxation

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### Standardized Test Scores

The GMAT or GRE is required. Scores must be received directly from the appropriate testing agency by the deadline. The GMAT code number is MZR-GT-68. The GRE code number is 4842. We will consider you waived from the GRE/GMAT if you have one or more of the following:

- You received a bachelor's degree in accounting or a business administration degree with a major in accounting with a cumulative GPA greater than or equal to 3.0.
- You received a bachelor's degree in accounting or a business administration degree with a major in accounting, and you have earned a graduate level degree from an accredited school.
- You have passed all four parts of the CPA Exam. Verification must be sent as an official document from the testing authority to Graduate Legal Studies before you can register for classes.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/CAE test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80
- Minimum IELTS Score: 6.5
- Minimum CAE Score: 176

English Conditional Admission: In cases where minimum TOEFL/IELTS scores were not achieved or no English proficiency test was taken, the Graduate Tax Program may offer English Conditional Admission (ECA) to academically qualified non-native English speakers.

## Master of Laws Program

### Master of Laws in Taxation

#### Degree Requirements

All students must complete 24 semester hours within the approved GTP curriculum. Curriculum is applicable to both online and onsite degree options (with the exception of the Low Income Tax Payer Clinic).

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
TAX 4001	Fundamentals of Taxation	4
TAX 4002	Corporate Taxation	3
TAX 4003	Partnership Taxation	3
TAX 4004	Tax Procedure	2
TAX 4005	Taxation Research and Writing	2
TAX 4035	Tax Accounting	2
<b>Elective Courses</b>		<b>8</b>

Students will complete remaining degree requirements by choosing from available TAX electives, in consultation with an advisor. Elective offerings vary.

Minimum Credit hours to graduate: 24

Students must earn and maintain a cumulative GPA of at least a 2.7 to remain in good standing and graduate with the degree.

A full-time student is expected to earn the degree in one year or over two semesters; a part-time student can earn the degree in 2-3 years. Program time limit is 5 years from the time of matriculation.

Dual J.D./LL.M. in Taxation degree available to those pursuing a J.D. at the Sturm College of Law

## Master of Taxation Program

### Master of Taxation

#### Degree Requirements

All students must complete 24 or 30 semester hours (to be selected at the time of matriculation into the program) within the approved GTP curriculum. Curriculum is applicable to both online and onsite degree options (with the exception of the Low Income Tax Payer Clinic).

#### Coursework Requirements

Code	Title	Credits
<b>Required Courses</b>		
TAX 4001	Fundamentals of Taxation	4
TAX 4002	Corporate Taxation	3
TAX 4003	Partnership Taxation	3
TAX 4004	Tax Procedure	2
TAX 4005	Taxation Research and Writing	2
TAX 4035	Tax Accounting	2
<b>Elective Courses</b>		<b>8 or 14</b>

Students will complete remaining degree requirements by choosing from available TAX electives, in consultation with an advisor. Elective offerings vary.

<b>Total Hours</b>	<b>24 or 30</b>
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Students must earn and maintain a cumulative GPA of at least a 2.7 to remain in good standing and graduate with degree.

A full-time student is expected to earn the degree in one year or over two semesters; a part-time student can earn the degree in 2-3 years. Program time limit is 5 years from the time of matriculation.

**TAX 4001 Fundamentals of Taxation (4 Credits)**

This class will cover fundamental concepts of the federal income tax system, including the definition of income, adjusted gross income, taxable income, exclusions from income, business and personal deductions, tax credits, basis, amount realized, gain and loss, capital gains and losses, depreciation, involuntary conversions, like-kind exchanges.

**TAX 4002 Corporate Taxation (3 Credits)**

This required course covers the taxation of corporations and shareholders, including formation, nonliquidating distributions, the dividends received deduction, stock redemptions, distributions in kind, constructive distributions and liquidating distributions.

**TAX 4003 Partnership Taxation (3 Credits)**

Tax treatment of partnerships and partners; aggregate and entity principles; problems associated with the formation, operation, and dissolution of partnerships; transactions between partnerships and partners; compensation of service partners; sales of partnership interests; withdrawal and retirement of partners; basis adjustments; treatment of unrealized receivables and substantially appreciated inventory.

**TAX 4004 Tax Procedure (1-2 Credits)**

This required course addresses foundational procedural matters that must be addressed in resolving tax controversies with the Internal Revenue Service. Topics covered include filing obligations, statutes of limitation on assessment and collection of taxes and claims for refund, statutory notices, administrative appeals, limitations on injunctions against the assessment and collection of tax, examination procedures and collections procedures. Students are also introduced to ethical obligations of tax advisors.

**TAX 4005 Taxation Research and Writing (1-2 Credits)**

Research sources, techniques, and practice; in-depth research of selected areas. Emphasis on argument and communication of conclusions; evaluation of legislative history and administrative authorities.

**TAX 4015 S Corporations (2 Credits)**

This elective course addresses the federal taxation of S corporations and their shareholders. Topics covered include qualification as an S corporation, elections, the flow through of items to shareholders, basis in S stock and debt, accumulated adjustments account, the built-in gains tax, and passive activity limitations and taxes. Prerequisite: TAX 4002 - Corporation Taxation.

**TAX 4024 Advanced Tax Procedure (2 Credits)**

This class addresses advanced procedural matters arising in tax controversy. Topics covered include innocent spouse relief, jurisdiction of courts to resolve tax matters, petitioning Tax Court, and bringing suit for refund in U.S. district courts and US Court of Federal Claims. Prerequisite: TAX 4004.

**TAX 4025 Estate & Gift Taxation (2 Credits)**

This elective course will cover taxation of gratuitous transfers under the federal estate and gift tax codes, including taxable inter vivos gifts, annual exclusion, gift-splitting, gift tax charitable deduction, gift tax on powers of appointment, estate tax on owned interests, property transferred inter vivos with retained interests and powers, property subject to powers of appointment or transferred in contemplation of death, jointly owned property, life insurance proceeds, annuities and employee death benefits, marital deduction, charitable deduction, estate tax credits, estate tax deductions and valuation problems.

**TAX 4035 Tax Accounting (2 Credits)**

This elective course covers adoption of and change in accounting periods; income recognition and deduction allowance under the cash and accrual methods; prepaid and contested income and expenses; long-term contracts; capitalization and expensing; interest, original issue discount, and the time value of money; deferred payment transactions; income and deduction reversals; accounting method and practice changes.

**TAX 4045 Exempt Organizations (2 Credits)**

The statutory exemption for "charities," social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

**TAX 4050 International Taxation-Inbound (2 Credits)**

This course addresses the U.S. taxation of foreign taxpayers with economic activity connected to or within the United States. Topics covered include jurisdiction to tax, determination of residence, source, categorization of income, and tax treaties.

**TAX 4055 Tax & Financial Planning (2 Credits)**

This course addresses the Federal income taxation of investments and introduces students to the concepts and tools used to advise clients in investing and planning for the taxation of their investments and accumulated wealth.

**TAX 4060 Natural Resources Taxation (2 Credits)**

Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.



**TAX 4065 Taxation of Corporate Reorgs & Divisions (2 Credits)**

This course addresses the taxation of corporate reorganizations and divisions. Students will be introduced to the law governing the taxation of corporate reorganizations and divisions, whether taxable or tax-free, and learn to advise taxpayers on the results.

**TAX 4120 Qualified Pension and Profit Sharing Plans (4 Credits)**

An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business.

**TAX 4121 Taxation of Retirement Plans and Deferred Compensation (2 Credits)**

Taxation of Retirement Plans and Deferred Compensation introduces students to issues related to retirement savings plans available to employers and taxpayers, including vesting requirements, top-heavy plans, and the taxation of plan contributions and distributions. The course also addresses non-qualified deferred compensation governed by § 409A, including, traditional non-qualified deferred compensation plan designs, executive compensation programs (e.g., equity compensation arrangements and types of non-qualified trusts established for the benefit of executives), common § 409A errors and correction, tax and accounting implications, and the "special timing rule" for FICA taxes.

**TAX 4125 Fiduciary Income Taxation (2 Credits)**

This course covers the federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under sections 671-678; trust ownership rules for subchapter S stock; and the calculation of the alternative minimum tax. Estate & Gift Taxation is highly recommended before taking this course.

**TAX 4150 International Taxation-Outbound (2 Credits)**

This class addresses the U.S. taxation of U.S. taxpayers with economic activity outside of the United States. Topics covered include foreign tax credits, subpart F income, hybrid entities, global intangible low-taxed income and foreign-derived intangible income.

**TAX 4165 Taxation of Startups and Venture Capital (2 Credits)**

This course addresses taxation of startups and venture capital. Topics covered include choice of entity, taxation of intellectual property, carried interests, employee compensation, international expansion, and exit strategies. TAX 4003 Partnership Taxation and Tax 4002 Corporate Taxation are co-requisites or pre-requisites for this course.

**TAX 4220 Fiduciary Income Taxation (4 Credits)**

Federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under Sections 671-678; and the calculation of the alternative minimum tax.

**TAX 4225 Estate Planning (2 Credits)**

This course is a survey of estate planning issues. We will analyze an estate from the beginning through the end of the process. We will examine fact gathering and the analysis of data; the psychological and ethical aspects of working with families at different phases of the estate plan; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance and retirement planning in an estate and business planning context; planning with trusts; and the transfer of wealth and a closely held business interest from one generation to the next. We will also study ways to plan for future generations and domestic asset protection planning. Estate and Gift Taxation (TAX 4025) is a pre-requisite for the for this course.

**TAX 4230 Estate Planning (3 Credits)**

Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts, including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed. Prerequisite: TAX 4210.

**TAX 4240 Tax and Financial Planning (3 Credits)**

This is an introductory, integrated course focusing on personal financial planning. Topics covered include cash flow projections and budgeting, annual and multiple period income tax planning, an introduction to taxation of investments, an insurance and liability coverage survey, retirement planning, and estate and succession planning.

**TAX 4250 Ethics in Tax Practice (3 Credits)**

An examination of the ethical rules and considerations affecting lawyers and accountants in tax practice, including transactional, compliance and controversy matters.

**TAX 4315 Low Income Taxpayer Clinic (1-4 Credits)****TAX 4325 Tax Planning for Closely Held Businesses (2 Credits)**

This course addresses succession planning for closely held businesses. Topics covered include buy-sell agreements, stock redemptions, intra-family transfers of business entities, compensation arrangements, and family limited partnerships. TAX 4003 Partnership Taxation and TAX 4002 Corporate Taxation are pre-requisite or co-requisites for this course. Estate Planning and Fiduciary Income Taxation are recommended.

**TAX 4386 Graduate Tax Program Externship (2-4 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Externships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The externship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the externship will result in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP externs.

**TAX 4410 Taxation-Natural Resources (3 Credits)**

Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

**TAX 4415 Low Income Taxpayer Clinic (1-8 Credits)**

Using a focused series of classes related to issues facing individual low income taxpayers embroiled in conflict with the Internal Revenue Service or in litigation before the United States Tax Court (innocent spouse relief, earned income credit, dependency exemptions, appeals of audits and collection due process issues, tax litigation), this course first prepares tax students to represent taxpayers regarding such issues, then provides the opportunity to practice before the IRS and in the Tax Court. In a clinical setting, students are trained in all facets of practice before the IRS and the Tax Court. Once trained, under the supervision of clinical staff, the students undertake representation of low income taxpayers in tax audits, appeals, collection proceedings, and, if necessary, before the Tax Court. All facets of client representation, including initial client meetings, representation agreements, client advocacy, and ending the representation, are experienced by each clinic participant.

**TAX 4430 Exempt Organizations (3 Credits)**

An examination of the statutory exemptions for "charities," social welfare organizations, social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, property title companies, federally organized or chartered organizations, political organizations, and other exempt organizations; rules on electioneering and lobbying activities; taxation of private foundations; prohibited transaction rules; the tax on unrelated business income, including debt-financed income; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

**TAX 4470 Employment Tax (2 Credits)**

Explore existing employment tax risks, recognize employment tax planning opportunities through appropriate compensation and entity structuring techniques, analyze proper worker classification, and highlight preventative techniques to avoid personal liability.

**TAX 4490 State & Local Taxation (3 Credits)**

Taxable incidents, privilege tax, discrimination, and multiple taxation under the Commerce Clause of the United States Constitution; taxation based on class legislation and the Equal Protection Clause; nexus or jurisdictional due process; allocation and apportionment formulas; business versus nonbusiness income; multi-state tax compact; unitary concept; residence definitions; nonresident income sources; tax credits and short period returns for individual income taxpayers; sales of tangible personal property; retail and wholesale sales; taxable and nontaxable leases; contractors rule, exemptions, and resale certificates under sales and use tax statutes; valuation techniques for real personal property; and administrative and judicial appeal of property tax valuations and assessments.

**TAX 4500 Consolidated Returns (3 Credits)**

Methods used by related corporations to report income and losses; affiliation and consolidation; computation of consolidated taxable income; allocation of consolidated tax liability; deferred intercompany transactions; treatment of investments in affiliates; earnings and profits; impact of corporate combination and separation.

**TAX 4550 Consolidated Returns (2 Credits)**

This course covers the rules and requirements for consolidated income tax returns, including qualification for consolidation, determination of consolidated taxable income, allocations of liability, adjustments of E&P and basis, and various loss limitations.

**TAX 4590 State and Local Taxation (2 Credits)**

This course addresses state law approaches to taxation, including variations in state rules, constitutional limitations on states' authority to impose tax, and various approaches to apportionment of taxation. We will also discuss policy considerations underlying these systems.

**TAX 4600 Seminar: Selected Topics (2-4 Credits)**

Recognition of tax problems and opportunities for a broad range of transactions encountered by individuals. Areas include family income splitting and other tax reduction and avoidance techniques; portfolio transactions, including short sales, puts and calls, and commodity futures; structuring agreements in contemplation of marriage or arising out of separation or divorce; personal insurance; charitable contributions; net operating losses; alternative minimum tax; various year-end planning techniques.

**TAX 4620 Accounting for Income Taxes (ASC 740) (2 Credits)**

Examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature. Topics include the calculation of current and deferred income taxes, an overview of book-tax differences, the calculation of interim period tax provisions and the presentation and disclosure of income taxes in financial statements. Students will learn the basics of accounting for income taxes related to advanced topics such as stock compensation expense, foreign operations, state income taxes, accounting for uncertain tax positions (formerly known as FIN 48), business combinations, inter-company transactions and valuation allowances.

**TAX 4625 Accounting for Income Taxes (2 Credits)**

Accounting for Income Taxes examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature.

**TAX 4701 Special Topics in Taxation (1-5 Credits)**

Special topics courses are used for timely offerings of specialized courses not otherwise found in the course catalog. Titles will vary. Please see [law.du.edu/registrar](http://law.du.edu/registrar) for more information.

**TAX 4750 Special Topics in International Taxation (2 Credits)**

This advanced seminar discusses international taxation of economic activity arising in multiple jurisdictions. Topics discussed can include tax treaties, dual residence entities, anti-abuse regimes, approaches to base erosion and profit shifting, taxation of intangible income, and issues related to stateless income. TAX 4150 International – Outbound is a prerequisite for this course.

**TAX 4980 Internship (0 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Director or a full-time GTP faculty member.

**TAX 4985 Internship (0 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Program Manager.

**TAX 4991 Independent Study (1-4 Credits)**

Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. The 4 quarter-hour maximum may be applied toward graduation requirements with no more than 2 quarter hours in any one quarter. Must obtain pre-approval from the Graduate Tax Program.

**TAX 5025 Tax Externship (1-4 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Tax externships are designed to allow students the opportunity to gain monitored work experience in Tax-oriented placements outside of the law school. Example placements include judicial chambers, government agencies, private firms, corporations, and nonprofit organizations. Students should discuss any placement with the Director of the Graduate Tax Program before enrolling in this course. Externships are supervised by faculty who interact with the eligible student and the employer or organization that provides the externships. The externship should provide a new learning experience for the student and must be related to taxation. Satisfactory completion of the externship results in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for students. Students may complete an externship for 1 to 4 credits. Each credit corresponds to 42.5 hours of work and thus students can work from 42.5 hours to 170 hours. This class does not satisfy the upper-level writing requirement.

**TAX 5991 Independent Study (1-3 Credits)**

Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. Must obtain pre-approval from the Graduate Tax Program.

**Courses****TAX 4001 Fundamentals of Taxation (4 Credits)**

This class will cover fundamental concepts of the federal income tax system, including the definition of income, adjusted gross income, taxable income, exclusions from income, business and personal deductions, tax credits, basis, amount realized, gain and loss, capital gains and losses, depreciation, involuntary conversions, like-kind exchanges.

**TAX 4002 Corporate Taxation (3 Credits)**

This required course covers the taxation of corporations and shareholders, including formation, nonliquidating distributions, the dividends received deduction, stock redemptions, distributions in kind, constructive distributions and liquidating distributions.

**TAX 4003 Partnership Taxation (3 Credits)**

Tax treatment of partnerships and partners; aggregate and entity principles; problems associated with the formation, operation, and dissolution of partnerships; transactions between partnerships and partners; compensation of service partners; sales of partnership interests; withdrawal and retirement of partners; basis adjustments; treatment of unrealized receivables and substantially appreciated inventory.

**TAX 4004 Tax Procedure (1-2 Credits)**

This required course addresses foundational procedural matters that must be addressed in resolving tax controversies with the Internal Revenue Service. Topics covered include filing obligations, statutes of limitation on assessment and collection of taxes and claims for refund, statutory notices, administrative appeals, limitations on injunctions against the assessment and collection of tax, examination procedures and collections procedures. Students are also introduced to ethical obligations of tax advisors.

**TAX 4005 Taxation Research and Writing (1-2 Credits)**

Research sources, techniques, and practice; in-depth research of selected areas. Emphasis on argument and communication of conclusions; evaluation of legislative history and administrative authorities.

**TAX 4015 S Corporations (2 Credits)**

This elective course addresses the federal taxation of S corporations and their shareholders. Topics covered include qualification as an S corporation, elections, the flow through of items to shareholders, basis in S stock and debt, accumulated adjustments account, the built-in gains tax, and passive activity limitations and taxes. Prerequisite: TAX 4002 - Corporation Taxation.

**TAX 4024 Advanced Tax Procedure (2 Credits)**

This class addresses advanced procedural matters arising in tax controversy. Topics covered include innocent spouse relief, jurisdiction of courts to resolve tax matters, petitioning Tax Court, and bringing suit for refund in U.S. district courts and US Court of Federal Claims. Prerequisite: TAX 4004.

**TAX 4025 Estate & Gift Taxation (2 Credits)**

This elective course will cover taxation of gratuitous transfers under the federal estate and gift tax codes, including taxable inter vivos gifts, annual exclusion, gift-splitting, gift tax charitable deduction, gift tax on powers of appointment, estate tax on owned interests, property transferred inter vivos with retained interests and powers, property subject to powers of appointment or transferred in contemplation of death, jointly owned property, life insurance proceeds, annuities and employee death benefits, marital deduction, charitable deduction, estate tax credits, estate tax deductions and valuation problems.

**TAX 4035 Tax Accounting (2 Credits)**

This elective course covers adoption of and change in accounting periods; income recognition and deduction allowance under the cash and accrual methods; prepaid and contested income and expenses; long-term contracts; capitalization and expensing; interest, original issue discount, and the time value of money; deferred payment transactions; income and deduction reversals; accounting method and practice changes.

**TAX 4045 Exempt Organizations (2 Credits)**

The statutory exemption for "charities," social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

**TAX 4050 International Taxation-Inbound (2 Credits)**

This course addresses the U.S. taxation of foreign taxpayers with economic activity connected to or within the United States. Topics covered include jurisdiction to tax, determination of residence, source, categorization of income, and tax treaties.

**TAX 4055 Tax & Financial Planning (2 Credits)**

This course addresses the Federal income taxation of investments and introduces students to the concepts and tools used to advise clients in investing and planning for the taxation of their investments and accumulated wealth.

**TAX 4060 Natural Resources Taxation (2 Credits)**

Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

**TAX 4065 Taxation of Corporate Reorgs & Divisions (2 Credits)**

This course addresses the taxation of corporate reorganizations and divisions. Students will be introduced to the law governing the taxation of corporate reorganizations and divisions, whether taxable or tax-free, and learn to advise taxpayers on the results.

**TAX 4121 Taxation of Retirement Plans and Deferred Compensation (2 Credits)**

Taxation of Retirement Plans and Deferred Compensation introduces students to issues related to retirement savings plans available to employers and taxpayers, including vesting requirements, top-heavy plans, and the taxation of plan contributions and distributions. The course also addresses non-qualified deferred compensation governed by § 409A, including, traditional non-qualified deferred compensation plan designs, executive compensation programs (e.g., equity compensation arrangements and types of non-qualified trusts established for the benefit of executives), common § 409A errors and correction, tax and accounting implications, and the "special timing rule" for FICA taxes.

**TAX 4125 Fiduciary Income Taxation (2 Credits)**

This course covers the federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under sections 671-678; trust ownership rules for subchapter S stock; and the calculation of the alternative minimum tax. Estate & Gift Taxation is highly recommended before taking this course.

**TAX 4150 International Taxation-Outbound (2 Credits)**

This class addresses the U.S. taxation of U.S. taxpayers with economic activity outside of the United States. Topics covered include foreign tax credits, subpart F income, hybrid entities, global intangible low-taxed income and foreign-derived intangible income.

**TAX 4165 Taxation of Startups and Venture Capital (2 Credits)**

This course addresses taxation of startups and venture capital. Topics covered include choice of entity, taxation of intellectual property, carried interests, employee compensation, international expansion, and exit strategies. TAX 4003 Partnership Taxation and Tax 4002 Corporate Taxation are co-requisites or pre-requisites for this course.

**TAX 4225 Estate Planning (2 Credits)**

This course is a survey of estate planning issues. We will analyze an estate from the beginning through the end of the process. We will examine fact gathering and the analysis of data; the psychological and ethical aspects of working with families at different phases of the estate plan; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance and retirement planning in an estate and business planning context; planning with trusts; and the transfer of wealth and a closely held business interest from one generation to the next. We will also study ways to plan for future generations and domestic asset protection planning. Estate and Gift Taxation (TAX 4025) is a pre-requisite for the for this course.

**TAX 4325 Tax Planning for Closely Held Businesses (2 Credits)**

This course addresses succession planning for closely held businesses. Topics covered include buy-sell agreements, stock redemptions, intra-family transfers of business entities, compensation arrangements, and family limited partnerships. TAX 4003 Partnership Taxation and TAX 4002 Corporate Taxation are pre-requisite or co-requisites for this course. Estate Planning and Fiduciary Income Taxation are recommended.

**TAX 4415 Low Income Taxpayer Clinic (1-8 Credits)**

Using a focused series of classes related to issues facing individual low income taxpayers embroiled in conflict with the Internal Revenue Service or in litigation before the United States Tax Court (innocent spouse relief, earned income credit, dependency exemptions, appeals of audits and collection due process issues, tax litigation), this course first prepares tax students to represent taxpayers regarding such issues, then provides the opportunity to practice before the IRS and in the Tax Court. In a clinical setting, students are trained in all facets of practice before the IRS and the Tax Court. Once trained, under the supervision of clinical staff, the students undertake representation of low income taxpayers in tax audits, appeals, collection proceedings, and, if necessary, before the Tax Court. All facets of client representation, including initial client meetings, representation agreements, client advocacy, and ending the representation, are experienced by each clinic participant.

**TAX 4550 Consolidated Returns (2 Credits)**

This course covers the rules and requirements for consolidated income tax returns, including qualification for consolidation, determination of consolidated taxable income, allocations of liability, adjustments of E&P and basis, and various loss limitations.

**TAX 4590 State and Local Taxation (2 Credits)**

This course addresses state law approaches to taxation, including variations in state rules, constitutional limitations on states' authority to impose tax, and various approaches to apportionment of taxation. We will also discuss policy considerations underlying these systems.

**TAX 4625 Accounting for Income Taxes (2 Credits)**

Accounting for Income Taxes examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature.

**TAX 4701 Special Topics in Taxation (1-5 Credits)**

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**TAX 4750 Special Topics in International Taxation (2 Credits)**

This advanced seminar discusses international taxation of economic activity arising in multiple jurisdictions. Topics discussed can include tax treaties, dual residence entities, anti-abuse regimes, approaches to base erosion and profit shifting, taxation of intangible income, and issues related to stateless income. TAX 4150 International – Outbound is a prerequisite for this course.

**TAX 4985 Internship (0 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Program Manager.

**TAX 5025 Tax Externship (1-4 Credits)**

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**TAX 5991 Independent Study (1-3 Credits)**

Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. Must obtain pre-approval from the Graduate Tax Program.

## University College

As the University of Denver's college of continuing and professional studies, University College (<http://universitycollege.du.edu/answers/why-university-college.cfm>) delivers a personalized education from a top 100 university, as ranked by *U.S. News & World Report*. Delivered entirely

online or evenings on campus, career-focused programs help you envision your future and be a leader in your chosen field. Build your network and your knowledge at University College, where you can earn a master's degree (<http://universitycollege.du.edu/masters-degrees.cfm>) in 18 months, a specialized graduate certificate (<https://universitycollege.du.edu/certificate/>) in six months, or a graduate certificate (<https://universitycollege.du.edu/certificate/>) in less than a year. The top-ranked bachelor's completion program (<https://universitycollege.du.edu/bachelors/>) is also available for those with some college credit who want to finish their degree.

## Arts and Culture Management

Office: University College Student Support Center  
Mail Code: 2211 S. Josephine St., Denver, CO 80208  
Phone: 303-871-2291, 800-347-2042  
Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)  
Web Site: <http://www.universitycollege.du.edu>

The Arts and Culture Management program helps students enhance their ability to support, promote, and lead both public and private sector arts and cultural organizations. The program's larger aim is to prepare students to strengthen their communities through the dissemination of artistic and cultural creations that address and celebrate diverse constituencies, whether based on age, ethnic background, religious/philosophical identity, or political commitments. The program fosters the study of best practices in areas such as advocacy, community outreach, marketing, fundraising, facilities management, organizational development, budgeting, and governance. The program develops critical and creative thought through a combination of academic and applied inquiry to fully understand the needs of communities and organizations and to meet those needs in the most effective ways.

This program prepares students to:

- Develop careers in public and/or private arts and culture organizations
- Implement best practices to support organizational stability and creative vibrancy
- Cultivate strong connections between arts and culture organizations and the communities they serve
- Effectively deliver well-planned programs and events tailored to diverse audiences

### Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy

Students in the Arts and Culture Outreach and Advocacy concentration learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, graduates with this concentration will bring core skills to any organization they join in the arts and culture sector.

This degree prepares students to:

- Design events and programs that cultivate connections between arts and culture organizations and the communities they serve
- Develop winning proposals to secure grant support for outreach and advocacy initiatives
- Evaluate the opportunities to build a strategic marketing plan using various forms of media
- Apply creative, entrepreneurial approaches to help both nonprofit and for-profit organizations develop a strong, productive community presence

### Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Marketing

In the Arts and Culture Marketing concentration, students learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students develop the practical knowledge they need to work as effective members of arts and culture marketing teams.

This degree prepares students to:

- Design effective marketing strategies to cultivate audiences for arts and culture events
- Identify, develop, and retain key audiences
- Evaluate the opportunities to build strategic marketing plans using various forms of promotion, advertising, digital communications, and social media
- Assess individual campaigns and overarching strategies to improve them over time

## **Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Fundraising and Development**

Students in the Arts and Culture Fundraising concentration learn the practical steps involved in creating successful fundraising campaigns on behalf of nonprofit arts and culture organizations. From crowdsourcing and kick-starting campaigns to capital fundraising and legacy gifts, nonprofits must cultivate and retain donors from various backgrounds, prospect for new donation sources, and validate the value of their efforts. Students will gain the knowledge and skills needed to navigate changing trends, boost the impact of fundraising programs, and advance their organization's goals. By applying their personal enthusiasm and practical skills, students will learn how to cultivate both human and financial resources to fulfill the mission of any arts and culture organization.

This degree prepares students to:

- Evaluate diverse fundraising strategies to ensure alignment with the mission and capacity of arts and culture nonprofits of various sizes.
- Identify the best fundraising strategies, methods, and tools to meet organizational goals.
- Formulate and structure focused fundraising plans in the arts and culture space.
- Demonstrate financial literacy and awareness of current fundraising tools and practices to meet the development needs of arts and culture organizations.
- Exhibit cultural competence by analyzing and explaining how various fundraising approaches may need to be adjusted to work well in diverse cultural contexts.

## **Master of Arts in Arts and Culture Management with a Concentration in Mission-Driven Operations and Management**

In the Arts and Culture Mission-Driven Operations and Management concentration, students learn how to help program operations and organizational management work together to accomplish a nonprofit arts and culture organization's mission impact. Organizations need to develop effective program design to include staffing, performance measurements, and the human and financial resources to ensure success. In this concentration students will link financial goals to grants management, partnership cultivation and community-based strategies that further the goals of the organization. Together, students will examine the evidence of effective nonprofit programming as grounded in research. Students will identify program evaluation strategies that demonstrate community impact and mission accomplishment. Volunteer and advocacy operations are also examined as programming strategies that accomplish a nonprofit arts and culture organization's mission.

This degree prepares students to:

- Demonstrate planning practices for effectively resourced nonprofit/nongovernmental program development.
- Evaluate existing nonprofit programs' design using critical thinking to determine resource allocation and impact measurement.
- Demonstrate program-evaluation-planning skills to include collective impact, logic models.
- Examine diverse funding structures, including grants cultivation and management, to determine how best to resource program operations.

## **Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy**

Students earning a graduate certificate in the Arts and Culture Outreach and Advocacy learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students begin to develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, certificate students will develop core skills that are easily transferable to any organization they join in the arts and culture sector. Students will also learn additional skills and knowledge in arts and culture through elective coursework.

## **Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Marketing**

Students earning a graduate certificate in Arts and Culture Marketing learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students begin to develop the practical knowledge they need to work as effective members of arts and culture marketing teams. Students will also learn additional skills and knowledge in arts and culture through elective coursework.

## **Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Fundraising and Development**

Students earning a graduate certificate in Arts and Culture Fundraising and Development learn the practical steps involved in creating successful fundraising campaigns on behalf of nonprofit arts and culture organizations. From crowdsourcing and kick-starting campaigns to capital fundraising and legacy gifts, nonprofits must cultivate and retain donors from various backgrounds, prospect for new donation sources, and validate the value of their efforts. Students will gain the knowledge and skills needed to navigate changing trends, boost the impact of fundraising programs, and advance their organization's goals. By applying their personal enthusiasm and practical skills, students will learn how to cultivate both human and financial resources to fulfill the mission of any arts and culture organization.

## **Specialized Graduate Certificate in Arts and Culture Marketing**

Students earning a specialized graduate certificate in Arts and Culture Marketing learn to plan, sustain, and develop strategic marketing initiatives and campaign assessment methodologies on behalf of arts and culture organizations, both nonprofit and for-profit. Instructors with current expertise in arts and culture marketing provide industry insight and help students begin to develop the practical knowledge they need to work as effective members of arts and culture marketing teams.

## **Specialized Graduate Certificate in Arts and Culture Outreach and Advocacy**

Students earning a specialized graduate certificate in the Arts and Culture Outreach and Advocacy learn strategies and methods for creating strong relationships between arts and culture organizations and the communities they serve. Instructors with current expertise in arts and culture outreach and advocacy offer current industry insight and help students begin to develop the practical knowledge they need to advocate for arts and culture in communities of all kinds. By designing engaging events and targeted programs, applying entrepreneurial thinking and skills to issues of community outreach, and developing effective approaches to securing grant support, certificate students will develop core skills that are easily transferable to any organization they join in the arts and culture sector.

## **Master's Degree Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## **Certificate Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.



## Master of Arts Degree

### Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Fundraising and Development

Code	Title	Credits
<b>Core course requirements:</b>		
MALS 4475	Organizational Vibrancy and Measurement	4
MALS 4480	Arts and Culture: Best Practices and Practical Skills	4
MALS 4485	Legal Landscape of Arts and Culture	4
MALS 4905	Graduate Social Research Methods	4
MALS 4901 or MALS 4902 or MALS 4904	Capstone Project Capstone Seminar Interdisciplinary Capstone Seminar	4
<b>Arts and Culture Fundraising concentration requirements (Choose four courses):</b>		
MALS 4200	Grant Writing	4
MALS 4210	Fundraising for Sustainable Arts Organizations	4
NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4115	Leading Nonprofit Financial Health	4
<b>Elective requirements (Choose 3 courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Master of Arts in Arts and Culture Management with a Concentration in Arts and Culture Marketing

Code	Title	Credits
<b>Core course requirements:</b>		
MALS 4475	Organizational Vibrancy and Measurement	4
MALS 4480	Arts and Culture: Best Practices and Practical Skills	4
MALS 4485	Legal Landscape of Arts and Culture	4
MALS 4905	Graduate Social Research Methods	4
MALS 4901 or MALS 4902 or MALS 4904	Capstone Project Capstone Seminar Interdisciplinary Capstone Seminar	4
<b>Concentration requirements (Choose four courses):</b>		
MALS 4283	Strategic Marketing Planning for Arts and Culture	4
MALS 4285	Basics of Arts and Culture Marketing	4
MALS 4286	Social Media and Digital Marketing for Arts and Culture	4
MALS 4287	Managing Demand and Pricing for Arts and Culture	4
<b>Elective requirements (Choose 3 courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Arts in Arts and Culture Management with a Concentration in Mission-Driven Operations And Management

Code	Title	Credits
<b>Core course requirements:</b>		
MALS 4475	Organizational Vibrancy and Measurement	4
MALS 4480	Arts and Culture: Best Practices and Practical Skills	4
MALS 4485	Legal Landscape of Arts and Culture	4
MALS 4905	Graduate Social Research Methods	4
MALS 4901	Capstone Project	4
or MALS 4902	Capstone Seminar	
or MALS 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements (Choose four courses):</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4300	Operational Strategy and Structures	4
NFP 4305	Nonprofit Program and People Management	4
NFP 4310	Community Organizing, Voice and Empowerment	4
<b>Elective requirements (Choose 3 courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Arts and Culture Management with Concentration in Arts and Culture Outreach and Advocacy

Code	Title	Credits
<b>Core course requirements:</b>		
MALS 4475	Organizational Vibrancy and Measurement	4
MALS 4480	Arts and Culture: Best Practices and Practical Skills	4
MALS 4485	Legal Landscape of Arts and Culture	4
MALS 4905	Graduate Social Research Methods	4
MALS 4901	Capstone Project	4
or MALS 4902	Capstone Seminar	
or MALS 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements (Choose four courses):</b>		
MALS 4281	Event Planning	4
MALS 4284	Arts and Culture Entrepreneurship	4
MALS 4470	Arts and Culture: History, Context, and Trends	4
MALS 4490	Arts and Culture Programs for Social Impact	4
<b>Elective requirements (Choose 3 courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Arts and Culture Management with Concentration in Arts and Culture Fundraising and Development

Code	Title	Credits
<b>Concentration requirements:</b>		
MALS 4210	Fundraising for Sustainable Arts Organizations	4
MALS 4200	Grant Writing	4

NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4115	Leading Nonprofit Financial Health	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Marketing

Code	Title	Credits
<b>Concentration requirements:</b>		
MALS 4283	Strategic Marketing Planning for Arts and Culture	4
MALS 4285	Basics of Arts and Culture Marketing	4
MALS 4286	Social Media and Digital Marketing for Arts and Culture	4
MALS 4287	Managing Demand and Pricing for Arts and Culture	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Arts and Culture Management with a Concentration in Arts and Culture Outreach and Advocacy

Code	Title	Credits
<b>Concentration requirements:</b>		
MALS 4281	Event Planning	4
MALS 4284	Arts and Culture Entrepreneurship	4
MALS 4470	Arts and Culture: History, Context, and Trends	4
MALS 4490	Arts and Culture Programs for Social Impact	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Arts and Culture Marketing

Code	Title	Credits
MALS 4283	Strategic Marketing Planning for Arts and Culture	4
MALS 4285	Basics of Arts and Culture Marketing	4
MALS 4286	Social Media and Digital Marketing for Arts and Culture	4
MALS 4287	Managing Demand and Pricing for Arts and Culture	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Arts and Culture Outreach and Advocacy

Code	Title	Credits
MALS 4281	Event Planning	4
MALS 4284	Arts and Culture Entrepreneurship	4
MALS 4470	Arts and Culture: History, Context, and Trends	4
MALS 4490	Arts and Culture Programs for Social Impact	4
<b>Total Credits</b>		<b>16</b>

#### **MALS 4050 World Visual & Performance Art (4 Credits)**

This course draws upon global artistic traditions of visual art and performance in conveying how human beings express ideas, themes, and emotions. Students view and experience artistic forms and movements throughout history and from a variety of traditions across the world, critically analyzing art movements and forms across time. They synthesize ideas across cultures, traditions, and types of creative expression and make connections and distinctions between genres and art forms. A different, rich, artistic theme is the focus each time the course is taught.

#### **MALS 4200 Grant Writing (4 Credits)**

This course gives students the opportunity to develop a thorough understanding of proposal writing. Students will receive practical grant writing advice and support, and they will work to sharpen their writing, program design, budgeting, and evaluation skills. Prospect research, development planning, and grasping the dynamics of the broader philanthropic landscape are important components of a holistic funding strategy that produces a successful fundraising program. Students will explore the place of contributed income in a healthy and diversified funding plan, develop research and planning skills, and learn the best practices that are fundamental to building strong philanthropic relationships.

#### **MALS 4210 Fundraising for Sustainable Arts Organizations (4 Credits)**

Every sustainable arts and culture organization requires a diversified funding base—usually a mix of earned income, contributions from individuals, and grants from foundations and government programs. This survey course allows students to explore the professional skills they will need to respond effectively to a variety of funding scenarios. The course is tailored for creatives — artists, cultural workers, and organizers in need of a user-friendly approach to the critical activity of fundraising.

#### **MALS 4281 Event Planning (4 Credits)**

Events play a large role in connecting community and audiences within the arts and culture sector. Students will learn to develop and manage arts and culture events to achieve an organization's mission, goals, and objectives within the constraints of the event's scope, timing, and budget. Event management systems addressed include strategic planning, event design, marketing and audience development, site management, and partnership development. Students will create a program and plan for an event supporting a particular arts and culture organization.

#### **MALS 4283 Strategic Marketing Planning for Arts and Culture (4 Credits)**

This course provides a strategic approach to attracting audiences through arts marketing. Students learn to build a cohesive strategic marketing plan that aligns with the mission and programming of a real-life arts organization. Students will make a wide range of strategic marketing management decisions, preparing them for decision-making positions in arts marketing.

#### **MALS 4284 Arts and Culture Entrepreneurship (4 Credits)**

In any sector of the Arts and Culture field, whether government, nonprofit, or for profit, it is essential to be able to develop programs and/or organizations from conception through implementation and assessment. This development requires the clear communication of what is needed to develop, implement, and sustain this plan over time. In this course, students take an entrepreneurial approach to develop a program or organization in the arts and culture field. Students will develop and present a comprehensive business plan to define, map, structure, and assess the program/organization in either the nonprofit or for-profit sector.

#### **MALS 4285 Basics of Arts and Culture Marketing (4 Credits)**

This course provides a strategic approach to audiences and markets through an arts and cultural lens. Students will study basic principles of marketing, audience characteristics, and theories of creating commitment to the arts.

#### **MALS 4286 Social Media and Digital Marketing for Arts and Culture (4 Credits)**

Marketing arts and culture in the digital age is an art unto itself. Today's arts marketers are expected to produce visual, audio, and written content that matches the quality of the art, on stage or in the gallery, or the cultural programming presented to the public. This course provides students with a framework for planning, producing, executing, and measuring the impact of digital campaigns that build communities around art and culture.

#### **MALS 4287 Managing Demand and Pricing for Arts and Culture (4 Credits)**

Tomorrow's arts leaders need to be prepared to face the emotional subject of pricing in a way that is responsive to the community yet supports a sustainable business model. This class takes an evidence-based approach to determining the demand for arts and culture programming and setting prices for programs and events offered by arts and culture organizations. Students will explore dynamic pricing strategies, approaches to communicating the relationship between price and value, and how artistic and cultural programming enriches the broader community.

#### **MALS 4340 Arts and Culture Leadership for Social Change (4 Credits)**

Art and culture are powerful tools for the transformation of society and individuals: they sustain communities in resistance, provide powerful social critiques, expose audiences to multiple experiences and points of view and utilize collaboration, co-creation, dialogue, and exchange, to effect social change. In this course, students will learn how cultural institutions can become active agents in the work of social change. We will examine theories of movement building, explore case studies and develop advocacy, outreach, and program planning strategies for successful arts and social justice leadership.

**MALS 4444 Emerging Trends in Visual and Performance Art (4 Credits)**

Whether you're curating visual art for a large regional venue or staging work at a local theater or gallery, understanding current artistic trends can be critical to your success. This course looks into major developments in Contemporary visual and performance art around the world. From new approaches to materials and techniques to expressions of identity and cultural/political critique, students will examine and engage with the latest, most significant artistic trends that are shaping the Contemporary art experience.

**MALS 4470 Arts and Culture: History, Context, and Trends (4 Credits)**

This course examines the significant and growing economic, social, and educational impact of the arts and culture sector on our increasingly diverse communities. Focusing on historical and current trends in the visual, performing, literary, and media arts, students will develop a stronger grasp of the role arts and culture organizations play in enriching our understanding of the world around us.

**MALS 4475 Organizational Vibrancy and Measurement (4 Credits)**

As database and analytics systems for arts organizations grow ever more sophisticated, arts leaders must be literate in basics concepts of statistics, finance, and data analysis. This course will prepare students to examine data critically, explore the stories that data can tell, and determine how to measure success and vibrancy.

**MALS 4480 Arts and Culture: Best Practices and Practical Skills (4 Credits)**

This course will engage students in the management and operations of arts and cultural non-profits through terms, techniques, and applications specifically focusing on analysis of mission/visioning, planning, staffing, volunteerism, board governance, fiduciary actions, fundraising/development, marketing/promotion and assessment. This is in preparation for a variety of experiences students may explore, including new aspects of arts management, either in positions of leadership, employment in the field, or a higher interest in volunteerism.

**MALS 4485 Legal Landscape of Arts and Culture (4 Credits)**

Professionals in arts and culture, whether they are artists, managers, directors, or others working in the private, government, or nonprofit sector, will encounter a variety of legal issues during their careers. Through readings, case studies, assignments, and research, students will be introduced to a complex interdisciplinary system of relevant laws that impact and, in some cases, govern arts and culture organizational activities.

**MALS 4490 Arts and Culture Programs for Social Impact (4 Credits)**

In this course, students explore changing attitudes toward arts participation and cultural philanthropy, focusing especially on the need for new approaches to engaging and working with culturally diverse populations. Students explore the cultivation of effective cross-disciplinary partnerships to create impactful programs that can transform communities. Programs at diverse arts organizations serve as case studies for practical applications. Students use theory-of-change models to develop programs that connect arts and cultural work with social-impact activities beyond the arts and culture sector.

**MALS 4701 Topics in Arts and Culture (4 Credits)**

The content of this course varies each term. The topics may include time-sensitive issues in the area of literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**MALS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**MALS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**MALS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**MALS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Courses

**MALS 4050 World Visual & Performance Art (4 Credits)**

This course draws upon global artistic traditions of visual art and performance in conveying how human beings express ideas, themes, and emotions. Students view and experience artistic forms and movements throughout history and from a variety of traditions across the world, critically analyzing art movements and forms across time. They synthesize ideas across cultures, traditions, and types of creative expression and make connections and distinctions between genres and art forms. A different, rich, artistic theme is the focus each time the course is taught.

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This course gives students the opportunity to develop a thorough understanding of proposal writing. Students will receive practical grant writing advice and support, and they will work to sharpen their writing, program design, budgeting, and evaluation skills. Prospect research, development planning, and grasping the dynamics of the broader philanthropic landscape are important components of a holistic funding strategy that produces a successful fundraising program. Students will explore the place of contributed income in a healthy and diversified funding plan, develop research and planning skills, and learn the best practices that are fundamental to building strong philanthropic relationships.

**MALS 4210 Fundraising for Sustainable Arts Organizations (4 Credits)**

Every sustainable arts and culture organization requires a diversified funding base—usually a mix of earned income, contributions from individuals, and grants from foundations and government programs. This survey course allows students to explore the professional skills they will need to respond effectively to a variety of funding scenarios. The course is tailored for creatives — artists, cultural workers, and organizers in need of a user-friendly approach to the critical activity of fundraising.

**MALS 4281 Event Planning (4 Credits)**

Events play a large role in connecting community and audiences within the arts and culture sector. Students will learn to develop and manage arts and culture events to achieve an organization's mission, goals, and objectives within the constraints of the event's scope, timing, and budget. Event management systems addressed include strategic planning, event design, marketing and audience development, site management, and partnership development. Students will create a program and plan for an event supporting a particular arts and culture organization.

**MALS 4283 Strategic Marketing Planning for Arts and Culture (4 Credits)**

This course provides a strategic approach to attracting audiences through arts marketing. Students learn to build a cohesive strategic marketing plan that aligns with the mission and programming of a real-life arts organization. Students will make a wide range of strategic marketing management decisions, preparing them for decision-making positions in arts marketing.

**MALS 4284 Arts and Culture Entrepreneurship (4 Credits)**

In any sector of the Arts and Culture field, whether government, nonprofit, or for profit, it is essential to be able to develop programs and/or organizations from conception through implementation and assessment. This development requires the clear communication of what is needed to develop, implement, and sustain this plan over time. In this course, students take an entrepreneurial approach to develop a program or organization in the arts and culture field. Students will develop and present a comprehensive business plan to define, map, structure, and assess the program/organization in either the nonprofit or for-profit sector.

**MALS 4285 Basics of Arts and Culture Marketing (4 Credits)**

This course provides a strategic approach to audiences and markets through an arts and cultural lens. Students will study basic principles of marketing, audience characteristics, and theories of creating commitment to the arts.

**MALS 4286 Social Media and Digital Marketing for Arts and Culture (4 Credits)**

Marketing arts and culture in the digital age is an art unto itself. Today's arts marketers are expected to produce visual, audio, and written content that matches the quality of the art, on stage or in the gallery, or the cultural programming presented to the public. This course provides students with a framework for planning, producing, executing, and measuring the impact of digital campaigns that build communities around art and culture.

**MALS 4287 Managing Demand and Pricing for Arts and Culture (4 Credits)**

Tomorrow's arts leaders need to be prepared to face the emotional subject of pricing in a way that is responsive to the community yet supports a sustainable business model. This class takes an evidence-based approach to determining the demand for arts and culture programming and setting prices for programs and events offered by arts and culture organizations. Students will explore dynamic pricing strategies, approaches to communicating the relationship between price and value, and how artistic and cultural programming enriches the broader community.

**MALS 4340 Arts and Culture Leadership for Social Change (4 Credits)**

Art and culture are powerful tools for the transformation of society and individuals: they sustain communities in resistance, provide powerful social critiques, expose audiences to multiple experiences and points of view and utilize collaboration, co-creation, dialogue, and exchange, to effect social change. In this course, students will learn how cultural institutions can become active agents in the work of social change. We will examine theories of movement building, explore case studies and develop advocacy, outreach, and program planning strategies for successful arts and social justice leadership.

**MALS 4444 Emerging Trends in Visual and Performance Art (4 Credits)**

Whether you're curating visual art for a large regional venue or staging work at a local theater or gallery, understanding current artistic trends can be critical to your success. This course looks into major developments in Contemporary visual and performance art around the world. From new approaches to materials and techniques to expressions of identity and cultural/political critique, students will examine and engage with the latest, most significant artistic trends that are shaping the Contemporary art experience.

**MALS 4470 Arts and Culture: History, Context, and Trends (4 Credits)**

This course examines the significant and growing economic, social, and educational impact of the arts and culture sector on our increasingly diverse communities. Focusing on historical and current trends in the visual, performing, literary, and media arts, students will develop a stronger grasp of the role arts and culture organizations play in enriching our understanding of the world around us.

**MALS 4475 Organizational Vibrancy and Measurement (4 Credits)**

As database and analytics systems for arts organizations grow ever more sophisticated, arts leaders must be literate in basics concepts of statistics, finance, and data analysis. This course will prepare students to examine data critically, explore the stories that data can tell, and determine how to measure success and vibrancy.

**MALS 4480 Arts and Culture: Best Practices and Practical Skills (4 Credits)**

This course will engage students in the management and operations of arts and cultural non-profits through terms, techniques, and applications specifically focusing on analysis of mission/visioning, planning, staffing, volunteerism, board governance, fiduciary actions, fundraising/development, marketing/promotion and assessment. This is in preparation for a variety of experiences students may explore, including new aspects of arts management, either in positions of leadership, employment in the field, or a higher interest in volunteerism.

**MALS 4485 Legal Landscape of Arts and Culture (4 Credits)**

Professionals in arts and culture, whether they are artists, managers, directors, or others working in the private, government, or nonprofit sector, will encounter a variety of legal issues during their careers. Through readings, case studies, assignments, and research, students will be introduced to a complex interdisciplinary system of relevant laws that impact and, in some cases, govern arts and culture organizational activities.

**MALS 4490 Arts and Culture Programs for Social Impact (4 Credits)**

In this course, students explore changing attitudes toward arts participation and cultural philanthropy, focusing especially on the need for new approaches to engaging and working with culturally diverse populations. Students explore the cultivation of effective cross-disciplinary partnerships to create impactful programs that can transform communities. Programs at diverse arts organizations serve as case studies for practical applications. Students use theory-of-change models to develop programs that connect arts and cultural work with social-impact activities beyond the arts and culture sector.

**MALS 4701 Topics in Arts and Culture (4 Credits)**

The content of this course varies each term. The topics may include time-sensitive issues in the area of literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**MALS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**MALS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**MALS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**MALS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Communication Management

Office: University College Student Support Center  
Mail Code: 2211 S. Josephine St., Denver, CO 80208  
Phone: 303-871-2291, 800-347-2042  
Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)  
Web Site: <http://www.universitycollege.du.edu>

Effective communication is crucial for every organization. This fully online master's degree program provides you with the tools to play a central role in developing and implementing effective communication strategies. From the nuance required to handle interpersonal conversations or lead organizational change, to the strategy behind impactful digital communication or training, our curriculum develops your expertise in meaningful, data-driven storytelling.



Our commitment to practical application is evident in our hands-on projects and real-world case studies. These experiences allow you to not only grasp theoretical concepts but also gain practical insights into applying communication strategies. We understand the importance of staying current with industry trends. The program receives direction from an Advisory Board made up of senior industry experts, ensuring that our curriculum stays aligned with the latest industry trends. In addition, our instructors bring extensive industry experience to every course, providing you with valuable perspectives and practical knowledge. Finally, our curriculum integrates the latest technologies and tools used in professional communication, ensuring you graduate with a skill set aligned with industry demands.

Through this comprehensive program, you'll enhance your ability to strategically craft messages, measure their impact, and create desired outcomes. Whether your goal is gaining stakeholder buy-in, gathering participant feedback, engaging target audiences, or building brand awareness, graduates of this program are well-positioned to take their careers to the next level. You will demonstrate advanced critical thinking skills and possess a refined sophistication for applying communication best practices strategically in various contexts. Elevate your career with a master's degree that goes beyond theory, providing you with practical skills and industry connections needed for success in the ever-evolving field of professional communication.

This degree equips students with the skills to:

- Integrate learning by connecting course concepts with personal and professional experiences, allowing for the synthesis and application of knowledge in diverse situations.
- Develop critical thinking skills, encouraging a thorough exploration of issues, ideas, and events before forming opinions or drawing conclusions.
- Demonstrate intercultural communication competence, applying behaviors and skills effectively in various contexts to foster cultural sensitivity and adaptability.
- Exhibit organizational literacy, understanding the role of communication in organizations and its relationship with essential functions such as structures, finance, and strategy.
- Hone effective communication skills to craft strategic plans, campaigns, or interventions tailored to meet organizational or client needs, demonstrating the ability to align communication efforts with overarching goals.

## **Master of Arts in Communication Management with a Concentration in AI Strategy and Application in Communication**

This concentration is designed for communications professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

This concentration prepares students to:

- Apply a working knowledge of AI capabilities, limitations, and practical applications in order to develop strategies and adapt to a changing AI environment.
- Evaluate ethical, policy, and governance considerations in order to influence ethically responsible AI practices.
- Analyze the strategic potential of various AI tools and solutions to accomplish organizational goals.
- Develop communication solutions through the application of AI competencies.

## **Master of Arts in Communication Management with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations**

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this master's degree concentration, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

This concentration prepares students to:

- Assess the influence of historical, social, cultural, and economic factors in shaping one's identity and conceptions of diversity, equity, and inclusion practices.
- Integrate an understanding of social and cultural difference, perspective-taking, and empathy to better inform interpersonal communication and problem-solving strategies.
- Develop practices that advance equity as an integrated component of organizational strategy.
- Design solutions that meaningfully leverage diversity to achieve organizational goals and cultivate a culture of belonging across different organizational settings.
- Apply change models, tools and techniques to successfully achieve a vision for change.

## Master of Arts in Communication Management with a Concentration in Learning and Development

Take your ability to effectively facilitate adult learning to the next level. As organizations continue to invest in improving employee performance, this program will prepare you to lead learning and development efforts by leveraging your technology, facilitation, and evaluation skills. From design to implementation, learn to strategically execute entire L&D programs and specialized initiatives from start to finish.

This concentration prepares students to:

- Design and execute projects from needs assessment through design, delivery, implementation, and evaluation
- Elucidate key components of adult learning theories; assess contributions of these theories; articulate challenges to, limits of, and new directions for these theories; and apply them to meet organizational needs
- Identify, analyze, choose, and defend best instructional strategies and techniques to achieve learning objectives
- Develop advanced facilitation and communication skills and demonstrate the ability to respond appropriately to varied audiences with diverse needs and across platforms
- Evaluate and communicate impact of projects using most relevant metrics and analytics

## Master of Arts in Communication Management with a Concentration in Marketing Communication

Discover the power of brands to move an audience while learning how to craft, deploy, and measure campaigns from start to finish. Create integrated marketing plans that are driven by strategic objectives, backed by data-informed decisions, and deliver desired results. Apply your learning from each course as you receive hands-on experience evaluating traditional and digital marketing communication tactics while digging deep into marketing trends.

This concentration prepares students to:

- Design, manage, and measure persuasive, integrated marketing communication campaigns
- Assess the current scope and learn how to anticipate future trends in traditional, social, mobile, email, and search marketing
- Measure marketing communication efforts and create plans to adjust and defend future decisions based on results
- Create strategies to elevate an organization's or client's marketing and branding efforts through the use of appropriate tactics

## Master of Arts in Communication Management with a Concentration in Organizational Communication

Effective communication and advanced problem-solving skills are at the top of every organization's wish list. Are you prepared to meet the demand? Find the key to your next job or your next promotion in the communication field. Learn to harness the potential of your team, manage change initiatives, and meet needs by persuading stakeholders. In this program, you will enhance and deepen your interpersonal, organizational, and managerial abilities.

This concentration prepares students to:

- Articulate and defend various interpersonal and organizational communication techniques to make contextually appropriate decisions
- Evaluate and utilize business communication concepts, tools, and presentation techniques
- Assess and apply theories and best practices of group and team dynamics
- Identify barriers of effective communication and develop plans to ensure productive outcomes
- Create strategies to lead change by applying principles of change, critical change dynamics, and processes for knowledge transfer within organizations

## Master of Arts in Communication Management with a Concentration in Organizational Development

Successful organizations are dynamic entities that are constantly adjusting goals, organizational structures, and strategies in response to varying organizational needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes, resulting in the need for an organizational development (OD) intervention. In this concentration, students learn about organizations, organizational culture, and effective intervention strategies. Students also learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding

change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees.

This concentration prepares students to:

- Articulate and define organizational development, history of OD, and challenges and possibilities using an intentional OD intervention
- Develop and defend a personal philosophy of organizational change
- Evaluate the impact of organizational culture and core values on OD interventions
- Integrate the contract for a successful OD intervention with the organizational culture and determine the role of an OD practitioner in each stage of an OD intervention, distinguishing between an internal and external consultant
- Assess, compare, and contrast different models of change and describe the impact of each model on an OD process
- Define and organize OD strategies for different types of organizations (sectors, life cycle, size, industry, types of innovation, or other defining characteristics) for maximizing impacts of OD interventions
- Summarize the importance and impact of the different organizational structures and design on OD strategy and interventions
- Construct an organizational diagnosis plan by using interviewing, group facilitation, process observation, synthesis of data, and writing effective reports, while providing effective presentations of the findings
- Analyze the human side of change and build strategies for successful implementation of an OD intervention that honor the loss, resistance and acceptance of changes

### **Master of Arts in Communication Management with a Concentration in Public Relations**

Public relations careers show up in virtually every sector and industry. Gain practical experience using technology to manage how information flows to and from key audiences. You'll learn how to use data to connect with influencers, and leverage social media in a strategic way, all while employing principles of persuasion and quality content creation. From researching and evaluating audiences, to assessing the value of PR campaigns, you will apply critical thinking, precise writing, principles of ethics, and complex reasoning throughout your courses.

This concentration prepares students to:

- Communicate persuasively to targeted audiences to meet specific organizational outcomes
- Create communication plans with measurable results using public relations best practices, tactics, and strategies
- Develop, manage, and analyze effective media relations practices
- Articulate and defend the selection of techniques to measure, monitor, and influence an organization's reputation
- Articulate the primary principles, practices, and ethics of public relations in an increasingly interconnected, global economy

### **Master of Arts in Communication Management with a Concentration in User Experience Strategy**

In our current engagement economy, effectively moving an audience lies at the intersection of communication and technology. Students will learn to think critically and strategically about the user experience in a way that enables greater innovative agility across all communication platforms. Students will gain skills to manage and direct cross-functional teams equipped to defend technology, marketing, and communication decisions using data generated from deep user journey and user experience analysis.

This concentration prepares students to:

- Analyze the components and implications of user experience design across communication channels.
- Use critical analysis to manage the strategy and execution of interactive experiences.
- Analyze user-journey data to measure and inform decisions across digital platforms, communication channels, and marketing programs.
- Create engaging digital content that enhances the user experience through strategic choices with technology, design, and copy.

### **Graduate Certificate in Communication Management with a Concentration in AI Strategy and Application in Communication**

This certificate is designed for communications professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

### **Graduate Certificate in Communication Management with a Concentration in Learning and Development**

Gain insight to the strategies needed to effectively facilitate adult learning. Organizations continue to invest in improving employee performance, and in this program you will learn to lead learning and development efforts by leveraging your technology, facilitation, and evaluation skills. From design

to implementation, learn to strategically execute entire L&D programs and specialized initiatives from start to finish. Students will also gain additional skills and knowledge in communication management through elective coursework.

### **Graduate Certificate in Communication Management with a Concentration in Marketing Communication**

Discover the power of brands to move an audience while learning how to craft, deploy, and measure campaigns from start to finish. Create integrated marketing plans that are driven by strategic objectives, backed by data-informed decisions, and deliver desired results. Apply your learning from each course as you receive hands-on experience evaluating traditional and digital marketing communication tactics and digging deep into marketing trends. Students will also gain additional skills and knowledge in communication management through elective coursework.

### **Graduate Certificate in Communication Management with a Concentration in organizational Communication**

Effective communication and advanced problem-solving skills are at the top of every organization's wish list. Are you prepared to meet the demand? Find the key to your next job or your next promotion in the communication field. Learn to harness the potential of your team, manage change initiatives, and meet needs by persuading stakeholders. In this program, you will enhance and deepen your interpersonal, organizational, and managerial abilities. Students will also gain additional skills and knowledge in communication management through elective coursework.

### **Graduate Certificate in Communication Management with a Concentration in Public Relations**

Public relations careers show up in virtually every sector and industry. Gain practical experience using technology to manage how information flows to and from key audiences. You'll learn how to use data to connect with influencers and leverage social media in a strategic way, all while employing principles of persuasion and quality content creation. From researching and evaluating audiences, to assessing the value of PR campaigns, you will apply critical thinking, precise writing, principles of ethics, and complex reasoning throughout your courses.

### **Graduate Certificate in Communication Management with a Concentration in User Experience Strategy**

In our current engagement economy, effectively moving an audience lies at the intersection of communication and technology. Students will learn to think critically and strategically about the user experience in a way that enables greater innovative agility across all communication platforms. Students will gain skills to manage and direct cross-functional teams equipped to defend technology, marketing, and communication decisions using data generated from deep user journey and user experience analysis.

### **Specialized Graduate Certificate in AI Strategy and Application in Communication**

This specialized certificate is designed for communications professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

### **Specialized Graduate Certificate in Organizational Communication**

Effective communication and advanced problem-solving skills are at the top of every organization's wish list. Are you prepared to meet the demand? Find the key to your next job or your next promotion in the communication field. Learn to harness the potential of your team, manage change initiatives, and meet needs by persuading stakeholders. In this program, you will enhance and deepen your interpersonal, organizational, and managerial abilities.

### **Specialized Graduate Certificate in Learning and Development**

Take your ability to effectively facilitate adult learning to the next level. As organizations continue to invest in improving employee performance, this program will prepare you to lead learning and development efforts by leveraging your technology, facilitation, and evaluation skills. From design to implementation, learn to strategically execute entire L&D programs and specialized initiatives from start to finish.

### **Specialized Graduate Certificate in Marketing Communication**

Discover the power of brands to move an audience while learning how to craft, deploy, and measure campaigns from start to finish. Create integrated marketing plans that are driven by strategic objectives, backed by data-informed decisions, and deliver desired results. Apply your learning from each course as you receive hands-on experience evaluating traditional and digital marketing communication tactics and digging deep into marketing trends.

### **Specialized Graduate Certificate in Public Relations**

Public relations careers show up in virtually every sector and industry. Gain practical experience using technology to manage how information flows to and from key audiences. You'll learn how to use data to connect with influencers and leverage social media in a strategic way, all while employing principles of persuasion and quality content creation. From researching and evaluating audiences, to assessing the value of PR campaigns, you will apply critical thinking, precise writing, principles of ethics, and complex reasoning throughout your courses.

### **Specialized Graduate Certificate in User Experience Strategy**

In our current engagement economy, effectively moving an audience lies at the intersection of communication and technology. Students in the Specialized Graduate Certificate in User Experience will learn to think critically and strategically about the user experience in a way that enables greater innovative agility across all communication platforms. Students will gain skills to manage and direct cross-functional teams equipped to defend technology, marketing, and communication decisions using data generated from deep user journey and user experience analysis.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Arts in Communication Management with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
<b>Core coursework requirements:</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration Requirements:</b>		
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4

HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirement (choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Communication Management with a Concentration in AI Strategy and Application in Communication

Code	Title	Credits
<b>Core coursework requirements:</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration Requirements:</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
COMM 4510	Strategic Application of AI for Communication	
COMM 4515	Developing Communications Solutions with AI Tools	
<b>Elective requirement (choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>40</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Communication Management with a Concentration in Learning and Development

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4002	Dynamic Presentation and Training Methods	4
COMM 4030	Managing Learning in Organizations	4
COMM 4200	Instructional Design	4
COMM 4203	Adult Learning Strategies and Theories	4
COMM 4235	Integrating Learning and Development Technologies	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Communication Management with a Concentration in Marketing Communication

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4010	Business Insights for Communicators	4
COMM 4140	Marketing Strategy and Process	4
COMM 4301	Brand Management Strategies	4
COMM 4321	Integrated Digital Marketing	4
COMM 4324	Marketing Analytics	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Arts in Communication Management with a Concentration in Organizational Communication

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4002	Dynamic Presentation and Training Methods	4
COMM 4006	Building High-Performing Teams	4
COMM 4010	Business Insights for Communicators	4
COMM 4035	Cultural Intelligence through Communication	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Arts in Communication Management with a Concentration in Organizational Development

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4010	Business Insights for Communicators	4
ORL 4110	Fundamentals of Organization Development	4

ORL 4112	Organization Development Interventions	4
ORL 4115	Organizational Culture and Organizational Development Impacts	4
ORL 4125	Evaluate and Sustain Change	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Communication Management with a Concentration in Public Relations

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4016	Persuasion and Influence	4
COMM 4144	Strategic Public Relations	4
COMM 4145	Public Relations Writing and Content Creation	4
COMM 4146	Ethics in Public Relations	4
COMM 4150	Reputation Management & Crisis Communication	4
COMM 4154	Media Channels and Technology	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Communication Management with a Concentration in User Experience Strategy

Code	Title	Credits
<b>Core coursework requirements</b>		
COMM 4900	Communication Inquiry, Analysis, and Trends	4
COMM 4045	Applied Critical Thinking in Communication	4
COMM 4905	Storytelling through Research and Measurement	4
COMM 4920	Portfolio Capstone	4
<b>Concentration requirements</b>		
COMM 4306	UX Strategies and Methods	4
COMM 4307	Developing Content for User Experience	4
COMM 4308	UX Team Management	4
COMM 4309	Service Design	4
COMM 4324	Marketing Analytics	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.



## Graduate Certificate Programs

### Graduate Certificate in Communication Management with a Concentration in AI Strategy and Application in Communication

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
COMM 4510	Strategic Application of AI for Communication	4
COMM 4515	Developing Communications Solutions with AI Tools	4
<b>Elective requirements (choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Communication Management with a Concentration in Learning and Development

Code	Title	Credits
<b>Concentration requirements</b>		
COMM 4002	Dynamic Presentation and Training Methods	4
COMM 4030	Managing Learning in Organizations	4
COMM 4200	Instructional Design	4
COMM 4203	Adult Learning Strategies and Theories	4
COMM 4235	Integrating Learning and Development Technologies	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Communication Management with a Concentration in Marketing Communication

Code	Title	Credits
<b>Concentration requirements</b>		
COMM 4010	Business Insights for Communicators	4
COMM 4140	Marketing Strategy and Process	4
COMM 4301	Brand Management Strategies	4
COMM 4321	Integrated Digital Marketing	4
COMM 4324	Marketing Analytics	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Communication Management with a Concentration in Organizational Communication

Code	Title	Credits
<b>Concentration requirements</b>		
COMM 4002	Dynamic Presentation and Training Methods	4

COMM 4006	Building High-Performing Teams	4
COMM 4010	Business Insights for Communicators	4
COMM 4035	Cultural Intelligence through Communication	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Communication Management with a Concentration in Public Relations

Code	Title	Credits
<b>Concentration requirements</b>		
COMM 4144	Strategic Public Relations	4
COMM 4145	Public Relations Writing and Content Creation	4
COMM 4146	Ethics in Public Relations	4
COMM 4150	Reputation Management & Crisis Communication	4
COMM 4154	Media Channels and Technology	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Communication Management with a Concentration in User Experience Strategy

Code	Title	Credits
<b>Concentration Requirements</b>		
COMM 4306	UX Strategies and Methods	4
COMM 4307	Developing Content for User Experience	4
COMM 4308	UX Team Management	4
COMM 4309	Service Design	4
COMM 4324	Marketing Analytics	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in AI Strategy and Application in Communication

Code	Title	Credits
<b>Required courses</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
COMM 4510	Strategic Application of AI for Communication	4
COMM 4515	Developing Communications Solutions with AI Tools	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Learning and Development

Code	Title	Credits
COMM 4030	Managing Learning in Organizations	4
COMM 4200	Instructional Design	4
COMM 4203	Adult Learning Strategies and Theories	4
COMM 4235	Integrating Learning and Development Technologies	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Marketing Communication

Code	Title	Credits
COMM 4140	Marketing Strategy and Process	4
COMM 4301	Brand Management Strategies	4
COMM 4321	Integrated Digital Marketing	4
COMM 4324	Marketing Analytics	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Organizational Communication

Code	Title	Credits
COMM 4002	Dynamic Presentation and Training Methods	4
COMM 4006	Building High-Performing Teams	4
COMM 4035	Cultural Intelligence through Communication	4
ORL 4420	Leading Change for Transformation	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Public Relations

Code	Title	Credits
COMM 4144	Strategic Public Relations	4
COMM 4145	Public Relations Writing and Content Creation	4
COMM 4150	Reputation Management & Crisis Communication	4
COMM 4154	Media Channels and Technology	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in User Experience Strategy

Code	Title	Credits
COMM 4306	UX Strategies and Methods	4
COMM 4307	Developing Content for User Experience	4
COMM 4308	UX Team Management	4
COMM 4309	Service Design	4
<b>Total Credits</b>		<b>16</b>

#### COMM 4001 Portfolio Foundations (0 Credits)

Master's and certificate-seeking students in Communication Management must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

**COMM 4002 Dynamic Presentation and Training Methods (4 Credits)**

The increasing presence of technology in the workplace has changed the way we present information and conduct trainings, both in person and virtually. In this course, students hone their presentation and training skills by assessing their audience, purpose, and desired learning outcomes. Students practice using appropriate and memorable visual aids in order to maximize the audience and/or participant engagement. Students employ communication strategies and training techniques to improve participants' receptivity and retention of information and ideas. Whether presenting or training in person or virtually, students will gain the skills and confidence needed for effective communication across varied delivery methods.

**COMM 4006 Building High-Performing Teams (4 Credits)**

High-performing teams are invaluable to every organization. Ensuring productive and satisfying group and team interactional outcomes in organizational, professional, and personal settings can be difficult. Students focus on theory, application, and the practice of working together to learn the fundamentals of building high-performing teams. Students learn about the development of group dynamics, assessment, and leadership while also gaining knowledge about their strengths and weaknesses in teams, developing new skills, and learning how to enhance productivity while reducing barriers to effective communication.

**COMM 4010 Business Insights for Communicators (4 Credits)**

Communications leaders must speak the language of business to effectively craft strategies, execute deliverables, and measure outcomes that create tangible value and advance their organizations' objectives. Whether in an industry, public sector, or non-profit role, these leaders gain an edge through supplementing strong technical literacy with the ability to assess operational priorities and execute deliverables accordingly. In this class, students will sharpen their understanding of balance sheets and budgets; demystify key aspects of Information Technology infrastructure (intranets, cloud and on-premises computing, databases, security, etc.); delve into various organizational and divisional/departmental models, functions, and political positions; address the benefits and challenges of globalization and cross-cultural communication; and touch on an assortment of other relevant topics, including managing upward and workflow prioritization. Along the way, students will hone their strategic planning competencies and perspectives by putting all elements learned in this course together. Materials and assessments are geared toward application in relevant contexts.

**COMM 4016 Persuasion and Influence (4 Credits)****COMM 4030 Managing Learning in Organizations (4 Credits)**

To support a culture of continuous improvement, Learning and Development (L & D) professionals must quickly and effectively train and develop employees, evaluate results, show a return on investment, and develop new solutions to meet ever-changing business needs. This course prepares students to lead and manage L & D departments, teams, and processes by guiding them to think strategically, generate creative solutions that address root causes, build trusted partnerships with business partners, and manage knowledge assets.

**COMM 4035 Cultural Intelligence through Communication (4 Credits)**

There is a growing need to communicate effectively across cultural differences. Writer James Neuliep defines culture as an accumulated pattern of values, beliefs, and behaviors shared by an identifiable group of people with a common history and verbal and nonverbal code system. Culture pervades every aspect of the communicative process. This course uses a contextual approach to examine the ways culture, communication, context, and power intersect in intercultural communication interactions. Students will identify and analyze obstacles and barriers to effective intercultural communication. Finally, students will examine strategies and skills needed to become a competent and effective intercultural communicator.

**COMM 4045 Applied Critical Thinking in Communication (4 Credits)****COMM 4140 Marketing Strategy and Process (4 Credits)**

Creating and sustaining competitive advantage is driven by strategies that integrate people, process, and systems. In this application-oriented course, students will examine the fundamentals of marketing, develop the insights and skills to formulate and implement sound marketing decisions, and apply ethical marketing strategies which contribute to the overall business (for-profit and non-for-profit) performance. Students will apply strategic concepts through discussion and teamwork. Throughout the quarter, students will examine how information and research is used to inform marketing management decisions to all level of the organization, including external stakeholders. Because marketing communication plays such a critical role in marketing success, integrating different types of communication channels will be an emphasis.

**COMM 4144 Strategic Public Relations (4 Credits)**

In a complex global environment, business, government, nonprofit, and other organizations require professional public relations practitioners who can effectively develop two-way relationships with constituents/audiences to enable strategic and effective communication processes. This course prepares students for this complex environment through the study and practice of essential components of public relations, which include the use of strategy, the value of relationship development, an overview of the range of PR tactics, the evolving role of digital communications and social media to PR, and the importance of ethics and transparency in PR practice.

**COMM 4145 Public Relations Writing and Content Creation (4 Credits)**

Effective and persuasive writing and creative content development are integral parts of today's public relations programs. This course deepens students' knowledge of the range of content available for public relations professionals to build relationships with media while ensuring they become effective, creative, clear, and concise architects and translators of the written word. In this course, students will develop a deep understanding of messaging for target audiences and the wide variety of concepts at their disposal to create effective communication programs. Students will leave the course with the ability to establish key messages using supporting evidence, craft content for target audiences, evaluate the impact of various media relations techniques as a way to achieve earned media coverage. Students will also develop a portfolio of well-written public relations collateral, including long- and short-form materials.

**COMM 4146 Ethics in Public Relations (4 Credits)**

Public relations professionals, regardless of the industry in which they work, are often tasked with “doing the right thing” when communicating with the public. But what do we mean by “the right thing” in this context? The course explores the role and importance of ethics in public relations practice. Students will consider the fundamentals of transparency and ethics, ethics theory, and ethical decision-making models. With this foundation in place, students will then learn to apply ethical theory and methodology in practice in crisis management, advocacy, corporate social responsibility, and social media contexts.

**COMM 4150 Reputation Management & Crisis Communication (4 Credits)**

Reputation management is the process of tracking, maintaining, and defending a consistent message and positive image across all media. It applies to corporations and individuals, to billion-dollar brands and grassroots causes. Today’s reputation management integrates public relations, search engine optimization (SEO), content marketing, and social media management. It requires constant monitoring and participation in the dialogues that comprise modern media as the traditional roles of sender and receiver merge and evolve. As digital presence has become the front lines of reputation management, systems use various predefined criteria for processing complex data to report behavior and activity surrounding a reputation, thereby automating the process of determining positive sentiment, influence, and trustworthiness. While reputation management is an ongoing proactive effort, PR professionals also need to be prepared to react in a crisis. Crisis communication planning and management strategies are an important subset of this field. Through the study of proactive and reactive programs, students will learn how to apply reputation and crisis management principles in times of quiet and chaos all while monitoring, positioning, and measuring a brand’s presence online.

**COMM 4154 Media Channels and Technology (4 Credits)**

This course will focus on the increasing role technology and analytics play in the public relations profession. Data-driven decision-making is now essential to the development of public relations strategy and tactics. This course will expose students to engagement across media channels—including owned, shared, paid, and earned media—as well as techniques and strategies for the effective use of technology for tracking, planning, and engaging audiences. This course will position students to lead strategic, data-driven decision-making in the public relations field. The course will also provide students with the tools necessary to engage new media and technology effectively in public relations.

**COMM 4200 Instructional Design (4 Credits)**

Designing training that maximizes results is a central concern in organizations. Students in this course identify the elements of effective learning design, formally and informally, for organizations and professional arenas. Students will strategize instructional approaches in order to meet organizational needs and objectives. Students will create an instructional design product that can be applied appropriately in professional settings.

**COMM 4203 Adult Learning Strategies and Theories (4 Credits)**

Individuals involved in adult learning design and development benefit from a strong foundation in adult learning theories and strategies to develop effective practices. Adult learners bring unique needs, life experiences, and prior knowledge to learning situations and thrive when inclusive, motivational, and relevant application of knowledge, concepts and skills are utilized. In this course, foundational and emerging theories regarding how adults learn best, along with analysis of key instructional strategies, provide solid grounding for implementing best practice in adult learning.

**COMM 4206 Evaluating Learning and Development Effectiveness (4 Credits)**

Assessment and evaluation enable learning and development professionals to determine if learners acquired the intended content, knowledge, skills and/or attitudes; if the benefits of the training endeavors are worth the costs; whether training has met organizational goals; and if further training is necessary. Through case studies, practice exercises, and the development of an authentic assessment plan, students learn how to design, interpret, and apply different types of learning and development evaluation concepts and methods to their respective or intended work settings.

**COMM 4226 Managing Organizational Conflict (4 Credits)**

Conflict is a part of all businesses, government, and nonprofit organizations. It is a product of human existence and diversity in an interrelated society. Though many people fear conflict as a threat to a productive work environment, it is not conflict itself that jeopardizes harmony but unresolved conflict, and the associated costs are well documented. Organizations increasingly recognize that conflict need not carry costly financial and interpersonal burdens and can, in fact, serve as a productive change agent. Students in this course explore the nature and sources of organizational conflict and facilitate development of practical skills to recognize and manage conflict using case studies, exercises, speakers, and field research. Students are introduced to the concept of various conflict resolution methods, including individual initiative, negotiation, mediation, restorative justice, and arbitration. This course is well suited for leaders and aspiring leaders in any profession who want to increase their interpersonal capability and enhance their value in organizations.

**COMM 4235 Integrating Learning and Development Technologies (4 Credits)**

Organizational learning and talent development are changing rapidly in the face of staggering technological advances. As organizations become increasingly decentralized, teams interact virtually, and collaboration becomes dependent on digital tools. In this context, it is imperative that learning and development professionals harness technology to meet the changing needs of individuals and the places/spaces in which they work. In this course, students explore the latest technological trends in Learning and Development, while also learning how to evaluate technologies for their appropriateness in meeting organizational learning and development goals. In recognition of the rapidly changing nature of this field, students also develop strategies for future learning to keep their work relevant and engaged.

**COMM 4301 Brand Management Strategies (4 Credits)**

Organizations of all types – private, public, and nonprofit – increasingly recognize that a strong brand can ultimately become one of an organization’s greatest assets. Executing on a strategy designed to build long-lasting brand recognition, resonance, and loyalty is a critical marketing responsibility. In today’s dynamic business landscape, brand management requires complex decisions to create meaning and value for consumers. This course covers the essential components of branding with a focus on how to maintain consistent alignment between brand vision and marketing strategies. Students are strongly encouraged to take at least one other marketing concentration course prior to this course.

**COMM 4306 UX Strategies and Methods (4 Credits)**

This course will cover user experience strategies, tactics, and methodologies. Students will learn how to think about UX from a high level, set goals for a product or project, and turn the strategies into concrete steps. Students will learn how to employ research, design thinking, usability testing and analysis to enhance the user experience.

**COMM 4307 Developing Content for User Experience (4 Credits)**

This course will explore how strategically developed content is a cornerstone of the user experience. Students will learn the User Experience Design workflow and how to advocate, research and deliver content for digital experiences. The course will also cover how to measure the business impact of content strategy, as well as how to scale content strategy as a practice within organizations.

**COMM 4308 UX Team Management (4 Credits)**

Building and managing a dynamic UX team is a skillset that goes beyond typical design best practices and team management - the role of design leader today expects company leadership in innovation, creativity and culture. This course will provide the students with the knowledge needed to build, manage, and nurture highly dynamic, fast-paced cross functional teams while also providing experience in the transformational components of design leadership.

**COMM 4309 Service Design (4 Credits)**

Where UX design is specific to the digital experience, service design crosses over from the tangible to intangible experiences within both digital and analog channels. This course takes students through an in-depth exploration of research, mapping, blueprinting, and deep user flow analysis as it relates to interactions and experiences of all types. The impact behind processes for employees and customers across all sectors including public, private, and nonprofit will be covered.

**COMM 4318 Mobile Marketing (4 Credits)**

Mobile is global. We are living in an unprecedented time where people all around the world have access to mobile devices. These devices bring the world to the palm of our hands, and we can do almost anything with them. Often a user's first experience with a product or service will be on a mobile device rather than a desktop computer, so we must shift our mindset to a mobile-first mentality. The fast-paced, ever-changing field of mobile marketing has created exciting opportunities for brands to meet customers where they are and approach them with the right strategy. The focus of this course is to provide an expansive grasp of the tools and tactics used to develop and implement a multi-channel mobile marketing strategy. Through discussion, research, and practical experience, students will learn how to maximize mobile to have the greatest impact within their overall marketing plan.

**COMM 4319 Compelling Content Creation (4 Credits)**

In our digital world, communication is increasingly visual. This course will expose students to the art of turning facts into compelling, strategically-crafted visual narratives that engage an audience. From presentations to interoffice memos, press releases to video content, students will apply course concepts to develop critical business communication skills. The course will also explore on-screen video techniques to maximize impact in a business world that utilizes Zoom and other online tools.

**COMM 4320 Social Media Strategy (4 Credits)**

Social media is a critical communication channel that is constantly evolving. Learn to plan, manage, measure, and anticipate social media efforts that add value to your target audiences through organic and paid options. In this course, students will explore motivations that prompt audiences to engage, identify the tools and technology needed to execute social media campaigns or communication interventions, and devise effective strategy and tactics needed to cut through the noise. Create a stronger online presence, show personality, and build your brand by gaining skills needed to successfully communicate on behalf of any organization or individual using social media. Through online research, case studies, and practical exercises, students will gain first-hand knowledge of social media techniques and how to leverage social media as a communications tool.

**COMM 4321 Integrated Digital Marketing (4 Credits)**

At an ever-increasing rate, consumers use digital media to live, to work, and to play. Digital marketing leverages digital media and technologies allowing brands to promote their products and services to very targeted audiences at key online touchpoints in highly measurable ways. This course takes a deep dive into digital marketing strategies and provides an expansive grasp of digital marketing tactics. Students will analyze the digital marketplace and make strategic decisions about which tactics will have greatest impact, how to integrate them into the marketing mix, and ultimately how to use digital marketing to achieve overarching marketing goals. Required pre-requisites: COMM 4140.

**COMM 4324 Marketing Analytics (4 Credits)**

Marketing analytics leverages business metrics to better understand marketing performance and return on investment (ROI). Through data analysis, attribution modeling, and reporting, marketers are able to measure and optimize their initiatives. This class focuses on developing a performance measurement system for marketing channels, incorporating measuring website traffic, conducting market research, estimating usage patterns, and interpreting website visitor behavior. Key performance indicators are tied to marketing goals and tactical campaigns. Students will conduct a review of online metrics, compare marketing analytics vendors, and develop ways to communicate performance.

**COMM 4325 Search Marketing (4 Credits)**

Search marketing is a communicator's medium and a vital part of any marketing mix. This type of digital marketing specifically focuses on increasing a website's visibility in the search engine results pages (SERPs) through organic Search Engine Optimization (SEO) and pay-per-click (PPC) while also drawing attention to quality website content or well-crafted paid ad messaging. This class will provide deep insight into the tools and tactics of search marketing. Students will learn what makes search marketing demanding and how to overcome the challenges presented by regular search engine algorithm updates, increasing mobile device usage, and the influence of social media. Two key techniques of SEM will be explored: search engine optimization (SEO) to improve results from the natural or organic listings, and paid search marketing, or pay-per-click (PPC), to deliver results from the sponsored listings within search engines. A variety of search practices, including mobile and local, will be explored.

**COMM 4326 Digital Campaign Management (4 Credits)**

A digital marketing campaign is a strategic and creative online effort to promote an organization's goal, reach their target audience in a variety of ways and drive them toward a desired action. Digital campaigns are often more complex and dynamic than traditional marketing methods, requiring constant analysis of data and evaluation of effectiveness. Students will experience this dynamism first hand through a course-long interactive campaign simulation during this course. Students will examine the process and stages engaged when creating a successful digital marketing campaign; investigate how marketing automation can streamline efforts and improve team efficiencies; and evaluate how tracking and measuring campaign data can facilitate optimization and scalability to boost ROI. Recommended Prerequisite: Students are strongly advised to take COMM 4321 prior to this course.

**COMM 4701 Topics in Communication Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**COMM 4900 Communication Inquiry, Analysis, and Trends (4 Credits)**

In this course, students will actively immerse themselves in their chosen communication field, cultivating essential networking, writing, and analytical skills. Students will establish professional networks for mentorship, industry insight, and understanding field norms. They will enhance their business writing skills, ensuring clarity and authenticity in their communication. Students will explore current and future industry trends, strategizing for adaptation, relevance, and personal growth. Throughout the course, students will engage in reflective exercises, connecting course concepts to their learning and professional goals, fostering a deeper understanding of their communication practice.

**COMM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**COMM 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4905 Storytelling through Research and Measurement (4 Credits)**

Whether conducting a needs assessment, attempting to understand your audience, or developing a new product, communication professionals regularly harness the power of research, measurement, and storytelling. This course explores mixed-methods research design; data collection strategies; strategies for measuring the impact of communication challenges and interventions; and the fundamentals of telling data-driven stories that persuade stakeholders and demonstrate ROI. Together these tools enable confident problem solving, enhance organizational decision making, and influence stakeholder behavior. This course culminates in an individualized project that integrates research design, data collection, data analysis, and storytelling.

**COMM 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the seminar produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**COMM 4980 Internship (0-4 Credits)**

The Communication Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all COMM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**COMM 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**COMM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

**Courses****COMM 4001 Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Communication Management must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

**COMM 4002 Dynamic Presentation and Training Methods (4 Credits)**

The increasing presence of technology in the workplace has changed the way we present information and conduct trainings, both in person and virtually. In this course, students hone their presentation and training skills by assessing their audience, purpose, and desired learning outcomes. Students practice using appropriate and memorable visual aids in order to maximize the audience and/or participant engagement. Students employ communication strategies and training techniques to improve participants' receptivity and retention of information and ideas. Whether presenting or training in person or virtually, students will gain the skills and confidence needed for effective communication across varied delivery methods.

**COMM 4006 Building High-Performing Teams (4 Credits)**

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**COMM 4010 Business Insights for Communicators (4 Credits)**

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**COMM 4016 Persuasion and Influence (4 Credits)****COMM 4030 Managing Learning in Organizations (4 Credits)**

To support a culture of continuous improvement, Learning and Development (L & D) professionals must quickly and effectively train and develop employees, evaluate results, show a return on investment, and develop new solutions to meet ever-changing business needs. This course prepares students to lead and manage L & D departments, teams, and processes by guiding them to think strategically, generate creative solutions that address root causes, build trusted partnerships with business partners, and manage knowledge assets.

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**COMM 4200 Instructional Design (4 Credits)**

Designing training that maximizes results is a central concern in organizations. Students in this course identify the elements of effective learning design, formally and informally, for organizations and professional arenas. Students will strategize instructional approaches in order to meet organizational needs and objectives. Students will create an instructional design product that can be applied appropriately in professional settings.

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Individuals involved in adult learning design and development benefit from a strong foundation in adult learning theories and strategies to develop effective practices. Adult learners bring unique needs, life experiences, and prior knowledge to learning situations and thrive when inclusive, motivational, and relevant application of knowledge, concepts and skills are utilized. In this course, foundational and emerging theories regarding how adults learn best, along with analysis of key instructional strategies, provide solid grounding for implementing best practice in adult learning.

**COMM 4206 Evaluating Learning and Development Effectiveness (4 Credits)**

Assessment and evaluation enable learning and development professionals to determine if learners acquired the intended content, knowledge, skills and/or attitudes; if the benefits of the training endeavors are worth the costs; whether training has met organizational goals; and if further training is necessary. Through case studies, practice exercises, and the development of an authentic assessment plan, students learn how to design, interpret, and apply different types of learning and development evaluation concepts and methods to their respective or intended work settings.

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**COMM 4235 Integrating Learning and Development Technologies (4 Credits)**

Organizational learning and talent development are changing rapidly in the face of staggering technological advances. As organizations become increasingly decentralized, teams interact virtually, and collaboration becomes dependent on digital tools. In this context, it is imperative that learning and development professionals harness technology to meet the changing needs of individuals and the places/spaces in which they work. In this course, students explore the latest technological trends in Learning and Development, while also learning how to evaluate technologies for their appropriateness in meeting organizational learning and development goals. In recognition of the rapidly changing nature of this field, students also develop strategies for future learning to keep their work relevant and engaged.

**COMM 4301 Brand Management Strategies (4 Credits)**

Organizations of all types – private, public, and nonprofit – increasingly recognize that a strong brand can ultimately become one of an organization's greatest assets. Executing on a strategy designed to build long-lasting brand recognition, resonance, and loyalty is a critical marketing responsibility. In today's dynamic business landscape, brand management requires complex decisions to create meaning and value for consumers. This course covers the essential components of branding with a focus on how to maintain consistent alignment between brand vision and marketing strategies. Students are strongly encouraged to take at least one other marketing concentration course prior to this course.

**COMM 4306 UX Strategies and Methods (4 Credits)**

This course will cover user experience strategies, tactics, and methodologies. Students will learn how to think about UX from a high level, set goals for a product or project, and turn the strategies into concrete steps. Students will learn how to employ research, design thinking, usability testing and analysis to enhance the user experience.

**COMM 4307 Developing Content for User Experience (4 Credits)**

This course will explore how strategically developed content is a cornerstone of the user experience. Students will learn the User Experience Design workflow and how to advocate, research and deliver content for digital experiences. The course will also cover how to measure the business impact of content strategy, as well as how to scale content strategy as a practice within organizations.

**COMM 4308 UX Team Management (4 Credits)**

Building and managing a dynamic UX team is a skillset that goes beyond typical design best practices and team management - the role of design leader today expects company leadership in innovation, creativity and culture. This course will provide the students with the knowledge needed to build, manage, and nurture highly dynamic, fast-paced cross functional teams while also providing experience in the transformational components of design leadership.

**COMM 4309 Service Design (4 Credits)**

Where UX design is specific to the digital experience, service design crosses over from the tangible to intangible experiences within both digital and analog channels. This course takes students through an in-depth exploration of research, mapping, blueprinting, and deep user flow analysis as it relates to interactions and experiences of all types. The impact behind processes for employees and customers across all sectors including public, private, and nonprofit will be covered.

**COMM 4318 Mobile Marketing (4 Credits)**

Mobile is global. We are living in an unprecedented time where people all around the world have access to mobile devices. These devices bring the world to the palm of our hands, and we can do almost anything with them. Often a user's first experience with a product or service will be on a mobile device rather than a desktop computer, so we must shift our mindset to a mobile-first mentality. The fast-paced, ever-changing field of mobile marketing has created exciting opportunities for brands to meet customers where they are and approach them with the right strategy. The focus of this course is to provide an expansive grasp of the tools and tactics used to develop and implement a multi-channel mobile marketing strategy. Through discussion, research, and practical experience, students will learn how to maximize mobile to have the greatest impact within their overall marketing plan.

**COMM 4319 Compelling Content Creation (4 Credits)**

In our digital world, communication is increasingly visual. This course will expose students to the art of turning facts into compelling, strategically-crafted visual narratives that engage an audience. From presentations to interoffice memos, press releases to video content, students will apply course concepts to develop critical business communication skills. The course will also explore on-screen video techniques to maximize impact in a business world that utilizes Zoom and other online tools.

**COMM 4320 Social Media Strategy (4 Credits)**

Social media is a critical communication channel that is constantly evolving. Learn to plan, manage, measure, and anticipate social media efforts that add value to your target audiences through organic and paid options. In this course, students will explore motivations that prompt audiences to engage, identify the tools and technology needed to execute social media campaigns or communication interventions, and devise effective strategy and tactics needed to cut through the noise. Create a stronger online presence, show personality, and build your brand by gaining skills needed to successfully communicate on behalf of any organization or individual using social media. Through online research, case studies, and practical exercises, students will gain first-hand knowledge of social media techniques and how to leverage social media as a communications tool.

**COMM 4321 Integrated Digital Marketing (4 Credits)**

At an ever-increasing rate, consumers use digital media to live, to work, and to play. Digital marketing leverages digital media and technologies allowing brands to promote their products and services to very targeted audiences at key online touchpoints in highly measurable ways. This course takes a deep dive into digital marketing strategies and provides an expansive grasp of digital marketing tactics. Students will analyze the digital marketplace and make strategic decisions about which tactics will have greatest impact, how to integrate them into the marketing mix, and ultimately how to use digital marketing to achieve overarching marketing goals. Required pre-requisites: COMM 4140.

**COMM 4324 Marketing Analytics (4 Credits)**

Marketing analytics leverages business metrics to better understand marketing performance and return on investment (ROI). Through data analysis, attribution modeling, and reporting, marketers are able to measure and optimize their initiatives. This class focuses on developing a performance measurement system for marketing channels, incorporating measuring website traffic, conducting market research, estimating usage patterns, and interpreting website visitor behavior. Key performance indicators are tied to marketing goals and tactical campaigns. Students will conduct a review of online metrics, compare marketing analytics vendors, and develop ways to communicate performance.

**COMM 4325 Search Marketing (4 Credits)**

Search marketing is a communicator's medium and a vital part of any marketing mix. This type of digital marketing specifically focuses on increasing a website's visibility in the search engine results pages (SERPs) through organic Search Engine Optimization (SEO) and pay-per-click (PPC) while also drawing attention to quality website content or well-crafted paid ad messaging. This class will provide deep insight into the tools and tactics of search marketing. Students will learn what makes search marketing demanding and how to overcome the challenges presented by regular search engine algorithm updates, increasing mobile device usage, and the influence of social media. Two key techniques of SEM will be explored: search engine optimization (SEO) to improve results from the natural or organic listings, and paid search marketing, or pay-per-click (PPC), to deliver results from the sponsored listings within search engines. A variety of search practices, including mobile and local, will be explored.

**COMM 4326 Digital Campaign Management (4 Credits)**

A digital marketing campaign is a strategic and creative online effort to promote an organization's goal, reach their target audience in a variety of ways and drive them toward a desired action. Digital campaigns are often more complex and dynamic than traditional marketing methods, requiring constant analysis of data and evaluation of effectiveness. Students will experience this dynamism first hand through a course-long interactive campaign simulation during this course. Students will examine the process and stages engaged when creating a successful digital marketing campaign; investigate how marketing automation can streamline efforts and improve team efficiencies; and evaluate how tracking and measuring campaign data can facilitate optimization and scalability to boost ROI. Recommended Prerequisite: Students are strongly advised to take COMM 4321 prior to this course.

**COMM 4701 Topics in Communication Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**COMM 4900 Communication Inquiry, Analysis, and Trends (4 Credits)**

In this course, students will actively immerse themselves in their chosen communication field, cultivating essential networking, writing, and analytical skills. Students will establish professional networks for mentorship, industry insight, and understanding field norms. They will enhance their business writing skills, ensuring clarity and authenticity in their communication. Students will explore current and future industry trends, strategizing for adaptation, relevance, and personal growth. Throughout the course, students will engage in reflective exercises, connecting course concepts to their learning and professional goals, fostering a deeper understanding of their communication practice.

**COMM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**COMM 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4905 Storytelling through Research and Measurement (4 Credits)**

Whether conducting a needs assessment, attempting to understand your audience, or developing a new product, communication professionals regularly harness the power of research, measurement, and storytelling. This course explores mixed-methods research design; data collection strategies; strategies for measuring the impact of communication challenges and interventions; and the fundamentals of telling data-driven stories that persuade stakeholders and demonstrate ROI. Together these tools enable confident problem solving, enhance organizational decision making, and influence stakeholder behavior. This course culminates in an individualized project that integrates research design, data collection, data analysis, and storytelling.

**COMM 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the seminar produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**COMM 4980 Internship (0-4 Credits)**

The Communication Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all COMM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

### **COMM 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

### **COMM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## **Environmental Policy and Management**

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Mail Code: 2211 S. Josephine St., Denver, CO 80208  
Phone: 303-871-2291, 800-347-2042  
Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)  
Web Site: <http://www.universitycollege.du.edu>

### **Master of Science in Environmental Policy and Management**

The Master of Science in Environmental Policy and Management degree may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults.

The Master of Science in Environmental Policy and Management degree prepares students to enter the dynamic industry of Environmental Policy and Management, which is emerging in importance and popularity around the world. Students will receive engaging instruction from professional practitioners who work and teach in fields such as sustainability, climate change, natural resource management, renewable energy, law, environmental finance and economics, among many others. Graduates learn to address and manage complex environmental problems.

This degree prepares students to:

- Apply major environmental laws to current policy and environmental challenges to identify limitations and opportunities to improve environmental governance.
- Recommend sustainable actions to high-level stakeholders fluently using the language of both sustainability and fiscal responsibility.
- Apply appropriate research methods/designs to address a research hypothesis and questions.
- Compose research arguments to validate claims based on a variety of professional and academic sources.
- Resolve an authentic problem that is relevant to a current or aspirational position in the discipline.

### **Master of Science in Environmental Policy and Management with a Concentration in Emergency Planning and Response**

The Emergency Planning and Response master's degree concentration is offered to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans and responses. Graduates will learn to compare and contrast plans and responses to various events and disasters. Students will learn strategies for effective communication in all phases of emergency management (i.e., mitigation, preparedness, response, and recovery).

Whether an emergency is natural or human caused, emergency preparedness is vital to ensure minimize impacts on the welfare of those affected. The Emergency Planning and Response master's degree concentration covers emergency planning, mitigation of potential hazards, response, and recovery. Professional practitioners who work in the emergency planning and response field teach the Emergency Planning and Response master's degree concentration. Classes focus on the integrated system at every stage of a disaster and define the roles of emergency response teams, government agencies, businesses, and private citizens.

This degree prepares students to:

- Develop emergency response plans to ensure that organizations or communities possess necessary resources (e.g., personnel, equipment, communications, etc.) to respond to emergency incidents;
- Identify the potential hazards within a community or organization that require mitigation to minimize the health, economic, and environmental consequences of potential emergency incidents;

- Develop critical incident management actions that will save lives, protect property and the environment, and meet the basic human needs during a critical incident;
- Construct Recovery Plans to repair damages and restore the health, economy, infrastructure, and environment of the affected community following a large-scale disaster.

## **Master of Science in Environmental Policy and Management with a Concentration in Energy and Sustainability**

The Energy and Sustainability master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Students are prepared to enter the dynamic industry of energy and sustainability, which is emerging in importance and popularity around the world. Students will establish a solid foundation in energy and sustainability concepts, and then learn to integrate environmental systems, put policy into practice, and develop effective sustainability plans. Regulatory and policy issues related to energy development, implementation, and use, energy finance, and alternative and renewable energy processes will be examined, along with renewable energy sources, plans for integration, and trends within the field of energy.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources.

This degree prepares students to:

- Demonstrate a solid understanding of how non-renewable and renewable energy sources are developed, used, regulated, and financed;
- Articulate a strong working knowledge of sustainability concepts;
- Show an understanding of trends and issues in areas of traffic management, climate science, water supplies, and green buildings;
- Develop plans for the integration of sustainable practices into products, business and marketing plans, environmental policies, and organizational processes;
- Build finance schemes and marketing strategies for their plans so they can be presented to an organization leader as an executable idea.

## **Master of Science in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting**

The Environmental Analytics and Reporting master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. This certificate and concentration emphasize learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of ISO 14001, fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements.

This degree prepares students to:

- Assess the value, function, and application of data analytics to create or enhance organizational value;
- Differentiate the function and limitations of data and analytics methods and tools to inform selection of an optimal approach for a specific need;
- Prepare analyses of environmental data to support preparation of reports for organizations and agencies (e.g., ESG, SEC, SASB, NGO, EPA, OSHA, state and local agencies);
- Conduct analyses of a structured data set to craft the routine environmental reporting elements of organizational reports including sustainability, risk, efficiency, impacts, permit status, routine releases, unplanned events, strategies, operations monitoring, management monitoring, ethics, stakeholder perceptions, innovation, and collaboration;
- Formulate an analytics modeling project and report.

## **Master of Science in Environmental Policy and Management with a Concentration in Environmental, Health and Safety**

The Environmental, Health and Safety master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Whether students currently work in environmental health and safety positions for commercial or government operations, or aspire to, the Environmental, Health and Safety master's degree prepares them with the management skills and technical knowledge required to become a health and safety manager or officer. Students will begin with the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries.

Critical instruction is given on relevant training, emergency planning, procedural operations, and the management of worker health and safety, in addition to environmental management and reporting systems and business and finance strategy.

This degree prepares students to:

- Evaluate the benefits and barriers to integration of environmental health and safety including the fundamentals of safety management, training requirements, emergency planning, setting goals, objectives, and operating procedures, and how management views environmental health and safety;
- Describe the Occupational Safety and Health Act and other rules governing workplace safety with emphasis on the overlap between safety and environmental laws, OSHA's inspection and enforcement authority, employee and employer rights and record keeping requirements;
- Develop and apply compliance programs including how to reduce losses of direct and indirect costs due to accidents and how to convince management and employees that safety programs are beneficial;
- Investigate workplace safety topics including costs of accidents, investigation programs, practical application of worker's compensation, confined space entry programs, injury/illness records and reporting, programs for new fall protective rules and personal protective equipment programs.

## Master of Science in Environmental Policy and Management with a Concentration in Environmental Management

The Environmental Management master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Master's degree students will learn environmental management and leadership essentials, providing them with critical knowledge related to technology, law, and economics as they each relate to the environment. Facilitating environmental innovation, development plans, and integration will be discussed, along with essential permitting and regulatory issues that environmental managers need.

Students in the Environmental Management master's concentration will receive engaging instruction from professional practitioners who work in the fields in which they teach in topics ranging from economics to law, leadership to regulations, as each topic relates to the environment. Designed for students seeking a combination of leadership, policy, and environmental issue education, the concentration prepares graduates to address and manage complex environmental systems.

This degree prepares students to:

- Examine the requirements and implementation strategies of the National Environmental Policy Act and the requirements of various federal agencies which are responsible for National Environmental Policy Act implementation;
- Critique Environmental Impact Statements and Environmental Assessments for regulatory compliance and thoroughness in disclosing environmental effects of proposed actions;
- Investigate the Resource Conservation and Recovery Act's regulations governing performance requirements for treatment, storage and disposal of solid and hazardous waste generation and disposal;
- Explain and summarize developing trends in waste minimization, solid waste management and special waste controls;
- Demonstrate how to use the ISO 14001 framework as a proactive and systematic approach to environmental management and develop a complete program that integrates the ISO 14001 requirements with the existing strategic management methods of an organization;
- Assess personal leadership attributes and construct a personal leadership development plan that integrates leadership principles necessary for advancement including interpersonal communication and leading environmental innovation using the natural world as a model.

## Master of Science in Environmental Policy and Management with a Concentration in Environmental Policy

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets.

These systems link processes such as product design, sourcing, forecasting, planning, manufacturing, distribution, logistics, retailing and material disposal and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success.

Earned entirely online, in the Supply Chain Management concentration students learn the six pillars of the field, and how to solve problems through the use of Six Sigma principles and the use of data analytics. Through hands-on projects with companies students gain real-world experience on the challenges facing global supply chains in the 21st-century while learning from current leaders in the field.

This degree prepares students to:

- Outline the legal and philosophical underpinnings of the environmental movement, both in the United States and internationally, including the use of international laws and treaties to mitigate, lessen, or eliminate damage to various aspects of the environment;
- Analyze global environmental issues including endangered species, overpopulation, resource depletion, biodiversity, ocean dumping, deforestation, desertification, global warming, and ozone depletion;
- Explain how to encourage sustainability through consumption patterns that ensure a continuing resource supply for future generations and through achieving a balance between environmental protection and economic development;
- Describe the field of public environmental policy including contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation;
- Examine ethical considerations in environmental management and decision making and explore various philosophies of humankind's relationship with the environment;
- Develop and express a personal philosophy addressing one's own role in the regulatory, technical, scientific, and financial management of the environment.

## **Master of Science in Environmental Policy and Management with a Concentration in Natural Resource Management**

The Natural Resource Management master's degree concentration may be earned online or in a combination of online, on campus, and hybrid courses at the University of Denver in the evenings to meet the needs of busy adults. Designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources (e.g., mining or forestry management), the Natural Resource Management concentration prepares students to work in professional roles overseeing natural resource management for commercial or government purposes. Learn historic and contemporary management systems and principles, along with key policies and procedures needed to excel in the public or private sectors related to natural resource management.

Degree-seeking students are exposed to a breadth of knowledge pertaining to natural resources, water management, zoning, forestry management, mining, and land use issues. Focused skills concentrate on technology, management, and communication knowledge that is critical to success in the natural resource management field.

This degree prepares students to:

- Analyze the practical and theoretical basis of recreational land use in the context of ecosystem management and explore the responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in wildlife management issues;
- Discuss the statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces;
- Explain historic and contemporary management systems and principles by examining key policies, guidelines, and planning procedures of governmental agencies, resource-based industry and the public;
- Describe how the biological, physical, social, and economic aspects of lands, waters, and natural resources work together to achieve sustainable conditions that encourage preservation and management of natural resources for recreation;
- Investigate the basic principles, trends, challenges, and controversies of the administration of maintaining certain wildlife species including threats from water and air pollution, poaching and other illegal actions;
- Characterize the field of public environmental policy including contemporary methods of policy analysis, agenda-setting, models of policy formulation and implementation, and policy evaluation.

## **Master of Science in Environmental Policy and Management with a Concentration in Supply Chain Management**

The Supply Chain Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization's mission.

The Supply Chain Management concentration will teach students to apply principles of environmental sustainability as they plan for and manage the end-to-end flow of products, including closed loop supply chains. Students will explore the many links in the supply chain that have significant impact on the environment, from raw material sourcing to energy use to transportation. Students will gain hands-on experience, learn new technologies, and develop skills ranging from logistics to organizational development.

This degree prepares students to:



- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system;
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems;
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology;
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices;
- Apply best practices to address an authentic supply chain problem in a work setting.

## **Graduate Certificate in Environmental Policy and Management with a Concentration in Energy and Sustainability**

The graduate certificate in Energy and Sustainability concentration may be earned online to meet the needs of busy adults. Busy adults who already hold master's degrees, or professionals who work within the field of energy development, will benefit from a graduate certificate in Energy and Sustainability, a dynamic field that is emerging in importance and popularity. Ideal for students seeking further study related to sustainable systems, energy development and use, energy finance, and alternative and renewable energy process, the graduate certificate in Energy and Sustainability may be earned online or on campus in the evenings. Students will develop integration strategies, build finance schemes and marketing plans, articulate a strong working knowledge of sustainability concepts, and learn about energy and sustainability systems. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

## **Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting**

The Environmental Analytics and Reporting certificate may be earned online to meet the needs of busy adults. This certificate emphasizes learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of ISO 14001, fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

## **Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental, Health and Safety**

The graduate certificate in Environmental, Health and Safety concentration may be earned online to meet the needs of busy adults. Designed and delivered for professionals who already holds a master's degree, or for professionals looking to further their environmental career with a new skillset, the graduate certificate in Environmental, Health and Safety concentration may be earned online or on campus in the evenings. Certificate students will explore the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Students pursuing this graduate certificate will acquire environmental management skills and technical knowledge that prepare them to work with health and safety statutes and regulations, management of worker health and safety issues, environmental management and reporting systems, and business and finance. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

## **Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Management**

The graduate certificate in Environmental Management concentration may be earned online to meet the needs of busy adults. Environmental Management certificate students will develop essential management skills and technical knowledge required to function in a variety of managerial positions within the environmental field. Certificate students learn to facilitate environmental innovation and integrate systems while complying with regulatory and policy matters.

The Environmental Management certificate is designed for busy adults who already hold a master's degree, or for professionals looking to further their environmental career with a new skillset in leadership, policy, and environmental issues. The graduate certificate in Environmental Management concentration provides detailed instruction on statutes and regulations, management and reporting systems, business and finance strategy, and communication and negotiation skills as they each relate to environmental management. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework. Environmental Management graduate certificate students take master's-level

classes but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

### **Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Policy**

The graduate certificate in Environmental Policy concentration may be earned online to meet the needs of busy adults. Designed and delivered for professionals who already hold master's degrees or for those looking to further their environmental career with a new skillset, the graduate certificate in Environmental Policy concentration is ideal for adult students seeking an innovative, career relevant graduate certificate. Environmental policy analysis at the public level will be discussed, including contemporary methods for analytical model development, implementation, and evaluation. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

Environmental Management and Policy students who are currently in the field of environmental policy, or for those aspiring to join the field, will develop skills through the online graduate certificate program that will serve them well in a policy making organization, such as values and ethics, communication and negotiation, policy analysis, and environmental laws and regulations. Environmental Policy graduate certificate students take master's level classes, but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

### **Graduate Certificate in Environmental Policy and Management with a Concentration in Natural Resource Management**

The Natural Resource Management graduate certificate concentration may be earned online to meet the needs of busy adults. Designed for professionals who already hold master's degrees, or for busy adults looking to further their environmental career with a new skillset, the graduate certificate in Natural Resource Management will prepare students to work in natural resource management roles for commercial or government organizations. Certificate students will learn historic and contemporary management systems and principles, in addition to essential policies and procedures needed to thrive in natural resource management in the public or private sectors. Students will also gain additional skills and knowledge in environmental policy and management through elective coursework.

The graduate certificate is designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources. Graduate certificate students will develop organizational leadership skills and learn environmental statutes and regulations pertaining to natural resource management. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

### **Specialized Graduate Certificate in Environmental Analytics and Reporting**

The Environmental Analytics and Reporting specialized graduate certificate emphasizes learning how to utilize the tools and insights of the data analytics revolution to perform sophisticated environmental analyses and reports. Students learn possible uses of data analytics in an era of sustainability and ever-increasing complexity to manage the environmental elements of their organizations more effectively. Constructively reporting these results, trends, and accomplishments is an important avenue of communication in any organization. Environmental professionals will learn to identify and obtain a data set from a publicly traded company, from their own organization, or another public or governmental source suitable to use for carrying out analytics projects. Clear questions will be formulated and framed; analytical algorithms will be run on cloud technologies to reveal relevant insight into environmental issues. Context for these analyses will be provided through study of fundamental U.S. environmental statutes, and governmental and NGO environmental reporting standards and requirements.

### **Specialized Graduate Certificate in Environmental, Health and Safety**

The specialized graduate certificate in Environmental, Health and Safety may be earned online to meet the needs of busy adults. Students will explore the foundational statutory and regulatory origins of environmental health and safety compliance management and learn how to effectively and efficiently streamline resources to integrate safety and health regulations across sectors and industries.

Students pursuing this certificate, will acquire environmental management skills and technical knowledge that prepare them to work with health and safety statutes and regulations, management of worker health and safety issues, environmental management and reporting systems, and business and finance. Credits earned through the specialized graduate certificate may apply toward a master's degree in Environmental Policy and Management.

### **Specialized Graduate Certificate in Environmental Management**

The specialized graduate certificate in Environmental Management may be earned online to meet the needs of busy adults. The Environmental Management specialized graduate certificate is designed for busy adults who already hold a master's degree, or for professionals looking to further their environmental career with a new skillset in leadership, policy, and environmental issues. The graduate certificate in Environmental Management concentration provides detailed instruction on statutes and regulations, management and reporting systems, business and finance strategy, and communication and negotiation skills as they each relate to environmental management. Students will take master's-level classes but do not complete a capstone project. Credits earned through this certificate may apply toward a master's degree in Environmental Policy and Management.

## **Specialized Graduate Certificate in Environmental Policy**

The specialized graduate certificate in Environmental Policy may be earned online to meet the needs of busy adults. Designed and delivered for professionals who already hold master's degrees or for those looking to further their environmental career with a new skillset. Environmental policy analysis at the public level will be discussed, including contemporary methods for analytical model development, implementation, and evaluation.

Environmental Management and Policy students will develop skills that will serve them well in a policy making organization, such as values and ethics, communication and negotiation, policy analysis, and environmental laws and regulations. Environmental Policy specialized graduate certificate students take master's level classes, but do not complete a capstone project. Credits earned through this graduate certificate may apply toward a master's degree in Environmental Policy and Management.

## **Specialized Graduate Certificate in Energy and Sustainability**

The specialized graduate certificate in Energy and Sustainability may be earned online to meet the needs of busy adults. Students will develop integration strategies, build finance schemes and marketing plans, articulate a strong working knowledge of sustainability concepts, and learn about energy and sustainability systems.

Sustainable systems must be considered and developed in the areas of growth, transportation, energy, policy, and business models in order to head off looming environmental, political, and humanitarian problems. This will be accomplished through a comprehensive study of sustainability in the areas of economic development, green building, land use, transportation, and water resources. Credits earned through this certificate may apply toward a master's degree in Environmental Policy and Management.

## **Specialized Graduate Certificate in Natural Resource Management**

The Natural Resource Management specialized graduate certificate may be earned online to meet the needs of busy adults. Students will learn historic and contemporary management systems and principles, in addition to essential policies and procedures needed to thrive in natural resource management in the public or private sectors.

The certificate is designed for professionals whose primary interest is the management of natural resources for organizations which plan or regulate the use of natural resources, or commercial operations which extract and use natural resources. Students will develop organizational leadership skills and learn environmental statutes and regulations pertaining to natural resource management. Credits earned through this certificate may apply toward a master's degree in Environmental Policy and Management.

## **Master's Degree Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### **English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## **Certificate Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Science in Environmental Policy and Management

Code	Title	Credits
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901 or EPM 4902	Capstone Project Capstone Seminar	4
<b>AND Select 5 courses</b>		<b>20</b>
EPM 4001	Environmental Foundations and Principles	
EPM 4002	Integrated Environmental Systems	
EPM 4040	Wetland Ecology and Management	
EPM 4108	Impacts of Recreational Use	
EPM 4115	Introduction to Ecology	
EPM 4120	Introduction to Natural Resource Management	
EPM 4140	National Environmental Policy Act (NEPA)	
EPM 4150	Global Environmental Law and Policy	
EPM 4220	Endangered Species and Wildlife	
EPM 4230	Renewable and Alternative Energies	
EPM 4232	Sustainability: Policy and Practice	
EPM 4233	Sustainable Transportation	
EPM 4234	Climate Change and Science	
EPM 4235	Green Building	
EPM 4236	Nuclear, Hydrogen, and Energy Storage Technologies	
EPM 4238	Water and Food Sustainability	
EPM 4280	Resource Conservation and Recovery Act (RCRA)	
EPM 4355	Systems, Standards, and Certifications for Environmental Management	
EPM 4390	Environmental Policy Analysis	
EPM 4400	Environmental Values and Ethics	
EPM 4465	Environmental Restoration and Waste Management	
EPM 4500	Leadership for Environmental Managers	
EPM 4510	Environmental, and Health & Safety Management	
EPM 4520	Occupational Safety and Health Act (OSHA)	
EPM 4525	Workplace Safety Management	
EPM 4610	Analytics I	
EPM 4615	Analytics II	
EPM 4620	Environmental Reporting Standards and Models	
EPM 4625	Environmental Analysis and Reporting Project	

EPM 4705	Land Use Planning	
EPM 4710	Environmental Project Management	
<b>Electives requirements (select three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

In University College graduate-level programs, grades of C or greater are considered passing, whereas grades of C- or lower are considered failing. Courses with a grade of C- or below will not count toward meeting degree or certificate requirements. Also, no more than one-fourth of the hours accepted toward the degree be grades of "C". A cumulative and program grade-point average of 3.0 or better must be maintained at all times.

### **Master of Science in Environmental Policy and Management with a Concentration in Emergency Planning and Response**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements</b>		
SMGT 4210	Critical Incident Management	4
SMGT 4230	Mitigation for Emergency Managers	4
SMGT 4240	Emergency Incident Recovery	4
SMGT 4400	Emergency Planning	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### **Master of Science in Environmental Policy and Management with a Concentration in Energy and Sustainability**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements (Select 6 courses)</b>		<b>24</b>
EPM 4002	Integrated Environmental Systems	
EPM 4040	Wetland Ecology and Management	
EPM 4120	Introduction to Natural Resource Management	
EPM 4140	National Environmental Policy Act (NEPA)	
EPM 4150	Global Environmental Law and Policy	
EPM 4220	Endangered Species and Wildlife	
EPM 4230	Renewable and Alternative Energies	
EPM 4232	Sustainability:Policy and Practice	
EPM 4233	Sustainable Transportation	

EPM 4234	Climate Change and Science	
EPM 4235	Green Building	
EPM 4236	Nuclear, Hydrogen, and Energy Storage Technologies	
EPM 4238	Water and Food Sustainability	
EPM 4390	Environmental Policy Analysis	
EPM 4610	Analytics I	
EPM 4620	Environmental Reporting Standards and Models	
EPM 4705	Land Use Planning	
<b>Elective requirements (Select two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting

Code	Title	Credits
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements</b>		
EPM 4610	Analytics I	4
EPM 4615	Analytics II	4
EPM 4620	Environmental Reporting Standards and Models	4
EPM 4625	Environmental Analysis and Reporting Project	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Environmental Policy and Management with a Concentration in Environmental, Health and Safety

Code	Title	Credits
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements</b>		
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4510	Environmental, and Health & Safety Management	4
EPM 4520	Occupational Safety and Health Act (OSHA)	4
EPM 4525	Workplace Safety Management	4

<b>Elective requirements (Choose four courses)</b>	<b>16</b>
<b>Total Credits</b>	<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### **Master of Science in Environmental Policy and Management with a Concentration in Environmental Management**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements</b>		
EPM 4140	National Environmental Policy Act (NEPA)	4
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4355	Systems, Standards, and Certifications for Environmental Management	4
EPM 4500	Leadership for Environmental Managers	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### **Master of Science in Environmental Policy and Management with a Concentration in Environmental Policy**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901	Capstone Project	4
or EPM 4902	Capstone Seminar	
<b>Concentration requirements</b>		
EPM 4150	Global Environmental Law and Policy	4
EPM 4232	Sustainability: Policy and Practice	4
EPM 4390	Environmental Policy Analysis	4
EPM 4400	Environmental Values and Ethics	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Environmental Policy and Management with a Concentration in Natural Resource Management

Code	Title	Credits
<b>Core coursework requirements</b>		
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4910	Research Practices and Applications	4
EPM 4901 or EPM 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
EPM 4108	Impacts of Recreational Use	4
EPM 4120	Introduction to Natural Resource Management	4
EPM 4220	Endangered Species and Wildlife	4
EPM 4390	Environmental Policy Analysis	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives..

## Master of Science in Environmental Policy and Management with a Concentration in Supply Chain Management

Code	Title	Credits
<b>Core coursework requirements</b>		
EPM 4910	Research Practices and Applications	4
EPM 4003	Environmental Finance and Economics	4
EPM 4200	Environmental Protection Law	4
EPM 4901 or EPM 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4110	Fundamentals of Supply Chain Planning	4
TRAN 4120	Fundamentals of Supply Chain Execution	4
TRAN 4130	Structured Problem Solving in Supply Chain Management	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Environmental Policy and Management with a Concentration in Energy and Sustainability

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4002	Integrated Environmental Systems	4
EPM 4230	Renewable and Alternative Energies	4
EPM 4232	Sustainability:Policy and Practice	4
EPM 4233	Sustainable Transportation	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>



**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Analytics and Reporting**

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4610	Analytics I	4
EPM 4615	Analytics II	4
EPM 4620	Environmental Reporting Standards and Models	4
EPM 4625	Environmental Analysis and Reporting Project	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental, Health and Safety**

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4510	Environmental, and Health & Safety Management	4
EPM 4520	Occupational Safety and Health Act (OSHA)	4
EPM 4525	Workplace Safety Management	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Management**

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4140	National Environmental Policy Act (NEPA)	4
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4355	Systems, Standards, and Certifications for Environmental Management	4
EPM 4500	Leadership for Environmental Managers	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Environmental Policy and Management with a Concentration in Environmental Policy

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4150	Global Environmental Law and Policy	4
EPM 4232	Sustainability:Policy and Practice	4
EPM 4390	Environmental Policy Analysis	4
EPM 4400	Environmental Values and Ethics	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate in Environmental Policy and Management with a Concentration in Natural Resource Management

Code	Title	Credits
<b>Concentration requirements</b>		
EPM 4108	Impacts of Recreational Use	4
EPM 4120	Introduction to Natural Resource Management	4
EPM 4220	Endangered Species and Wildlife	4
EPM 4390	Environmental Policy Analysis	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Environmental Analytics and Reporting

Code	Title	Credits
EPM 4610	Analytics I	4
EPM 4615	Analytics II	4
EPM 4620	Environmental Reporting Standards and Models	4
EPM 4625	Environmental Analysis and Reporting Project	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Environmental, Health and Safety

Code	Title	Credits
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4510	Environmental, and Health & Safety Management	4
EPM 4520	Occupational Safety and Health Act (OSHA)	4
EPM 4525	Workplace Safety Management	4
<b>Total Credits</b>		<b>16</b>

**Specialized Graduate Certificate in Environmental Management**

Code	Title	Credits
EPM 4500	Leadership for Environmental Managers	4
EPM 4280	Resource Conservation and Recovery Act (RCRA)	4
EPM 4355	Systems, Standards, and Certifications for Environmental Management	4
EPM 4140	National Environmental Policy Act (NEPA)	4
<b>Total Credits</b>		<b>16</b>

**Specialized Graduate Certificate in Environmental Policy**

Code	Title	Credits
EPM 4232	Sustainability:Policy and Practice	4
EPM 4150	Global Environmental Law and Policy	4
EPM 4400	Environmental Values and Ethics	4
EPM 4390	Environmental Policy Analysis	4
<b>Total Credits</b>		<b>16</b>

**Specialized Graduate Certificate in Energy and Sustainability**

Code	Title	Credits
EPM 4002	Integrated Environmental Systems	4
EPM 4230	Renewable and Alternative Energies	4
EPM 4232	Sustainability:Policy and Practice	4
EPM 4233	Sustainable Transportation	4
<b>Total Credits</b>		<b>16</b>

**Specialized Graduate Certificate in Natural Resource Management**

Code	Title	Credits
EPM 4108	Impacts of Recreational Use	4
EPM 4120	Introduction to Natural Resource Management	4
EPM 4220	Endangered Species and Wildlife	4
EPM 4390	Environmental Policy Analysis	4
<b>Total Credits</b>		<b>16</b>

**EPM 4001 Environmental Foundations and Principles (4 Credits)**

This course investigates the field's history, current activities and issues, ethics, systems, and economics; and an overview of key necessary knowledge and skills to work and learn within the field. Students will: gain a strong historical understanding of how environmental and natural resource issues have influenced economic development and societal growth throughout the ages; learn about the complexity of environmental issues and the value of interdisciplinary and systems thinking when applied to making decisions about natural resource usage; understand the role that empirical science, policy analysis and advocacy play in how governments and private companies address complex environmental issues; become aware of the stressors that ecosystems around the globe are experiencing and the value of multidisciplinary approaches to addressing these challenges; and understand the diverse organizations and employment opportunities available in the environmental field.

**EPM 4002 Integrated Environmental Systems (4 Credits)**

The earth as a whole is comprised of many systems that affect the environment. Some have large wide ranging reach, while others are restricted to a relatively small area. Included is everything in between. Actions in one area or system may have unintended secondary and tertiary consequences in that system or others. This course uses various tools and materials to study a few environmental systems and determine connections, consequences, impacts, barriers, decision making, life cycle costs, etc.

**EPM 4003 Environmental Finance and Economics (4 Credits)**

The class provides an overview of economics, finance, and sustainability in an environmental and social context. The class examines traditional and alternative performance metrics, such as "Green GDP", and explores the relationship between risk and return, return on investments, including environmental, social, and governance (ESG) investing. The course emphasizes relationships between business management and environmental quality, and provides students with a financial and economic decision-making framework for understanding and analyzing environmental issues. The course utilizes a case-study approach to cover economic and finance concepts in real world scenarios involving natural resource and environmental decisions. Students will leave this course with the ability to confidently converse regarding sustainability in a finance and economics context.

**EPM 4040 Wetland Ecology and Management (4 Credits)**

This course provides a detailed examination of wetlands and deepwater habitats of the United States, with an emphasis on wetlands. The definition, identification, classification, and management requirements of various wetland communities are stressed. Students identify and classify wetlands and analyze wetlands in the context of federal, state, and local regulatory processes. Students evaluate activities with adverse and beneficial effects to wetlands. Students explore concepts related to wetland management in the public, private and non-profit sectors.

**EPM 4108 Impacts of Recreational Use (4 Credits)**

The practical and managerial theoretical basis of recreational use of public and private lands is examined in the context of ecosystem management. #The statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces are discussed in detail. #The impacts of recreational uses on the environment and conflicts with other uses of land and resources are discussed. Land use planning policies and decisions, decisions which respond to recreation, wilderness, wilderness and open space issues will be examined. At the end of this course, students will create a visitor impact use assessment using the Inter-agency Visitor Use Management Framework (IVUMF).

**EPM 4115 Introduction to Ecology (4 Credits)**

This course examines the concepts of the ecosystem, populations, communities, the flows of energy, material cycles, and biotic diversity. Students will analyze ecological concepts including the unity of organisms and inseparable interactions with the physical environment. Class discussions include topics such as the formation, distribution, and organization of ecological communities, plant succession, and nutrient cycling. Students will also evaluate aspects of evolutionary trends within plant and animal communities as they relate to ecological principles. The goals of this class are to transmit the principles, methods, and vocabulary of ecology. Students will critically analyze and discuss issues concerning population ecology, community ecology, and ecosystem ecology. Students will relate concepts of ecology to their personal and professional interests in environmental issues. The ability and necessity of communicating ecological principles within a commercial and/or regulatory environment will be developed. An assignment will provide experience in the collection, interpretation, and analysis of data. The skills learned will be relevant in environmental reporting, discussions, and presentations within a professional environment.

**EPM 4120 Introduction to Natural Resource Management (4 Credits)**

In this course, students gain an understanding of the roles and responsibilities of federal, state, and local agencies, environmental and wildlife interest groups, and other organizations involved in natural resources management. Students will learn the content and purpose of natural resources management plans, then apply this knowledge to assess and develop policies that will improve natural resources management.

**EPM 4140 National Environmental Policy Act (NEPA) (4 Credits)**

This course examines the National Environmental Policy Act (NEPA) and its applications. Students will gain both academic and practical experience in studying the intent and application of NEPA by federal agencies. Students will gain practical application by critically reviewing various NEPA documents and examining the components of NEPA documents. Students will prepare an Environmental Assessment (EA) of their choosing for their final project in this course.

**EPM 4150 Global Environmental Law and Policy (4 Credits)**

International environmental agreements provide a mechanism to address domestic environmental issues caused by foreign countries. However, some agreements have been more successful than others based on various aspects within the agreement and a country's domestic actions taken to enforce the agreement. This course teaches students how international environmental agreements are created, managed, and improved in order to improve environmental issues in different countries and international waters. Students will analyze and comment on existing agreements and create strategies for improving the agreements to strengthen agreements to be more effective in addressing environmental issues. Students learn about the stakeholders involved in creating and improving these agreements. Students will develop marketable analytical skills that help guide organizations toward more robust advocacy strategies designed to make the agreements more enforceable and effective in addressing environmental issues. Prerequisite: Recommended - EPM 4200.

**EPM 4200 Environmental Protection Law (4 Credits)**

This course provides an examination of the fundamental laws which protect our environment and health. Students will analyze the purpose, context, implementation, and implications of the most important laws, regulations, policies, and court cases that affect the environment, human health, and our economy. Coverage includes: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), related toxics laws, and species and habitat protection statutes. It provides an examination of the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping and implementing environmental laws. The course also asks students to apply this knowledge to current events in environmental policy and litigation.

**EPM 4220 Endangered Species and Wildlife (4 Credits)**

This course provides an examination of the basic principles, trends, challenges, and controversies surrounding the administration of maintaining certain wildlife species, specifically through the administration of the Endangered Species Act. Students gain an understanding of the roles and responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in endangered species and wildlife management issues. This course will also apply the principles of human dimensions to understand the complex social systems at work to conserve endangered species.

**EPM 4230 Renewable and Alternative Energies (4 Credits)**

This course provides a well-rounded primer on energy as a resource and its importance in the economy and the world today. Students will examine renewable and alternative energies and alternative transportation fuels. This course analyzes issues surrounding the development, enforcement and application of energy regulatory policies.

**EPM 4232 Sustainability: Policy and Practice (4 Credits)**

This course teaches students how organizations practice sustainability and how they plan for, shape, and react to the emerging environmental policies necessary to limit global warming. The investment community continues its quest to identify strong sustainability organizations, making public reporting more important than ever. NGOs and governments are pushing for higher ambition. Students will learn to make sustainability reports more meaningful to garner support from NGOs and attract investors. Students will develop marketable analytical skills that help guide organizations toward more robust sustainability actions and reporting, or help NGOs evaluate corporate reports for strengths and gaps.

**EPM 4233 Sustainable Transportation (4 Credits)**

21st Century transportation planning on the local and global scale involves consideration of environmental policies and sustainable practices. Development of an efficient system for moving goods and people along highways, airways and public transit networks must coordinate with legal requirements governing automobile source emissions, water pollution, mitigation of congestion, and crisis management. Conflicts occur along political fault lines between public interest groups, environmental justice advocates, the business community, government regulators, and the ordinary commuter. Consideration is given to different fuel sources, including carbon-based, hydrogen, electricity, and biofuels. The course also examines fuel efficiency (CAFE) and trends in emission science and regulation.

**EPM 4234 Climate Change and Science (4 Credits)**

"Global Warming" is a cause celebre, but how much do we really know about the science involved in studying the earth's climate? Moving beyond the social and political opinions espoused in the current debate on climate change, this course delves into the chemical and physical forces at play in the arena. This course covers scientific processes used in measuring climate dynamics, among them ozone chemistry, carbon and oxygen cycles, and heat and water budgets. It explores scales and methods for detecting climate change, including analyzing ice cores, instrumental records, and time series. Some attention will be dedicated to "climate forcing" caused by such things as orbital variations, volcanism, plate tectonics, and solar variability.

**EPM 4235 Green Building (4 Credits)**

Builders, developers and designers increasingly are promoting the use of green construction practices in the pursuit of healthier, smarter buildings. Students in this course examine sustainable building strategies and tools, including LEED (Leadership in Energy and Environmental Design), the nationally-accepted benchmark for the design, construction and operation of high-performance green buildings. LEED promotes a whole-building approach by recognizing performance in five areas: sustainable site development water savings, energy efficiency, materials selection and indoor air quality. What materials are best in the design and operation of green building? How can a designer or building owner make better use of power and water efficiency programs? What are the recent developments, trends and case studies of green buildings and materials?

**EPM 4236 Nuclear, Hydrogen, and Energy Storage Technologies (4 Credits)**

The necessity and urgency of moving away from fossil fuels-based energy production to reduce global warming has been well documented. Renewable energy technologies (solar, wind, and water-based) have been widely embraced as alternative energy solutions. However, like all energy production technologies, renewable energy technologies have shortcomings that prevent them from being standalone energy production solutions. Nuclear and fuel cell energy production technologies address the shortcomings of renewable energy technologies and can be considered symbiotic options in the move away from fossil fuels. Improving energy storage technologies will also be required to complete this symbiosis. This course will examine renewable energy technologies shortcomings and how nuclear, fuel cell, and energy storage technologies may be implemented to further facilitate the move away from fossil fuels-based energy production.

**EPM 4238 Water and Food Sustainability (4 Credits)**

Concurrent food, water, and climate crises amidst widespread hunger and undernutrition have re-focused public attention on the deficiencies and complexities of global food and water systems. This course examines the science and sustainability of our water resources as well as food production with an emphasis on the connections between the two. Increasing water and food system sustainability requires working along multiple disciplines, reconnecting agriculture with ecological systems and ensuring that policies and institutions that impact food and water systems protect social equity and the environment. The course draws from interdisciplinary research and education bridging worldviews and values implicit in different disciplinary and theoretical perspectives. Linking theory and practice is also essential thus the course will incorporate multiple perspectives and case studies from local to global levels. Demand is growing for interdisciplinary scholars and other professionals who are equipped to analyze and address the complex challenges of sustainable water resources, sustainable food production, and water and food security. Students will synthesize information from water, food, and the environment from a systems perspective. They will examine the interactions between science, policy, and ethics and analyze the trade-offs and synergies between different objectives, solutions, and outcomes. Students will devise solutions to problems that incorporate the intricacies and interdependencies of water and food systems.

**EPM 4280 Resource Conservation and Recovery Act (RCRA) (4 Credits)**

The Resource Conservation and Recovery Act (RCRA) course is a detailed review of the Resource Conservation and Recovery Act that was passed in 1976 and has been continuously updated since that time. RCRA is also known as "the cradle to grave law" dealing with hazardous waste generation and disposal. This course not only covers the important parts of the regulation, but students will also learn how to navigate and practically apply the law and regulations.

**EPM 4355 Systems, Standards, and Certifications for Environmental Management (4 Credits)**

Students will analyze and apply common environmental management systems, which can be used to ensure and improve quality during the management of a wide range of environmental operations. They will synthesize this knowledge via a project which establishes portions of an environmental management system. Students will execute the plan-do-check-act cycle to improve quality. They will evaluate options to minimize environmental impacts using root cause analysis and generalize common system components that are necessary for an environmental organization to achieve its objectives (establishing environmental policy, establishing performance objectives, monitoring results, evaluating performance, understanding and managing risks, etc.) Course assignments will allow students to practice systemizing and standardizing environmental management processes to improve performance (common procedures, data management, analytical methods, performance monitoring, etc.) Throughout the course, students will discover that management systems beyond subject matter expertise are necessary to do well in environmental careers.

**EPM 4390 Environmental Policy Analysis (4 Credits)**

This course investigates key issues in environmental policy analysis, including the importance of environmental justice, federalism versus state policy, techniques of environmental assessment, the impacts of politics and case law on environmental policy, and policy decision-making. The class sets a foundation with an overview of the U.S. and international environmental movements. Students look at stakeholder engagement, policy formulation and implementation, and policy evaluation in different institutions. The course emphasizes the important role that the political and judicial process plays in the creation of policy solutions, and assesses the strengths and weaknesses of different techniques of environmental analysis including environmental impact assessments, modeling and simulation, sustainability analysis, and how best to weave environmental justice/equity throughout policy development and implementation.

**EPM 4400 Environmental Values and Ethics (4 Credits)**

Students examine ethical considerations in environmental management and decision making. Discussions cover personal versus organizational attitudes; cultural, economic, and historic values; science versus politics; and international and intergenerational policies. The course also explores various philosophies of humankind's relationship with the environment. Students are encouraged to develop and express a personal philosophy relative to their role in the regulatory, technical, scientific, and financial management of the environment.

**EPM 4465 Environmental Restoration and Waste Management (4 Credits)**

Environmental Restoration is the identification and elimination of hazardous materials from a designated site such that the risks to human health and the environment are reduced to an acceptable level for an intended future land use. This course examines successful environmental restoration activities that were used to reduce and mitigate risk associated with past operations of nuclear and nuclear-related facilities and the significant potential to release harmful contaminants. Environmental restoration effects on the ecological and human health risk assessments and analyses related to the transport, treatment, storage, and disposal of waste from the contaminated site are presented. Remediation processes for radioactive materials and other hazardous wastes and the eventual storage, processing, and disposal and the potential effect on humans and the environment is studied. An overview is given on the development of a radiological protection program for an EIS report. External and internal hazards: control measures and monitoring, and other important limits and measurements are explored.

**EPM 4500 Leadership for Environmental Managers (4 Credits)**

This course provides students with fundamental leadership skills with an emphasis on topics and contexts relevant to environmental professionals. It addresses three main subject areas: leadership principles necessary to positively influence their work environment; how to effectively communicate; and developing a vision and mission for their personal leadership success. Students will assess their own leadership attributes, characteristics, and skills and construct a personal leadership development plan. The class will make use of reading assignments, written assignments, video assignments, situational role-play, and class participation.

**EPM 4510 Environmental, and Health & Safety Management (4 Credits)**

This course presents the intricacies of establishing environmental and health and safety programs in the workplace. The course is divided into specific environmental and health and safety topics that are relevant to environmental and safety management. There are multiple topics that address the benefits and barriers to designing, implementing, and maintaining environmental and health and safety programs.

**EPM 4520 Occupational Safety and Health Act (OSHA) (4 Credits)**

This course provides an in-depth review of the laws and regulations that govern the safety and health of workers. The course is of value to students seeking to expand knowledge of the Occupational Safety and Health Act. Emphasis is on the areas of overlap between safety and environmental laws, OSHA's inspection and enforcement authority, employee and employer rights, record keeping requirements and an outline of labor's interest in OSHA cases. Current topics such as OSHA reform legislation and regulatory agenda are discussed.

**EPM 4525 Workplace Safety Management (4 Credits)**

This course introduces students to core elements in a health and safety management systems approach to identifying and preventing workplace injuries and illnesses. Students examine the five elements of developing an effective occupational health and safety management program. The course also explores the common challenges and obstacles encountered during the development and implementation of these programs. This course includes a general overview of common OSHA regulations, rights, and responsibilities for developing a safety and health program. The format of this class is highly interactive, affording students an opportunity to engage with case studies and their peers, as well as to practice developing health, safety, and environmental programs at their respective establishments.

**EPM 4610 Analytics I (4 Credits)**

Data and analytics are key for any business domain; data tells us about our customers and markets and analytics make information and knowledge out of data. It's now possible to be inundated with data but gain no new knowledge from it. Analytics help companies demonstrate their ESG behavior and its impact. Companies that can prove and display the environmental impact gain a market advantage. Analytics also demonstrate real environmental impact versus greenwashing. This course has a managerial focus rather than a technical one, though students will perform some data analytics in this course. It is designed to provide managers with sufficient background on the potential value of data analytics, the business process change associated with data analytics, and the underlying technologies, to enable them to interface effectively with analysts and data scientists.

**EPM 4615 Analytics II (4 Credits)**

Business professionals including those in environmental health and safety (EHS) management, use statistics every day in making decisions. In this graduate-level course, you will gain an overview of the data analytic process and data mining techniques used for discovery knowledge from datasets. The course is designed to highlight the practical aspects of data mining methods and their applications, rather than theoretical aspects of statistical machine learning or optimization. The course also introduces emerging trends in Data Analytics and their applications in decision making process on environmental issues such as sustainability which includes waste management, water, and energy conservation. In summary, data is now an integral part of our lives and to be successful in today's business landscape, we need to be able to leverage data to make critical business decisions on environmental sustainability. This course will teach students how to use data to make those decisions confidently. Prerequisite: EPM 4610.

**EPM 4620 Environmental Reporting Standards and Models (4 Credits)**

Students learn the reporting requirements of existing and emerging environmental reporting standards, e.g., SEC requirements, EU standards, NGO standards, Global Reporting Initiative environmental performance indicators, and Sustainability Accounting Standards Board recommendations, and how to craft mandatory and optional reports that conform to these standards and requirements.

**EPM 4625 Environmental Analysis and Reporting Project (4 Credits)**

This is the concluding class for the Environment Analytics and Reporting concentration and graduate certificate. The class centers on performing sophisticated investigations of sustainability-related data sets utilizing the tools and insights of the data analytics revolution. The focus of the course is on applying advanced data analytics techniques (e.g., data mining, predictive analytics, and prescriptive analytics) to support innovative approaches for organizational sustainability, business performance, stakeholder relations, and/or environmental policy. Students will engage in readings, develop an analysis project using Watson Analytics, and prepare a report covering conclusions and recommendations. Prerequisites: EPM 4610, 4615, and 4620.

**EPM 4701 Topics in EPM (2-5 Credits)**

The content of this course will vary each time it is offered. The topics may include time-sensitive issues in the field of environmental policy and management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content will be announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**EPM 4705 Land Use Planning (4 Credits)**

This course provides a comprehensive examination of land use planning efforts by federal, state, and local governments. The legal authorities, responsibilities, and conflicts held by these governmental entities are examined in detail. The course examines the interrelationship between home rule authority, local zoning and planning requirements, and federal/state natural resource plans, as well as public participation in land use plans. Students will learn how to set goals and objectives for specific components of ecosystems, design projects to achieve desired ecologic conditions, and use new technologies in planning.

**EPM 4710 Environmental Project Management (4 Credits)**

In this course, students will learn about project management concepts and gain practical experience applying basic project management skills. As a part of class assignments, students will work on selected projects while covering the entire project management process, from project initiation to close-out. These projects will cover a range of environmental and / or sustainability project management perspectives, including governmental, industry, and advocacy or non-profit organizations. By the end of the course, students should have a strong understanding of project management skills and terminology, and be able to successfully complete some requirements for project manager certification. They will also understand the similarities and differences in project management for environmental professionals. Please note that while this course will provide a foundation in project management, it will not cover all concepts and terminology in depth or provide the required work hours necessary for project manager certification.

**EPM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**EPM 4902 Capstone Seminar (4 Credits)**

The purpose of the Capstone Seminar is to develop and apply transferable professional skills to persuade decision-makers. The course requires students to identify a Capstone subject matter, develop a premise, and argue for an applied solution. Students will conduct research to create a strong argument that supports their premise by considering purpose, need, and audience and will provide evidence that the premise can be implemented. Tasks include gathering and evaluating appropriate source information, writing a strong solution in support of the premise, and then defending the solution. Students will write a Capstone paper and prepare a presentation suitable for professional exposure through publication and/or presentation.

**EPM 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**EPM 4980 Internship (0-4 Credits)**

The EPM Internship is designed to offer students a purposeful experience in the field of environmental policy and management. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**EPM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed it with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Courses

**EPM 4001 Environmental Foundations and Principles (4 Credits)**

This course investigates the field's history, current activities and issues, ethics, systems, and economics; and an overview of key necessary knowledge and skills to work and learn within the field. Students will: gain a strong historical understanding of how environmental and natural resource issues have influenced economic development and societal growth throughout the ages; learn about the complexity of environmental issues and the value of interdisciplinary and systems thinking when applied to making decisions about natural resource usage; understand the role that empirical science, policy analysis and advocacy play in how governments and private companies address complex environmental issues; become aware of the stressors that ecosystems around the globe are experiencing and the value of multidisciplinary approaches to addressing these challenges; and understand the diverse organizations and employment opportunities available in the environmental field.

**EPM 4002 Integrated Environmental Systems (4 Credits)**

The earth as a whole is comprised of many systems that affect the environment. Some have large wide ranging reach, while others are restricted to a relatively small area. Included is everything in between. Actions in one area or system may have unintended secondary and tertiary consequences in that system or others. This course uses various tools and materials to study a few environmental systems and determine connections, consequences, impacts, barriers, decision making, life cycle costs, etc.

**EPM 4003 Environmental Finance and Economics (4 Credits)**

The class provides an overview of economics, finance, and sustainability in an environmental and social context. The class examines traditional and alternative performance metrics, such as "Green GDP", and explores the relationship between risk and return, return on investments, including environmental, social, and governance (ESG) investing. The course emphasizes relationships between business management and environmental quality, and provides students with a financial and economic decision-making framework for understanding and analyzing environmental issues. The course utilizes a case-study approach to cover economic and finance concepts in real world scenarios involving natural resource and environmental decisions. Students will leave this course with the ability to confidently converse regarding sustainability in a finance and economics context.

**EPM 4040 Wetland Ecology and Management (4 Credits)**

This course provides a detailed examination of wetlands and deepwater habitats of the United States, with an emphasis on wetlands. The definition, identification, classification, and management requirements of various wetland communities are stressed. Students identify and classify wetlands and analyze wetlands in the context of federal, state, and local regulatory processes. Students evaluate activities with adverse and beneficial effects to wetlands. Students explore concepts related to wetland management in the public, private and non-profit sectors.



**EPM 4108 Impacts of Recreational Use (4 Credits)**

The practical and managerial theoretical basis of recreational use of public and private lands is examined in the context of ecosystem management. #The statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces are discussed in detail. #The impacts of recreational uses on the environment and conflicts with other uses of land and resources are discussed. Land use planning policies and decisions, decisions which respond to recreation, wilderness, wilderness and open space issues will be examined. At this end of this course, students will create a visitor impact use assessment using the Inter-agency Visitor Use Management Framework (IVUMF).

**EPM 4115 Introduction to Ecology (4 Credits)**

This course examines the concepts of the ecosystem, populations, communities, the flows of energy, material cycles, and biotic diversity. Students will analyze ecological concepts including the unity of organisms and inseparable interactions with the physical environment. Class discussions include topics such as the formation, distribution, and organization of ecological communities, plant succession, and nutrient cycling. Students will also evaluate aspects of evolutionary trends within plant and animal communities as they relate to ecological principles. The goals of this class are to transmit the principles, methods, and vocabulary of ecology. Students will critically analyze and discuss issues concerning population ecology, community ecology, and ecosystem ecology. Students will relate concepts of ecology to their personal and professional interests in environmental issues. The ability and necessity of communicating ecological principles within a commercial and/or regulatory environment will be developed. An assignment will provide experience in the collection, interpretation, and analysis of data. The skills learned will be relevant in environmental reporting, discussions, and presentations within a professional environment.

**EPM 4120 Introduction to Natural Resource Management (4 Credits)**

In this course, students gain an understanding of the roles and responsibilities of federal, state, and local agencies, environmental and wildlife interest groups, and other organizations involved in natural resources management. Students will learn the content and purpose of natural resources management plans, then apply this knowledge to assess and develop policies that will improve natural resources management.

**EPM 4140 National Environmental Policy Act (NEPA) (4 Credits)**

This course examines the National Environmental Policy Act (NEPA) and its applications. Students will gain both academic and practical experience in studying the intent and application of NEPA by federal agencies. Students will gain practical application by critically reviewing various NEPA documents and examining the components of NEPA documents. Students will prepare an Environmental Assessment (EA) of their choosing for their final project in this course.

**EPM 4150 Global Environmental Law and Policy (4 Credits)**

International environmental agreements provide a mechanism to address domestic environmental issues caused by foreign countries. However, some agreements have been more successful than others based on various aspects within the agreement and a country's domestic actions taken to enforce the agreement. This course teaches students how international environmental agreements are created, managed, and improved in order to improve environmental issues in different countries and international waters. Students will analyze and comment on existing agreements and create strategies for improving the agreements to strengthen agreements to be more effective in addressing environmental issues. Students learn about the stakeholders involved in creating and improving these agreements. Students will develop marketable analytical skills that help guide organizations toward more robust advocacy strategies designed to make the agreements more enforceable and effective in addressing environmental issues. Prerequisite: Recommended - EPM 4200.

**EPM 4200 Environmental Protection Law (4 Credits)**

This course provides an examination of the fundamental laws which protect our environment and health. Students will analyze the purpose, context, implementation, and implications of the most important laws, regulations, policies, and court cases that affect the environment, human health, and our economy. Coverage includes: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), related toxics laws, and species and habitat protection statutes. It provides an examination of the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping and implementing environmental laws. The course also asks students to apply this knowledge to current events in environmental policy and litigation.

**EPM 4220 Endangered Species and Wildlife (4 Credits)**

This course provides an examination of the basic principles, trends, challenges, and controversies surrounding the administration of maintaining certain wildlife species, specifically through the administration of the Endangered Species Act. Students gain an understanding of the roles and responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in endangered species and wildlife management issues. This course will also apply the principles of human dimensions to understand the complex social systems at work to conserve endangered species.

**EPM 4230 Renewable and Alternative Energies (4 Credits)**

This course provides a well-rounded primer on energy as a resource and its importance in the economy and the world today. Students will examine renewable and alternative energies and alternative transportation fuels. This course analyzes issues surrounding the development, enforcement and application of energy regulatory policies.

**EPM 4232 Sustainability: Policy and Practice (4 Credits)**

This course teaches students how organizations practice sustainability and how they plan for, shape, and react to the emerging environmental policies necessary to limit global warming. The investment community continues its quest to identify strong sustainability organizations, making public reporting more important than ever. NGOs and governments are pushing for higher ambition. Students will learn to make sustainability reports more meaningful to garner support from NGOs and attract investors. Students will develop marketable analytical skills that help guide organizations toward more robust sustainability actions and reporting, or help NGOs evaluate corporate reports for strengths and gaps.

**EPM 4233 Sustainable Transportation (4 Credits)**

21st Century transportation planning on the local and global scale involves consideration of environmental policies and sustainable practices. Development of an efficient system for moving goods and people along highways, airways and public transit networks must coordinate with legal requirements governing automobile source emissions, water pollution, mitigation of congestion, and crisis management. Conflicts occur along political fault lines between public interest groups, environmental justice advocates, the business community, government regulators, and the ordinary commuter. Consideration is given to different fuel sources, including carbon-based, hydrogen, electricity, and biofuels. The course also examines fuel efficiency (CAFE) and trends in emission science and regulation.

**EPM 4234 Climate Change and Science (4 Credits)**

Global Warming" is a cause celebre, but how much do we really know about the science involved in studying the earth's climate? Moving beyond the social and political opinions espoused in the current debate on climate change, this course delves into the chemical and physical forces at play in the arena. This course covers scientific processes used in measuring climate dynamics, among them ozone chemistry, carbon and oxygen cycles, and heat and water budgets. It explores scales and methods for detecting climate change, including analyzing ice cores, instrumental records, and time series. Some attention will be dedicated to "climate forcing" caused by such things as orbital variations, volcanism, plate tectonics, and solar variability.

**EPM 4235 Green Building (4 Credits)**

Builders, developers and designers increasingly are promoting the use of green construction practices in the pursuit of healthier, smarter buildings. Students in this course examine sustainable building strategies and tools, including LEED (Leadership in Energy and Environmental Design), the nationally-accepted benchmark for the design, construction and operation of high-performance green buildings. LEED promotes a whole-building approach by recognizing performance in five areas: sustainable site development water savings, energy efficiency, materials selection and indoor air quality. What materials are best in the design and operation of green building? How can a designer or building owner make better use of power and water efficiency programs? What are the recent developments, trends and case studies of green buildings and materials?.

**EPM 4236 Nuclear, Hydrogen, and Energy Storage Technologies (4 Credits)**

The necessity and urgency of moving away from fossil fuels-based energy production to reduce global warming has been well documented. Renewable energy technologies (solar, wind, and water-based) have been widely embraced as alternative energy solutions. However, like all energy production technologies, renewable energy technologies have shortcomings that prevent them from being standalone energy production solutions. Nuclear and fuel cell energy production technologies address the shortcomings of renewable energy technologies and can be considered symbiotic options in the move away from fossil fuels. Improving energy storage technologies will also be required to complete this symbiosis. This course will examine renewable energy technologies shortcomings and how nuclear, fuel cell, and energy storage technologies may be implemented to further facilitate the move away from fossil fuels-based energy production.

**EPM 4238 Water and Food Sustainability (4 Credits)**

Concurrent food, water, and climate crises amidst widespread hunger and undernutrition have re-focused public attention on the deficiencies and complexities of global food and water systems. This course examines the science and sustainability of our water resources as well as food production with an emphasis on the connections between the two. Increasing water and food system sustainability requires working along multiple disciplines, reconnecting agriculture with ecological systems and ensuring that policies and institutions that impact food and water systems protect social equity and the environment. The course draws from interdisciplinary research and education bridging worldviews and values implicit in different disciplinary and theoretical perspectives. Linking theory and practice is also essential thus the course will incorporate multiple perspectives and case studies from local to global levels. Demand is growing for interdisciplinary scholars and other professionals who are equipped to analyze and address the complex challenges of sustainable water resources, sustainable food production, and water and food security. Students will synthesize information from water, food, and the environment from a systems perspective. They will examine the interactions between science, policy, and ethics and analyze the trade-offs and synergies between different objectives, solutions, and outcomes. Students will devise solutions to problems that incorporate the intricacies and interdependencies of water and food systems.

**EPM 4280 Resource Conservation and Recovery Act (RCRA) (4 Credits)**

The Resource Conservation and Recovery Act (RCRA) course is a detailed review of the Resource Conservation and Recovery Act that was passed in 1976 and has been continuously updated since that time. RCRA is also known as "the cradle to grave law" dealing with hazardous waste generation and disposal. This course not only covers the important parts of the regulation, but students will also learn how to navigate and practically apply the law and regulations.

**EPM 4355 Systems, Standards, and Certifications for Environmental Management (4 Credits)**

Students will analyze and apply common environmental management systems, which can be used to ensure and improve quality during the management of a wide range of environmental operations. They will synthesize this knowledge via a project which establishes portions of an environmental management system. Students will execute the plan-do-check-act cycle to improve quality. They will evaluate options to minimize environmental impacts using root cause analysis and generalize common system components that are necessary for an environmental organization to achieve its objectives (establishing environmental policy, establishing performance objectives, monitoring results, evaluating performance, understanding and managing risks, etc.) Course assignments will allow students to practice systemizing and standardizing environmental management processes to improve performance (common procedures, data management, analytical methods, performance monitoring, etc.) Throughout the course, students will discover that management systems beyond subject matter expertise are necessary to do well in environmental careers.

**EPM 4390 Environmental Policy Analysis (4 Credits)**

This course investigates key issues in environmental policy analysis, including the importance of environmental justice, federalism versus state policy, techniques of environmental assessment, the impacts of politics and case law on environmental policy, and policy decision-making. The class sets a foundation with an overview of the U.S. and international environmental movements. Students look at stakeholder engagement, policy formulation and implementation, and policy evaluation in different institutions. The course emphasizes the important role that the political and judicial process plays in the creation of policy solutions, and assesses the strengths and weaknesses of different techniques of environmental analysis including environmental impact assessments, modeling and simulation, sustainability analysis, and how best to weave environmental justice/equity throughout policy development and implementation.

**EPM 4400 Environmental Values and Ethics (4 Credits)**

Students examine ethical considerations in environmental management and decision making. Discussions cover personal versus organizational attitudes; cultural, economic, and historic values; science versus politics; and international and intergenerational policies. The course also explores various philosophies of humankind's relationship with the environment. Students are encouraged to develop and express a personal philosophy relative to their role in the regulatory, technical, scientific, and financial management of the environment.

**EPM 4465 Environmental Restoration and Waste Management (4 Credits)**

Environmental Restoration is the identification and elimination of hazardous materials from a designated site such that the risks to human health and the environment are reduced to an acceptable level for an intended future land use. This course examines successful environmental restoration activities that were used to reduce and mitigate risk associated with past operations of nuclear and nuclear-related facilities and the significant potential to release harmful contaminants. Environmental restoration effects on the ecological and human health risk assessments and analyses related to the transport, treatment, storage, and disposal of waste from the contaminated site are presented. Remediation processes for radioactive materials and other hazardous wastes and the eventual storage, processing, and disposal and the potential effect on humans and the environment is studied. An overview is given on the development of a radiological protection program for an EIS report. External and internal hazards: control measures and monitoring, and other important limits and measurements are explored.

**EPM 4500 Leadership for Environmental Managers (4 Credits)**

This course provides students with fundamental leadership skills with an emphasis on topics and contexts relevant to environmental professionals. It addresses three main subject areas: leadership principles necessary to positively influence their work environment; how to effectively communicate; and developing a vision and mission for their personal leadership success. Students will assess their own leadership attributes, characteristics, and skills and construct a personal leadership development plan. The class will make use of reading assignments, written assignments, video assignments, situational role-play, and class participation.

**EPM 4510 Environmental, and Health & Safety Management (4 Credits)**

This course presents the intricacies of establishing environmental and health and safety programs in the workplace. The course is divided into specific environmental and health and safety topics that are relevant to environmental and safety management. There are multiple topics that address the benefits and barriers to designing, implementing, and maintaining environmental and health and safety programs.

**EPM 4520 Occupational Safety and Health Act (OSHA) (4 Credits)**

This course provides an in-depth review of the laws and regulations that govern the safety and health of workers. The course is of value to students seeking to expand knowledge of the Occupational Safety and Health Act. Emphasis is on the areas of overlap between safety and environmental laws, OSHA's inspection and enforcement authority, employee and employer rights, record keeping requirements and an outline of labor's interest in OSHA cases. Current topics such as OSHA reform legislation and regulatory agenda are discussed.

**EPM 4525 Workplace Safety Management (4 Credits)**

This course introduces students to core elements in a health and safety management systems approach to identifying and preventing workplace injuries and illnesses. Students examine the five elements of developing an effective occupational health and safety management program. The course also explores the common challenges and obstacles encountered during the development and implementation of these programs. This course includes a general overview of common OSHA regulations, rights, and responsibilities for developing a safety and health program. The format of this class is highly interactive, affording students an opportunity to engage with case studies and their peers, as well as to practice developing health, safety, and environmental programs at their respective establishments.

**EPM 4610 Analytics I (4 Credits)**

Data and analytics are key for any business domain; data tells us about our customers and markets and analytics make information and knowledge out of data. It's now possible to be inundated with data but gain no new knowledge from it. Analytics help companies demonstrate their ESG behavior and its impact. Companies that can prove and display the environmental impact gain a market advantage. Analytics also demonstrate real environmental impact versus greenwashing. This course has a managerial focus rather than a technical one, though students will perform some data analytics in this course. It is designed to provide managers with sufficient background on the potential value of data analytics, the business process change associated with data analytics, and the underlying technologies, to enable them to interface effectively with analysts and data scientists.

**EPM 4615 Analytics II (4 Credits)**

Business professionals including those in environmental health and safety (EHS) management, use statistics every day in making decisions. In this graduate-level course, you will gain an overview of the data analytic process and data mining techniques used for discovery knowledge from datasets. The course is designed to highlight the practical aspects of data mining methods and their applications, rather than theoretical aspects of statistical machine learning or optimization. The course also introduces emerging trends in Data Analytics and their applications in decision making process on environmental issues such as sustainability which includes waste management, water, and energy conservation. In summary, data is now an integral part of our lives and to be successful in today's business landscape, we need to be able to leverage data to make critical business decisions on environmental sustainability. This course will teach students how to use data to make those decisions confidently. Prerequisite: EPM 4610.

**EPM 4620 Environmental Reporting Standards and Models (4 Credits)**

Students learn the reporting requirements of existing and emerging environmental reporting standards, e.g., SEC requirements, EU standards, NGO standards, Global Reporting Initiative environmental performance indicators, and Sustainability Accounting Standards Board recommendations, and how to craft mandatory and optional reports that conform to these standards and requirements.

**EPM 4625 Environmental Analysis and Reporting Project (4 Credits)**

This is the concluding class for the Environment Analytics and Reporting concentration and graduate certificate. The class centers on performing sophisticated investigations of sustainability-related data sets utilizing the tools and insights of the data analytics revolution. The focus of the course is on applying advanced data analytics techniques (e.g., data mining, predictive analytics, and prescriptive analytics) to support innovative approaches for organizational sustainability, business performance, stakeholder relations, and/or environmental policy. Students will engage in readings, develop an analysis project using Watson Analytics, and prepare a report covering conclusions and recommendations. Prerequisites: EPM 4610, 4615, and 4620.

**EPM 4701 Topics in EPM (2-5 Credits)**

The content of this course will vary each time it is offered. The topics may include time-sensitive issues in the field of environmental policy and management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content will be announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**EPM 4705 Land Use Planning (4 Credits)**

This course provides a comprehensive examination of land use planning efforts by federal, state, and local governments. The legal authorities, responsibilities, and conflicts held by these governmental entities are examined in detail. The course examines the interrelationship between home rule authority, local zoning and planning requirements, and federal/state natural resource plans, as well as public participation in land use plans. Students will learn how to set goals and objectives for specific components of ecosystems, design projects to achieve desired ecologic conditions, and use new technologies in planning.

**EPM 4710 Environmental Project Management (4 Credits)**

In this course, students will learn about project management concepts and gain practical experience applying basic project management skills. As a part of class assignments, students will work on selected projects while covering the entire project management process, from project initiation to close-out. These projects will cover a range of environmental and / or sustainability project management perspectives, including governmental, industry, and advocacy or non-profit organizations. By the end of the course, students should have a strong understanding of project management skills and terminology, and be able to successfully complete some requirements for project manager certification. They will also understand the similarities and differences in project management for environmental professionals. Please note that while this course will provide a foundation in project management, it will not cover all concepts and terminology in depth or provide the required work hours necessary for project manager certification.

**EPM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**EPM 4902 Capstone Seminar (4 Credits)**

The purpose of the Capstone Seminar is to develop and apply transferable professional skills to persuade decision-makers. The course requires students to identify a Capstone subject matter, develop a premise, and argue for an applied solution. Students will conduct research to create a strong argument that supports their premise by considering purpose, need, and audience and will provide evidence that the premise can be implemented. Tasks include gathering and evaluating appropriate source information, writing a strong solution in support of the premise, and then defending the solution. Students will write a Capstone paper and prepare a presentation suitable for professional exposure through publication and/or presentation.

**EPM 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**EPM 4980 Internship (0-4 Credits)**

The EPM Internship is designed to offer students a purposeful experience in the field of environmental policy and management. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**EPM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed it with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Geographic Information Systems

Office: University College Student Support Center  
 Mail Code: 2211 S. Josephine St., Denver, CO 80208  
 Phone: 303-871-2291, 800-347-2042  
 Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)  
 Web Site: <http://www.universitycollege.du.edu>

### Graduate Certificate in Geographic Information Systems

The certificate in Geographic Information Systems is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. University College offers the region's first complete graduate certificate program in Geographic Information Systems. Designed and delivered for busy adults, the Geographic Information Systems graduate certificate helps professionals add to their skillset with technology skills that help solve real-world spatial problems.

Certificate students receive applied instruction from professional practitioners who work in the fields in which they teach, as they learn to create, implement, and execute a project using GIS, GPS (Global Positioning Systems), remote sensing, internet mapping, or digital image processing. The GIS certificate allows students to explore training fundamentals at a very hands-on, applied level necessary to succeed in the field.

Students gain a contextual background in GIS, from the management of natural resources to public utility management, public works engineering, environmental impact assessment, and even market research. In a burgeoning integrative world, it is vital to grasp the diverse fundamentals of each topic within the Geographic Information Systems industry and gain an insider's perspective to specific fields as they each relate to GIS training. Credits earned through this graduate certificate may apply toward a master's degree in Geographic Information Science offered in the Department of Geography and the Environment at the University of Denver or a master's degree in Information and Communications Technology offered through University College at the University of Denver.

This program prepares students to do the following:

- Analyze the nature of, uses for, and implementation processes for geographic data.
- Select appropriate applications of GIS technology to solve spatial problems based on organizational/client needs.
- Solve real-world problems through analysis and selection of appropriate GIS tools and processes to address the issues.

### Specialized Graduate Certificate in GIS and Unmanned Aircraft Systems

This specialized graduate certificate prepares students for the rapidly expanding UAS (Unmanned Aircraft Systems) application to GIS and mapping. Students will take four courses: GPS for GIS and then three focused courses; one on the use of UAS (Unmanned Aircraft Systems) in the GIS industry, a ground school where students will learn to fly, and photogrammetry where students will learn the science of preparing aerial photography products collected from drone platforms for GIS mapping and analysis.

**After completing this certificate, students will**

- Establish working knowledge for the safe and efficient use of UAS.
- Prove their ability to perform several aircraft maneuvers in a safe and efficient manner.
- Execute an aerial mapping exercise for use in GIS.

## Specialized Graduate Certificate in Geographic Information Systems in the Environment

The environmental movement decades ago gave rise to GIS as we know it today. In this specialized graduate certificate, students focus on GIS applications in the environment. Environmental assessment and natural resource management, conservation and preservation take center stage, and look at natural hazard risk assessment and planning.

### After completing this certificate, students will

- Evaluate the application of GIS technology, analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards.
- Participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector.
- Analyze applications that support hazard risk and assessment, mitigation, and emergency response planning.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Graduate Certificate Program

### Graduate Certificate in Geographic Information Systems with a Concentration in Geographic Information Systems

Code	Title	Credits
<b>Core coursework requirements</b>		<b>8</b>
Complete the following two courses:		
GIS 4101	Introduction to Geographic Information Systems	
GIS 4504	Cartography and Geovisualization	
<b>AND select 4 courses:</b>		<b>16</b>
GIS 4007	Creative Problem Solving and Programming Concepts	
GIS 4085	Python Programming II	
GIS 4110	Geographic Statistics	
GIS 4200	Geospatial Intelligence	
GIS 4510	GIS in Business	
GIS 4520	GIS in Telecommunications	
GIS 4530	Crime Mapping	
GIS 4540	Conservation GIS	
GIS 4570	Geographic Information Systems in Public Health	
GIS 4610	Open Source GIS	

GIS 4620	Geodatabase Application
GIS 4630	Public Domain Data for GIS
GIS 4650	Demographic Analysis Using GIS
GIS 4655	Community Intel
GIS 4660	GIS in Municipal Government
GIS 4670	GIS and the Law
GIS 4680	Environmental Applications
GIS 4683	GIS for Disaster Management
GIS 4685	GIS and Natural Hazards
GIS 4687	Hydrologic Modeling in GIS
GIS 4690	GPS for GIS
GIS 4700	Remote Sensing I
GIS 4701	Topics in Geographic Information Systems
GIS 4740	Remote Sensing II
GIS 4750	UAS for GIS
GIS 4760	UAS Photogrammetry
GIS 4770	UAS Ground School Practical
GIS 4860	Web GIS
GIS 4980	Internship
<b>Total Credits</b>	<b>24</b>

Minimum number of credits required for certificate: **24 credits**

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in GIS and Unmanned Aircraft Systems

Code	Title	Credits
GIS 4750	UAS for GIS	4
GIS 4760	UAS Photogrammetry	4
GIS 4770	UAS Ground School Practical	4
GIS 4690	GPS for GIS	4
<b>Total Credits</b>		<b>16</b>

Before registering for a four-course certificate course, students must have GIS software experience obtained via an introductory GIS course taken at the University of Denver or another institution and have earned a C- or better, or experience gained in the workplace. Please work with the academic advisor to verify your eligibility.

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### Specialized Graduate Certificate in GIS in the Environment

Code	Title	Credits
GIS 4540	Conservation GIS	4
GIS 4680	Environmental Applications	4
GIS 4685	GIS and Natural Hazards	4
GIS 4687	Hydrologic Modeling in GIS	4
<b>Total Credits</b>		<b>16</b>

Individuals enrolling in this certificate must have GIS software experience obtained via an introductory GIS course taken at the University of Denver or another institution and have earned a C- or better, or experience gained in the workplace. Please work with the academic advisor to verify your eligibility.

**GIS 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**GIS 4080 Python Programming in GIS (4 Credits)**

This course introduces Python concepts and the Python scripting environment in a GIS environment. Python is a free, open-source scripting language that has been integrated with GIS. Python is a dynamic, interpreted language that can be used to automate redundant tasks and workflows in GIS. Students learn tools and techniques and proper Python syntax, script flow, and error handling. Students learn to write scripts that allow them to automate redundant tasks and workflows in GIS. Students learn to write scripts that allow them to automate geoprocessing processes and GIS work more efficiently. This course teaches fundamental concepts needed to create Python scripts in ArcGIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4085 Python Programming II (4 Credits)**

GIS 4085 builds on GIS Python fundamentals from GIS 4080, covering advanced applications of Python for developing and customizing GIS software, designing user interfaces, and solving complex geoprocessing tasks. Participants will engage with peers in weekly discussions and code reviews. Weekly exercises and assignments provide practical application of concepts. Prerequisites: GIS 4080.

**GIS 4100 Geospatial Technologies (4 Credits)**

This course is designed to familiarize students with the tools and technology needed to access, manipulate, and display geographic information. Students will also learn how to think spatially in order to help students know when to apply these tools. This course is a combined introduction to geographic information systems (GIS), remote sensing (RS), global positioning systems (GPS), and cartography (the science and art of mapmaking). Students will also learn about ethical issues regarding the use of geospatial technologies, as well as trends in the practical applications of these important tools.

**GIS 4101 Introduction to Geographic Information Systems (4 Credits)**

This introductory course is designed to provide a general overview of geographic information systems (GIS) including background, development, trends, and prospects in this rapidly evolving technological field. Basic components and functions of GIS as well as fundamental spatial and geographic concepts are explored through lecture notes, assigned readings, videos, discussions, and applied practical experience using GIS software.

**GIS 4110 Geographic Statistics (4 Credits)**

This course offers an overview of spatial statistics using GIS and publicly available data. This course provides information on the following: spatial statistics, methods, and interpretation; spatial data, collection methods, and resources; and GIS techniques to map and analyze spatial data. Using a popular PC-based desktop mapping software program and statistical package, students learn how to navigate through spatial data, identify data issues, statistically analyze spatial data, map the data, and interpret results from these analyses. Topics include descriptive spatial statistics, hypothesis testing, interpolation, clustering, and spatial regression. Several application areas, such as demographic analysis and facility planning, are used in sample exercises and ethical considerations, such as masking, are discussed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4200 Geospatial Intelligence (4 Credits)**

Geospatial intelligence (GEOINT) is pivotal in linking geography to events and helping us gain insight into what is happening, where it's happening, and why it's happening. GEOINT is derived from the exploitation and analysis of imagery and geospatial information about features and events, with reference to space and time. This course serves as an introduction to the fundamentals of the geospatial intelligence community, core GEOINT technologies and operations, and the role of GEOINT in national, regional and local security affairs. This course is built on a framework of data, technology, and analysis in support of the GEOINT community, which may include natural disasters, first responders, military personnel, homeland defense, and law enforcement. Prerequisite: GIS-4101 Introduction to GIS.

**GIS 4504 Cartography and Geovisualization (4 Credits)**

The theory and art of map making developed over several thousand years and has been revolutionized by computer technology. This course is designed to expose students to the use of computer techniques in assessing technical design issues in the compilation of accurate and meaningful automated geographic mapping products. GIS software will be used in a series of hands-on lab exercises to produce typical GIS mapping products.

**GIS 4510 GIS in Business (4 Credits)**

Businesses continue to embrace GIS as an effective alternative to traditional manual mapping analysis methods. GIS has emerged as an affordable solution for performing essential revenue producing and expense reducing functions. Many years ago, successful GIS implementation required huge capital investment and a large staff of GIS experts; however, with the introduction of more powerful inexpensive computers and easier to use software, companies of all sizes are unleashing the business potential of GIS on the marketplace. This course exposes students to various business applications and uses of GIS as well as the underlying theories and technology behind the applications. This course emphasizes various business disciplines including Marketing, Real Estate, Transportation, and Oil & Gas using GIS in practical, hands-on exercises that demonstrate the theories and concepts discussed in the lectures. Prerequisite: GIS 4101 or similar GIS course and/or work experience.



**GIS 4520 GIS in Telecommunications (4 Credits)**

Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. The use of GIS in the telecom industry continues to grow because GIS technology accommodates the many CAD programs and drawings representing plant and transmission towers/coverage as well as the geographic representations of those items. Only a few years ago, introducing GIS into a telecom business required significant cash outlay, but through less expensive hardware and more user-friendly software, now even a modest CLEC can implement an effective GIS. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on-lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4530 Crime Mapping (4 Credits)**

Municipal police departments, county sheriff departments, and other state and federal law enforcement agencies use GIS technology as a tool to analyze crime statistics and patterns. This course examines how GIS technology is used in law enforcement to provide strategic, tactical, and administrative crime analysis.

**GIS 4540 Conservation GIS (4 Credits)**

This course is designed to provide students with an introduction to the use of geographic information systems (GIS) in conservation. Students receive an introduction to the use of GIS in various types of conservation studies and preservation. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support planning and management of land, species, and habitats. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4570 Geographic Information Systems in Public Health (4 Credits)**

GIS offers many applications and functionality that are tremendously beneficial to the Public Health industry. The ability to visualize cases in space (geographically) and time is invaluable in analyzing spatial clusters of health related events. Further the ability to model the spread of a potential epidemic can literally be a life saver. GIS is a natural choice for solving many Public Health issues including: analyzing the location of diseases; the spread of contagious diseases (both vector borne as well as the spread through human contact); the cause and effect of environmental factors; as well as the availability of Health facilities. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4610 Open Source GIS (4 Credits)**

This applied course guides students in their investigation and research of special topics and current events through Open Source geographic information systems (GIS). It builds upon geospatial skills previously acquired and is designed for participants to learn how geospatial work can be done when presented with a proposal or problem but given little to no data, budget, or access to commercial, off-the-shelf software, or other resources. In this course, students will choose their own topic and learn to navigate it by planning, implementing, and disseminating the outcomes of a geospatial project. Prerequisite: GIS 4101 Intro to GIS and additional coursework or experience with GIS Projects. Prerequisite: GIS 4101.

**GIS 4620 Geodatabase Application (4 Credits)**

This course in Geodatabase Application is logically broken into two separate component parts; the first section deals with Geodatabase concepts and provides a general overview of the Geodatabase structure and implementation including; background, object classes, feature classes, relationship classes, domains, validation rules, and Geodatabase topology. The second portion of the course focuses on Geodatabase Application introducing advanced features of Geodatabase, providing a solid foundation for the application of the Geodatabase to model and address complex real world issues. Geodatabase Linear Referencing, Geodatabase Surface Modeling, and Geocoding Services in the Geodatabase, are explored. This course incorporates a hands-on lab component. Computer lab exercises are designed to introduce the student to concepts and Geodatabase application. Strong emphasis is placed on Geodatabase design. Design objectives, design guidelines and functional requirements of the resulting Geodatabase model are addressed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4630 Public Domain Data for GIS (4 Credits)**

Geospatial data are the foundation upon which GIS and spatial analysis rests. As GIS has matured, the challenge has evolved from generating data to managing the enormous volume of data from government agencies, nonprofit organizations, and industry, and increasingly, from ordinary citizens through citizen science and volunteered geographic information efforts. Key to working with this volume of data are essential issues such as privacy, copyright, public domain, cost recovery, metadata standards, and data quality that GIS professionals must grapple with to be effective in the 21st Century. This class discusses and applies these issues and works with a rich array of data sources to enable effective decision-making in a Geographic Information System. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4650 Demographic Analysis Using GIS (4 Credits)**

This course offers an overview of demographic analysis using GIS and U.S. Census data. This course provides pertinent information on the following: demographic concepts and methods; U.S. Census data, collection methods, and reports; and GIS and spatial statistical methods to analyze demographic data. Using a popular PC-based desktop GIS software program, students learn how to navigate through census files and create a variety of thematic maps. Several application areas, such as demographic analysis and facility planning, are used in sample exercises. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4655 Community Intel (4 Credits)**

Community Intelligence is about using geospatial data to gain insights and to make informed decisions regarding community demographics, opportunities, risks, and an overall deeper understanding of communities. Whether one is a small business owner, the CEO of fortune 500 companies, an Emergency Manager, or running a non-profit environmental organization, having insights into local and regional communities, and understanding how to engage in this public provides an incredible advantage while maximizing effort, time, and resources. In this course, you will learn how to capture and discover key insights often hidden in complex datasets, and how to strategize and communicate with these data for maximum organizational impact. Course Pre-requisites: GIS-4101 Introduction to GIS. Prerequisites: GIS 4101.

**GIS 4660 GIS in Municipal Government (4 Credits)**

There are many areas of government where desktop mapping can be extremely helpful in solving problems that are spatial in nature. This course explores the many types of data collected by city and county government agencies from crime and election data to building, assessment, and zoning data and how it can be displayed in map form. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4670 GIS and the Law (4 Credits)**

This course explores the legal and technical ramifications created by Geographic Information Systems (GIS), Mobility and the Law, including the legal and policy issues related to the science of GIS, the sharing of geographic information, the data generated by mobile devices, the intellectual property issues, security and privacy issues, business and contractual issues related to GIS, and the standards of care and liability related to GIS. This course also examines the types of issues and concerns that exist in the U.S. and the world created by geographic information science and the mobile device. The evolution of GIS and the mobile device directly impacts governments, companies, and individuals on a daily basis. In today's world, more than three billion people have smart phones in their hands constantly. This creates issues about how to handle data, security and privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries and parts of the world. All of these issues need to be balanced by the differing cultural standards and mores from all over the world and legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing "always-connected" world created by GIS and the mobile device. Prerequisite: GIS 4101 - Intro to GIS, and GIS 4700 - Remote Sensing I and/or similar GIS course and/or work experience.

**GIS 4680 Environmental Applications (4 Credits)**

This class provides students with an introduction to practical applications of computerized Geographic Information Systems (GIS) in environmental assessment and natural resource management. Emphasis is placed on automated analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards. This course is designed to provide students who participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4683 GIS for Disaster Management (4 Credits)**

This course serves as an introduction to Geographic Information Systems and their application in Emergency Operations. The basic concepts of geography, cartography and Global Positioning Systems will be covered, along with the basic components and capabilities of a geographic information system. Students will learn about the fundamental types of GIS analysis and applications, focusing on those used in Emergency Operations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4685 GIS and Natural Hazards (4 Credits)**

This course is designed to provide students with an introduction to the use of GIS in natural hazard assessment. Students receive an introduction to the use of geographical information systems (GIS) in various types of natural disasters and response management. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support hazard risk and assessment, mitigation, and emergency response planning. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4687 Hydrologic Modeling in GIS (4 Credits)**

Hydrology is concerned with movement of the earth's waters through the hydrologic cycle, and the transport of constituents carried in its flow. In GIS, the landscape is represented by means of geographically referenced data describing the character and shape of relief features. A spatial hydrology model simulates the water flow and transport in a specific locale using GIS data structures. Hydrologic modeling in GIS allows us to automatically delineate a drainage system and quantify the characteristics of the system. It focuses on the movement of water across a land surface. This course looks at the basic inputs to hydrological modeling in GIS, walks students through established modeling procedures, and has students work on projects that are real and relevant as model applications. Instruction is largely hands-on, project-oriented. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4690 GPS for GIS (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Lab exercises include planning a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, and data integration into a GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4700 Remote Sensing I (4 Credits)**

This course provides a survey of remote sensing technologies, applications, and the industry. This course is designed for GIS, Geography and Geoscience students who seek to broaden their understanding of remote sensing in support of Geographic Information Systems. Introductions to the electromagnetic spectrum, energy sources, radiation principles, aerial cameras, and electronic imaging provide the student with the initial building blocks to a thorough understanding of remote sensing. This course provides an overview of the various high altitude and space-based collection systems and their characteristics, with a view toward future systems and capabilities. In addition, this course exposes students to the techniques of extracting relevant information from both hard copy and digital imagery. Pre-requisite: This course is a pre-requisite for GIS 4740 – Remote Sensing II.

**GIS 4701 Topics in Geographic Information Systems (2-5 Credits)**

The content of this course varies each time it is offered, depending on the interests and needs of the students. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GIS 4740 Remote Sensing II (4 Credits)**

The curriculum is a rigorous presentation of digital imaging processing theory with emphasis on its application to airborne and space borne imagery. The course includes computer laboratory exercises and workshops, where the students apply theory to satellite and air photo data. Interpretation of the digitally processed data is also included in the class exercises. Examples of vector and raster data integration are shown as well. Prerequisite: GIS 4700.

**GIS 4750 UAS for GIS (4 Credits)**

The purpose of this course is to introduce GIS students to the emerging world of using Unmanned Aircraft Systems (UAS) in the GIS workplace for data collection, reconnaissance, and research. UASs are in the news every day, highlighting their use in a military context. The Federal Aviation Administration (FAA) has released new rules and regulations governing the use of UASs in the civilian sector. This course will prepare students to be conversant in the world of UASs, basic aviation, safety, flying, mission planning, and general data gathering techniques for use in GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4760 UAS Photogrammetry (4 Credits)**

Surveying, photogrammetric mapping, GPS, and remote sensing are critical components to working in the UAV and GIS domain. The second course in this two-course sequence will expand on the data collection process highlighted in the first class and deliver the foundations required by GIS professionals working with UAVs. Prerequisite: GIS 4101 or similar GIS course and/or work experience and GIS 4750-UAVS and GIS.

**GIS 4770 UAS Ground School Practical (4 Credits)**

The purpose of this course is to provide skills and abilities to become a remote pilot in command (RPIC) within the United States. The class content will focus on 14 CFR 107, the rules and regulations that allow RPICs to operate Unmanned Aircraft Systems (UASs) safely and legally. In addition, students will be given hands-on training in the best practices for flying UASs. Course Overview/Purpose: The release of 14 CFR 107 by the FAA has set a legal framework for commercial UAS operations in the United States. The purpose of this course is to help students become well versed in 107 and gain hands-on experience operating UASs. Students will become proficient with UAS aeronautical operation standards, discover the rules and regulations of airspace that all RPICs must comply with, and evaluate the effects that weather has on UASs as well as sources of weather information. Students will also assess the performance abilities and limitations of UASs and explore standard UAS operations as outlined in the 107 regulations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4860 Web GIS (4 Credits)**

Creating web-based maps allows government entities, businesses, and other organizations to publish, discover, and share geospatial information. This course examines web and mobile GIS software applications, where students will learn the framework for creating web apps. Students publish comprehensive projects resulting in the creation of a fully-developed web GIS.

**GIS 4980 Internship (0-4 Credits)**

GIS students may fulfill up to four quarter hours of electives by enrolling in a GIS internship with a GIS company or an agency actively engaged in GIS activities. Students incorporating professional work experience must work with an approved mentor, who evaluates the student's performance and learning. The internship is designed to provide practical experience to students without prior professional experience in the field. Students who are employed on a full-time basis in the GIS industry may not use paid work experience as part of the academic program.

**GIS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

**Courses****GIS 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**GIS 4080 Python Programming in GIS (4 Credits)**

This course introduces Python concepts and the Python scripting environment in a GIS environment. Python is a free, open-source scripting language that has been integrated with GIS. Python is a dynamic, interpreted language that can be used to automate redundant tasks and workflows in GIS. Students learn tools and techniques and proper Python syntax, script flow, and error handling. Students learn to write scripts that allow them to automate redundant tasks and workflows in GIS. Students learn to write scripts that allow them to automate geoprocessing processes and GIS work more efficiently. This course teaches fundamental concepts needed to create Python scripts in ArcGIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4085 Python Programming II (4 Credits)**

GIS 4085 builds on GIS Python fundamentals from GIS 4080, covering advanced applications of Python for developing and customizing GIS software, designing user interfaces, and solving complex geoprocessing tasks. Participants will engage with peers in weekly discussions and code reviews. Weekly exercises and assignments provide practical application of concepts. Prerequisites: GIS 4080.

**GIS 4100 Geospatial Technologies (4 Credits)**

This course is designed to familiarize students with the tools and technology needed to access, manipulate, and display geographic information. Students will also learn how to think spatially in order to help students know when to apply these tools. This course is a combined introduction to geographic information systems (GIS), remote sensing (RS), global positioning systems (GPS), and cartography (the science and art of mapmaking). Students will also learn about ethical issues regarding the use of geospatial technologies, as well as trends in the practical applications of these important tools.

**GIS 4101 Introduction to Geographic Information Systems (4 Credits)**

This introductory course is designed to provide a general overview of geographic information systems (GIS) including background, development, trends, and prospects in this rapidly evolving technological field. Basic components and functions of GIS as well as fundamental spatial and geographic concepts are explored through lecture notes, assigned readings, videos, discussions, and applied practical experience using GIS software.

**GIS 4110 Geographic Statistics (4 Credits)**

This course offers an overview of spatial statistics using GIS and publicly available data. This course provides information on the following: spatial statistics, methods, and interpretation; spatial data, collection methods, and resources; and GIS techniques to map and analyze spatial data. Using a popular PC-based desktop mapping software program and statistical package, students learn how to navigate through spatial data, identify data issues, statistically analyze spatial data, map the data, and interpret results from these analyses. Topics include descriptive spatial statistics, hypothesis testing, interpolation, clustering, and spatial regression. Several application areas, such as demographic analysis and facility planning, are used in sample exercises and ethical considerations, such as masking, are discussed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4200 Geospatial Intelligence (4 Credits)**

Geospatial intelligence (GEOINT) is pivotal in linking geography to events and helping us gain insight into what is happening, where it's happening, and why it's happening. GEOINT is derived from the exploitation and analysis of imagery and geospatial information about features and events, with reference to space and time. This course serves as an introduction to the fundamentals of the geospatial intelligence community, core GEOINT technologies and operations, and the role of GEOINT in national, regional and local security affairs. This course is built on a framework of data, technology, and analysis in support of the GEOINT community, which may include natural disasters, first responders, military personnel, homeland defense, and law enforcement. Prerequisite: GIS-4101 Introduction to GIS.

**GIS 4504 Cartography and Geovisualization (4 Credits)**

The theory and art of map making developed over several thousand years and has been revolutionized by computer technology. This course is designed to expose students to the use of computer techniques in assessing technical design issues in the compilation of accurate and meaningful automated geographic mapping products. GIS software will be used in a series of hands-on lab exercises to produce typical GIS mapping products.

**GIS 4510 GIS in Business (4 Credits)**

Businesses continue to embrace GIS as an effective alternative to traditional manual mapping analysis methods. GIS has emerged as an affordable solution for performing essential revenue producing and expense reducing functions. Many years ago, successful GIS implementation required huge capital investment and a large staff of GIS experts; however, with the introduction of more powerful inexpensive computers and easier to use software, companies of all sizes are unleashing the business potential of GIS on the marketplace. This course exposes students to various business applications and uses of GIS as well as the underlying theories and technology behind the applications. This course emphasizes various business disciplines including Marketing, Real Estate, Transportation, and Oil & Gas using GIS in practical, hands-on exercises that demonstrate the theories and concepts discussed in the lectures. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4520 GIS in Telecommunications (4 Credits)**

Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. The use of GIS in the telecom industry continues to grow because GIS technology accommodates the many CAD programs and drawings representing plant and transmission towers/coverage as well as the geographic representations of those items. Only a few years ago, introducing GIS into a telecom business required significant cash outlay, but through less expensive hardware and more user-friendly software, now even a modest CLEC can implement an effective GIS. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on-lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4530 Crime Mapping (4 Credits)**

Municipal police departments, county sheriff departments, and other state and federal law enforcement agencies use GIS technology as a tool to analyze crime statistics and patterns. This course examines how GIS technology is used in law enforcement to provide strategic, tactical, and administrative crime analysis.

**GIS 4540 Conservation GIS (4 Credits)**

This course is designed to provide students with an introduction to the use of geographic information systems (GIS) in conservation. Students receive an introduction to the use of GIS in various types of conservation studies and preservation. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support planning and management of land, species, and habitats. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4570 Geographic Information Systems in Public Health (4 Credits)**

GIS offers many applications and functionality that are tremendously beneficial to the Public Health industry. The ability to visualize cases in space (geographically) and time is invaluable in analyzing spatial clusters of health related events. Further the ability to model the spread of a potential epidemic can literally be a life saver. GIS is a natural choice for solving many Public Health issues including: analyzing the location of diseases; the spread of contagious diseases (both vector borne as well as the spread through human contact); the cause and effect of environmental factors; as well as the availability of Health facilities. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4610 Open Source GIS (4 Credits)**

This applied course guides students in their investigation and research of special topics and current events through Open Source geographic information systems (GIS). It builds upon geospatial skills previously acquired and is designed for participants to learn how geospatial work can be done when presented with a proposal or problem but given little to no data, budget, or access to commercial, off-the-shelf software, or other resources. In this course, students will choose their own topic and learn to navigate it by planning, implementing, and disseminating the outcomes of a geospatial project. Prerequisite: GIS 4101 Intro to GIS and additional coursework or experience with GIS Projects. Prerequisite: GIS 4101.

**GIS 4620 Geodatabase Application (4 Credits)**

This course in Geodatabase Application is logically broken into two separate component parts; the first section deals with Geodatabase concepts and provides a general overview of the Geodatabase structure and implementation including; background, object classes, feature classes, relationship classes, domains, validation rules, and Geodatabase topology. The second portion of the course focuses on Geodatabase Application introducing advanced features of Geodatabase, providing a solid foundation for the application of the Geodatabase to model and address complex real world issues. Geodatabase Linear Referencing, Geodatabase Surface Modeling, and Geocoding Services in the Geodatabase, are explored. This course incorporates a hands-on lab component. Computer lab exercises are designed to introduce the student to concepts and Geodatabase application. Strong emphasis is placed on Geodatabase design. Design objectives, design guidelines and functional requirements of the resulting Geodatabase model are addressed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4630 Public Domain Data for GIS (4 Credits)**

Geospatial data are the foundation upon which GIS and spatial analysis rests. As GIS has matured, the challenge has evolved from generating data to managing the enormous volume of data from government agencies, nonprofit organizations, and industry, and increasingly, from ordinary citizens through citizen science and volunteered geographic information efforts. Key to working with this volume of data are essential issues such as privacy, copyright, public domain, cost recovery, metadata standards, and data quality that GIS professionals must grapple with to be effective in the 21st Century. This class discusses and applies these issues and works with a rich array of data sources to enable effective decision-making in a Geographic Information System. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4650 Demographic Analysis Using GIS (4 Credits)**

This course offers an overview of demographic analysis using GIS and U.S. Census data. This course provides pertinent information on the following: demographic concepts and methods; U.S. Census data, collection methods, and reports; and GIS and spatial statistical methods to analyze demographic data. Using a popular PC-based desktop GIS software program, students learn how to navigate through census files and create a variety of thematic maps. Several application areas, such as demographic analysis and facility planning, are used in sample exercises. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4655 Community Intel (4 Credits)**

Community Intelligence is about using geospatial data to gain insights and to make informed decisions regarding community demographics, opportunities, risks, and an overall deeper understanding of communities. Whether one is a small business owner, the CEO of fortune 500 companies, an Emergency Manager, or running a non-profit environmental organization, having insights into local and regional communities, and understanding how to engage in this public provides an incredible advantage while maximizing effort, time, and resources. In this course, you will learn how to capture and discover key insights often hidden in complex datasets, and how to strategize and communicate with these data for maximum organizational impact. Course Pre-requisites: GIS-4101 Introduction to GIS. Prerequisites: GIS 4101.

**GIS 4660 GIS in Municipal Government (4 Credits)**

There are many areas of government where desktop mapping can be extremely helpful in solving problems that are spatial in nature. This course explores the many types of data collected by city and county government agencies from crime and election data to building, assessment, and zoning data and how it can be displayed in map form. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4670 GIS and the Law (4 Credits)**

This course explores the legal and technical ramifications created by Geographic Information Systems (GIS), Mobility and the Law, including the legal and policy issues related to the science of GIS, the sharing of geographic information, the data generated by mobile devices, the intellectual property issues, security and privacy issues, business and contractual issues related to GIS, and the standards of care and liability related to GIS. This course also examines the types of issues and concerns that exist in the U.S. and the world created by geographic information science and the mobile device. The evolution of GIS and the mobile device directly impacts governments, companies, and individuals on a daily basis. In today's world, more than three billion people have smart phones in their hands constantly. This creates issues about how to handle data, security and privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries and parts of the world. All of these issues need to be balanced by the differing cultural standards and mores from all over the world and legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing "always-connected" world created by GIS and the mobile device. Prerequisite: GIS 4101 - Intro to GIS, and GIS 4700 - Remote Sensing I and/or similar GIS course and/or work experience.

**GIS 4680 Environmental Applications (4 Credits)**

This class provides students with an introduction to practical applications of computerized Geographic Information Systems (GIS) in environmental assessment and natural resource management. Emphasis is placed on automated analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards. This course is designed to provide students who participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4683 GIS for Disaster Management (4 Credits)**

This course serves as an introduction to Geographic Information Systems and their application in Emergency Operations. The basic concepts of geography, cartography and Global Positioning Systems will be covered, along with the basic components and capabilities of a geographic information system. Students will learn about the fundamental types of GIS analysis and applications, focusing on those used in Emergency Operations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4685 GIS and Natural Hazards (4 Credits)**

This course is designed to provide students with an introduction to the use of GIS in natural hazard assessment. Students receive an introduction to the use of geographical information systems (GIS) in various types of natural disasters and response management. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support hazard risk and assessment, mitigation, and emergency response planning. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4687 Hydrologic Modeling in GIS (4 Credits)**

Hydrology is concerned with movement of the earth's waters through the hydrologic cycle, and the transport of constituents carried in its flow. In GIS, the landscape is represented by means of geographically referenced data describing the character and shape of relief features. A spatial hydrology model simulates the water flow and transport in a specific locale using GIS data structures. Hydrologic modeling in GIS allows us to automatically delineate a drainage system and quantify the characteristics of the system. It focuses on the movement of water across a land surface. This course looks at the basic inputs to hydrological modeling in GIS, walks students through established modeling procedures, and has students work on projects that are real and relevant as model applications. Instruction is largely hands-on, project-oriented. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4690 GPS for GIS (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Lab exercises include planning a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, and data integration into a GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4700 Remote Sensing I (4 Credits)**

This course provides a survey of remote sensing technologies, applications, and the industry. This course is designed for GIS, Geography and Geoscience students who seek to broaden their understanding of remote sensing in support of Geographic Information Systems. Introductions to the electromagnetic spectrum, energy sources, radiation principles, aerial cameras, and electronic imaging provide the student with the initial building blocks to a thorough understanding of remote sensing. This course provides an overview of the various high altitude and space-based collection systems and their characteristics, with a view toward future systems and capabilities. In addition, this course exposes students to the techniques of extracting relevant information from both hard copy and digital imagery. Pre-requisite: This course is a pre-requisite for GIS 4740 – Remote Sensing II.

**GIS 4701 Topics in Geographic Information Systems (2-5 Credits)**

The content of this course varies each time it is offered, depending on the interests and needs of the students. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GIS 4740 Remote Sensing II (4 Credits)**

The curriculum is a rigorous presentation of digital imaging processing theory with emphasis on its application to airborne and space borne imagery. The course includes computer laboratory exercises and workshops, where the students apply theory to satellite and air photo data. Interpretation of the digitally processed data is also included in the class exercises. Examples of vector and raster data integration are shown as well. Prerequisite: GIS 4700.

**GIS 4750 UAS for GIS (4 Credits)**

The purpose of this course is to introduce GIS students to the emerging world of using Unmanned Aircraft Systems (UAS) in the GIS workplace for data collection, reconnaissance, and research. UASs are in the news every day, highlighting their use in a military context. The Federal Aviation Administration (FAA) has released new rules and regulations governing the use of UASs in the civilian sector. This course will prepare students to be conversant in the world of UASs, basic aviation, safety, flying, mission planning, and general data gathering techniques for use in GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4760 UAS Photogrammetry (4 Credits)**

Surveying, photogrammetric mapping, GPS, and remote sensing are critical components to working in the UAV and GIS domain. The second course in this two-course sequence will expand on the data collection process highlighted in the first class and deliver the foundations required by GIS professionals working with UAVs. Prerequisite: GIS 4101 or similar GIS course and/or work experience and GIS 4750-UAS and GIS.

**GIS 4770 UAS Ground School Practical (4 Credits)**

The purpose of this course is to provide skills and abilities to become a remote pilot in command (RPIC) within the United States. The class content will focus on 14 CFR 107, the rules and regulations that allow RPICs to operate Unmanned Aircraft Systems (UASs) safely and legally. In addition, students will be given hands-on training in the best practices for flying UASs. Course Overview/Purpose: The release of 14 CFR 107 by the FAA has set a legal framework for commercial UAS operations in the United States. The purpose of this course is to help students become well versed in 107 and gain hands-on experience operating UASs. Students will become proficient with UAS aeronautical operation standards, discover the rules and regulations of airspace that all RPICs must comply with, and evaluate the effects that weather has on UASs as well as sources of weather information. Students will also assess the performance abilities and limitations of UASs and explore standard UAS operations as outlined in the 107 regulations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4860 Web GIS (4 Credits)**

Creating web-based maps allows government entities, businesses, and other organizations to publish, discover, and share geospatial information. This course examines web and mobile GIS software applications, where students will learn the framework for creating web apps. Students publish comprehensive projects resulting in the creation of a fully-developed web GIS.

**GIS 4980 Internship (0-4 Credits)**

GIS students may fulfill up to four quarter hours of electives by enrolling in a GIS internship with a GIS company or an agency actively engaged in GIS activities. Students incorporating professional work experience must work with an approved mentor, who evaluates the student's performance and learning. The internship is designed to provide practical experience to students without prior professional experience in the field. Students who are employed on a full-time basis in the GIS industry may not use paid work experience as part of the academic program.

**GIS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Global Community Engagement

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## Master of Arts in Global Community Engagement

Professional success in an increasingly globalized world requires a nuanced understanding of how events, actors, and processes worldwide impact work at the local level. It requires the ability to interact effectively with people from diverse cultural, national, and linguistic backgrounds, in addition to adapting industry-specific policies and practices to the ever-changing demands of multinational and multicultural environments. This program provides working professionals with the knowledge and skills necessary to effectively navigate the complexities of their profession in an increasingly diverse 21<sup>st</sup> century workplace. Hands-on opportunities enable students to apply knowledge gained through the program to their own professional lives. Students acquire the tools necessary to thrive in diverse environments and to achieve organizational goals while developing a greater understanding of their own roles as citizens of the greater global community.

This degree prepares students to:

- Optimize organizational effectiveness by taking into account the impact of diversity and shifting global perspectives
- Interact effectively with people whose ideas are rooted in cultural backgrounds other than one's own
- Apply global cultural awareness to the structures and process of specific professions and industries
- Engage effectively with communities impacted by timely global struggles
- Leverage global and cultural practices of organizations and/or communities to effect change at home or abroad

## Master of Arts in Global Community Engagement with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this master's degree concentration, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

This degree prepares students to:

- Assess the influence of historical, social, cultural, and economic factors in shaping one's identity and conceptions of diversity, equity, and inclusion practices.
- Integrate an understanding of social and cultural difference, perspective-taking, and empathy to better inform interpersonal communication and problem-solving strategies.
- Develop practices that advance equity as an integrated component of organizational strategy.
- Design solutions that meaningfully leverage diversity to achieve organizational goals and cultivate a culture of belonging across different organizational settings.
- Apply change models, tools and techniques to successfully achieve a vision for change.

## Master of Arts in Global Community Engagement with a Concentration in Social Enterprise, Innovation and Entrepreneurship

Are you ready to be a social entrepreneur? Innovate the change needed to move the needle on a social problem? The Social Innovation for Global Impact concentration will develop your knowledge and skills in the innovation needed to tackle global, and local, social problems. You will sharpen the social value proposition and mission-driven strategy to address global social problems, or the ones in your community. Courses will develop the why and how of taking an idea and launching it as a social enterprise. Students learn the language and financial insight needed to cultivate funding, initiate prototyping, consider scaling, as well as marketing and measuring impact of global social innovations. Practical experience with a global, national, or local nonprofit, for-profit, healthcare, or other organization enables students to apply theory, strategy and metrics that solve real problems and drive mission impact.

This degree prepares students to:

- Examine existing global, national, and local social enterprises to determine the strengths and challenges in developing an impactful social enterprise.
- Utilize innovation tools, design thinking, and other processes to examine a social enterprise idea's social value, scaling potential, and market possibilities.
- Apply social innovation frameworks and tools to assess a social enterprise's business and financial structure in global, national, and local contexts.



## Graduate Certificate in Global Community Engagement with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this graduate certificate, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

## Graduate Certificate in Global Community Engagement with a Concentration in Global Issues

The graduate certificate in Global Issues offered at University College focuses on the impact of global events, actors, and processes worldwide on students' work and experiences at the local level. Students will assess the effects of global issues on domestic organizations, structures, and procedures in addition to relating their own roles as citizens in a globalizing world. Credits earned through this certificate may be applied toward a master's degree in Global Affairs.

## Specialized Graduate Certificate in Advancing Diversity, Equity, and Inclusion in Organizations

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this graduate certificate, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

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## Master's Degree Programs

### Master of Arts in Global Community Engagement

Code	Title	Credits
<b>Core coursework requirements</b>		
GS 4010	Global Society: Structures and Stakeholders	4
GS 4020	Culture, Identity, and Power	4
GS 4200	Globalization and Global Citizenship	4
GS 4905	Graduate Social Research Methods	4
GS 4901	Capstone Project	4
or GS 4902	Capstone Seminar	
or GS 4904	Interdisciplinary Capstone Seminar	
<b>Concentration Courses:</b>		
<b>Culture and Diversity (choose two courses):</b>		<b>8</b>
GS 4030	Working Internationally	
GS 4040	Managing Across Cultures	
GS 4050	Diversity and Organizational Structure	
GS 4060	Cultural Memory: Perspectives, Voices, and Implications	
<b>Global Issues (choose two courses):</b>		<b>8</b>
GS 4140	Contemporary Racial and Ethnic Relations	
GS 4130	Gender and Social Justice: Sex and Power in Global Perspective	
GS 4150	Global Trade: The Intersection of Main Street and the World	
GS 4210	The Force of Faith: Religion in the Global Workplace	
GS 4701	Topics in Global Community Engagement	
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Master of Arts in Global Community Engagement with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
<b>Core coursework requirement</b>		
GS 4010	Global Society: Structures and Stakeholders	4
GS 4040	Managing Across Cultures	4
GS 4200	Globalization and Global Citizenship	4
GS 4905	Graduate Social Research Methods	4
GS 4901	Capstone Project	4
or GS 4902	Capstone Seminar	
or GS 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4

HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## **Master of Arts in Global Community Engagement with a Concentration in Social Enterprise, Innovation and Entrepreneurship**

Code	Title	Credits
<b>Core coursework requirement</b>		
GS 4010	Global Society: Structures and Stakeholders	4
GS 4020	Culture, Identity, and Power	4
GS 4200	Globalization and Global Citizenship	4
GS 4905	Graduate Social Research Methods	4
GS 4901	Capstone Project	4
or GS 4902	Capstone Seminar	
or GS 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirement</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4400	Principles and Practices in Social Enterprise, Innovation and Entrepreneurship	4
NFP 4405	Social Enterprise Strategies	4
NFP 4410	Social Enterprise Experiential Learning	4
<b>Elective requirement (choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## **Graduate Certificate Programs**

### **Graduate Certificate in Global Community Engagement with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations**

Code	Title	Credits
<b>Certificate requirements</b>		
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4
HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### **Graduate Certificate in Global Community Engagement with a Concentration in Global Issues**

Code	Title	Credits
<b>Concentration requirements (Choose four courses):</b>		
GS 4010	Global Society: Structures and Stakeholders	16

GS 4130	Gender and Social Justice: Sex and Power in Global Perspective
GS 4150	Global Trade: The Intersection of Main Street and the World
GS 4200	Globalization and Global Citizenship
GS 4210	The Force of Faith: Religion in the Global Workplace
GS 4701	Topics in Global Community Engagement

<b>Elective requirements (Choose two courses)</b>	<b>8</b>
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<b>Total Credits</b>	<b>24</b>
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**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Program

### Specialized Graduate Certificate in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4
HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4

<b>Total Credits</b>	<b>16</b>
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#### GS 4010 Global Society: Structures and Stakeholders (4 Credits)

This course provides students with an introduction to the major actors, structures, and issues in contemporary global society. Moving beyond a state-centric view of the global landscape, the course considers the values, interests, and ideas of a variety of stakeholders—including businesses, corporations, institutions, governmental and non-governmental organizations, and grass-roots initiatives—in order to assess some of the ways in which these actors both compete and cooperate for opportunities and resources. Students will apply relevant concepts to their own personal and professional experiences so as to gain a better understanding of how global issues and actors at a variety of levels impact their work and how their work constitutes an important part of global society.

#### GS 4020 Culture, Identity, and Power (4 Credits)

In a rapidly globalizing world, culture and identity are increasingly recognized as having profound implications for professional success across a range of industries and practices. An understanding and appreciation of difference are central to effective professional interactions and progress. This course presents approaches for thinking about intersecting dynamics of culture, identity, and power in professional environments, and for mitigating cultural and identity-based conflict in the workplace and beyond.

#### GS 4030 Working Internationally (4 Credits)

Working Internationally is designed for those looking to broaden their personal and professional pursuits in global settings, whether at-home or abroad. This course covers both qualitative and practical considerations. Students will explore the benefits and challenges of working internationally with a focus on cross-cultural communication and management. Through a combination of lectures, case studies, assignments, and group discussions students will develop skills and strategies for building successful relationships with people from different cultural backgrounds. Additionally, the logistical nuances of working abroad will be addressed. Upon completion of the course, students will have a better understanding of how to navigate cultural differences, explore international opportunities, and work effectively in a global environment.

#### GS 4040 Managing Across Cultures (4 Credits)

This course addresses the impact of culture on management and organizational processes as well as provides students with approaches to engaging effectively in globalized organizational and multicultural contexts. Additionally, the course enables students to distinguish between differences in diversity and culture. They will analyze the impact of global issues and events on the management process in different times and places and evaluate managerial practices in different cultures and institutional environments. The impact of cultural intelligence in organizational citizenship and performance is also addressed. The course will aim to provide opportunities for the practical implementation of the concepts covered.

#### GS 4050 Diversity and Organizational Structure (4 Credits)

A company is only as good as its culture. It is not only the responsibility of the Diversity, Equity, and Inclusion (DEI) leader to create an inclusive and diverse culture. People managers and employees play a vital role in DEI's success. This course helps students understand ways to make their organizations more engaging and dynamic by discussing the different processes that impact thought and interaction between people. Students will also consider how to bring advocates of DEI together in their organizations. They will analyze and apply best DEI practices from a variety of perspectives by learning the essential pillars of a strong DEI plan. They will also learn critical definitions, apply interventions that override errors in judgment and decision making, dissect inclusion and belonging among work groups and think through the change management and communication aspects of DEI.

**GS 4060 Cultural Memory: Perspectives, Voices, and Implications (4 Credits)**

Increasingly, the ability to engage effectively with stakeholders from a variety of socio-economic, generational, gender, ethnic, religious, and cultural backgrounds is a prerequisite skill for succeeding in the workplace today. This requires an understanding of the diverse memories, experiences, and perspectives of everyone involved. The culturally infused meanings attached to impactful historical events profoundly influence how people imagine the world and their role in it. This course focuses on the impact of cultural memory on identity and how our perceptions of the past and the caricatures it creates profoundly impact how we see the world today. In this course, students will gain an understanding of how history is constructed, contested, and incorporated into our everyday interactions. They will learn to identify their own biases and better understand the perspectives of others to strategize for increased personal and organizational success.

**GS 4130 Gender and Social Justice: Sex and Power in Global Perspective (4 Credits)**

This course provides students with a critical understanding of gender and sexuality in relation to social and institutional processes, particularly as they impact professional interactions and conduct. Issues such as inequalities in the labor force, low wage work and poverty, work/family conflict, and domestic work will be addressed. The course will take an intersectional approach to analyzing gender and sexuality in the workplace and beyond.

**GS 4140 Contemporary Racial and Ethnic Relations (4 Credits)**

This course provides students with ways of assessing the effects of race and ethnicity in professional settings. Topics addressed will include forms of prejudice and discrimination, manifestations of privilege and inequality, and the intersection of race and ethnicity with other markers of identity. Students will analyze social and institutional practices that foster inclusivity and the implications of such practices on workplace equity and social justice.

**GS 4150 Global Trade: The Intersection of Main Street and the World (4 Credits)**

Trade is often characterized in terms of economic flows—the exchange of goods and services across borders and the electronic transfer of funds worldwide, as well as associated taxes, tariffs, labor, and production costs in different parts of the world. Yet trade also involves the exchange of ideas, cultures, languages, and people, all of which have profound implications for doing business worldwide. This course addresses trade in its different manifestations and explores the impact of trade on work in a variety of contexts. Students will approach trade from a holistic perspective to analyze its connections to globalization and their own work environments.

**GS 4160 Politics and Social Media (4 Credits)**

As social media becomes an increasingly prevalent means of distributing information, advertising products and services, and communicating with stakeholders, questions arise regarding the politics and ethics that inform its use. What are the potential consequences of using platforms such as Twitter to disseminate political ideologies? How has the use of LinkedIn affected workplace politics and changed the ways in which professionals network? Does professional success require the use of social media, or does its presence in certain contexts do more harm than good? This course will address these questions and others while providing students with lenses through which to view the intersection of social media and politics in the workplace and beyond.

**GS 4200 Globalization and Global Citizenship (4 Credits)**

Over the past century the world has witnessed unprecedented developments in communication, technology, and mobility. These have enabled the rapid exchange of money, people, materials, ideas, and cultures across national borders. With these changes have come questions about the roles and responsibilities of individuals, companies, and organizations within this increasingly complex and interconnected global society. Globalization is often used as a buzzword for this ever-evolving context, although its meaning is sometimes unclear. This course clarifies the nature of globalization by introducing students to fundamental concepts of global citizenship, focusing in particular on relationships between the local and the global, and on the necessity of developing a cosmopolitan perspective in order to be more successful in an increasingly globalizing workplace.

**GS 4210 The Force of Faith: Religion in the Global Workplace (4 Credits)**

This course examines the role of religion in the global workplace, addressing issues involved in working with clients, stakeholders, and employees from diverse religious backgrounds with the aim of increasing students' awareness of their own attitudes toward religious beliefs and professional responsibilities. Students will develop an understanding of the ways in which different religious beliefs impact conceptions of professional communication and conduct, in addition to exploring relationships between religious faiths and business ethics.

**GS 4303 Community Engaged Learning in Practice (4 Credits)**

This community engaged learning course provides students with an opportunity to apply knowledge and skills gained through their Global Community Engagement coursework to a real-world issue or problem. Students will learn best practices for engaging with communities both global and local, and will develop skills necessary to work effectively in diverse contexts. Equipped with an academic foundation, students will have significant latitude to sketch out a project of their choosing, with the professor's approval.

**GS 4701 Topics in Global Community Engagement (4 Credits)**

The content of this course varies each time it is offered. Specific course content is detailed on quarterly schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GS 4800 The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times (4 Credits)**

The Commonwealth of Puerto Rico is a tropical paradise boasting vibrant communities, rich cultures, and abundant natural resources. Once coined a "natural jewelry box" by the BBC, Puerto Rico offers sparkling turquoise waters, bioluminescent bays, lush mountainous terrain, and colorful colonial architecture. It is also plagued by a debilitating debt crisis, political corruption, and a crumbling infrastructure, which, particularly in the aftermath of hurricanes Irma and Maria, have caused many residents to flee the island in search of better opportunities and more stable living conditions. In this course, students will examine the paradox that is Puerto Rico. Drawing from literature on culture, history, power, and politics, students will research a topic of their choosing, with the professor's approval. They will then work with local communities in Puerto Rico on a project of mutual interest and importance, culminating in an approach or proposal for addressing the issue(s) at hand. Students will be required to spend 5 days on-site in Puerto Rico, plus any necessary travel time. This course will give students broad exposure to the history and culture of Puerto Rico, in addition to a nuanced understanding of a specific industry, issue, or problem. It will additionally highlight the power, privilege, and oppression that exists in our own backyards on this U.S. Commonwealth island.

**GS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**GS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**GS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**GS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**GS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**GS 4991 Independent Study (1-5 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Courses

### **GS 4010 Global Society: Structures and Stakeholders (4 Credits)**

This course provides students with an introduction to the major actors, structures, and issues in contemporary global society. Moving beyond a state-centric view of the global landscape, the course considers the values, interests, and ideas of a variety of stakeholders—including businesses, corporations, institutions, governmental and non-governmental organizations, and grass-roots initiatives—in order to assess some of the ways in which these actors both compete and cooperate for opportunities and resources. Students will apply relevant concepts to their own personal and professional experiences so as to gain a better understanding of how global issues and actors at a variety of levels impact their work and how their work constitutes an important part of global society.

### **GS 4020 Culture, Identity, and Power (4 Credits)**

In a rapidly globalizing world, culture and identity are increasingly recognized as having profound implications for professional success across a range of industries and practices. An understanding and appreciation of difference are central to effective professional interactions and progress. This course presents approaches for thinking about intersecting dynamics of culture, identity, and power in professional environments, and for mitigating cultural and identity-based conflict in the workplace and beyond.

### **GS 4030 Working Internationally (4 Credits)**

Working Internationally is designed for those looking to broaden their personal and professional pursuits in global settings, whether at-home or abroad. This course covers both qualitative and practical considerations. Students will explore the benefits and challenges of working internationally with a focus on cross-cultural communication and management. Through a combination of lectures, case studies, assignments, and group discussions students will develop skills and strategies for building successful relationships with people from different cultural backgrounds. Additionally, the logistical nuances of working abroad will be addressed. Upon completion of the course, students will have a better understanding of how to navigate cultural differences, explore international opportunities, and work effectively in a global environment.

### **GS 4040 Managing Across Cultures (4 Credits)**

This course addresses the impact of culture on management and organizational processes as well as provides students with approaches to engaging effectively in globalized organizational and multicultural contexts. Additionally, the course enables students to distinguish between differences in diversity and culture. They will analyze the impact of global issues and events on the management process in different times and places and evaluate managerial practices in different cultures and institutional environments. The impact of cultural intelligence in organizational citizenship and performance is also addressed. The course will aim to provide opportunities for the practical implementation of the concepts covered.

### **GS 4050 Diversity and Organizational Structure (4 Credits)**

A company is only as good as its culture. It is not only the responsibility of the Diversity, Equity, and Inclusion (DEI) leader to create an inclusive and diverse culture. People managers and employees play a vital role in DEI's success. This course helps students understand ways to make their organizations more engaging and dynamic by discussing the different processes that impact thought and interaction between people. Students will also consider how to bring advocates of DEI together in their organizations. They will analyze and apply best DEI practices from a variety of perspectives by learning the essential pillars of a strong DEI plan. They will also learn critical definitions, apply interventions that override errors in judgment and decision making, dissect inclusion and belonging among work groups and think through the change management and communication aspects of DEI.

### **GS 4060 Cultural Memory: Perspectives, Voices, and Implications (4 Credits)**

Increasingly, the ability to engage effectively with stakeholders from a variety of socio-economic, generational, gender, ethnic, religious, and cultural backgrounds is a prerequisite skill for succeeding in the workplace today. This requires an understanding of the diverse memories, experiences, and perspectives of everyone involved. The culturally infused meanings attached to impactful historical events profoundly influence how people imagine the world and their role in it. This course focuses on the impact of cultural memory on identity and how our perceptions of the past and the caricatures it creates profoundly impact how we see the world today. In this course, students will gain an understanding of how history is constructed, contested, and incorporated into our everyday interactions. They will learn to identify their own biases and better understand the perspectives of others to strategize for increased personal and organizational success.

### **GS 4130 Gender and Social Justice: Sex and Power in Global Perspective (4 Credits)**

This course provides students with a critical understanding of gender and sexuality in relation to social and institutional processes, particularly as they impact professional interactions and conduct. Issues such as inequalities in the labor force, low wage work and poverty, work/family conflict, and domestic work will be addressed. The course will take an intersectional approach to analyzing gender and sexuality in the workplace and beyond.

### **GS 4140 Contemporary Racial and Ethnic Relations (4 Credits)**

This course provides students with ways of assessing the effects of race and ethnicity in professional settings. Topics addressed will include forms of prejudice and discrimination, manifestations of privilege and inequality, and the intersection of race and ethnicity with other markers of identity. Students will analyze social and institutional practices that foster inclusivity and the implications of such practices on workplace equity and social justice.

### **GS 4150 Global Trade: The Intersection of Main Street and the World (4 Credits)**

Trade is often characterized in terms of economic flows—the exchange of goods and services across borders and the electronic transfer of funds worldwide, as well as associated taxes, tariffs, labor, and production costs in different parts of the world. Yet trade also involves the exchange of ideas, cultures, languages, and people, all of which have profound implications for doing business worldwide. This course addresses trade in its different manifestations and explores the impact of trade on work in a variety of contexts. Students will approach trade from a holistic perspective to analyze its connections to globalization and their own work environments.

**GS 4160 Politics and Social Media (4 Credits)**

As social media becomes an increasingly prevalent means of distributing information, advertising products and services, and communicating with stakeholders, questions arise regarding the politics and ethics that inform its use. What are the potential consequences of using platforms such as Twitter to disseminate political ideologies? How has the use of LinkedIn affected workplace politics and changed the ways in which professionals network? Does professional success require the use of social media, or does its presence in certain contexts do more harm than good? This course will address these questions and others while providing students with lenses through which to view the intersection of social media and politics in the workplace and beyond.

**GS 4200 Globalization and Global Citizenship (4 Credits)**

Over the past century the world has witnessed unprecedented developments in communication, technology, and mobility. These have enabled the rapid exchange of money, people, materials, ideas, and cultures across national borders. With these changes have come questions about the roles and responsibilities of individuals, companies, and organizations within this increasingly complex and interconnected global society. Globalization is often used as a buzzword for this ever-evolving context, although its meaning is sometimes unclear. This course clarifies the nature of globalization by introducing students to fundamental concepts of global citizenship, focusing in particular on relationships between the local and the global, and on the necessity of developing a cosmopolitan perspective in order to be more successful in an increasingly globalizing workplace.

**GS 4210 The Force of Faith: Religion in the Global Workplace (4 Credits)**

This course examines the role of religion in the global workplace, addressing issues involved in working with clients, stakeholders, and employees from diverse religious backgrounds with the aim of increasing students' awareness of their own attitudes toward religious beliefs and professional responsibilities. Students will develop an understanding of the ways in which different religious beliefs impact conceptions of professional communication and conduct, in addition to exploring relationships between religious faiths and business ethics.

**GS 4303 Community Engaged Learning in Practice (4 Credits)**

This community engaged learning course provides students with an opportunity to apply knowledge and skills gained through their Global Community Engagement coursework to a real-world issue or problem. Students will learn best practices for engaging with communities both global and local, and will develop skills necessary to work effectively in diverse contexts. Equipped with an academic foundation, students will have significant latitude to sketch out a project of their choosing, with the professor's approval.

**GS 4701 Topics in Global Community Engagement (4 Credits)**

The content of this course varies each time it is offered. Specific course content is detailed on quarterly schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GS 4800 The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times (4 Credits)**

The Commonwealth of Puerto Rico is a tropical paradise boasting vibrant communities, rich cultures, and abundant natural resources. Once coined a "natural jewelry box" by the BBC, Puerto Rico offers sparkling turquoise waters, bioluminescent bays, lush mountainous terrain, and colorful colonial architecture. It is also plagued by a debilitating debt crisis, political corruption, and a crumbling infrastructure, which, particularly in the aftermath of hurricanes Irma and Maria, have caused many residents to flee the island in search of better opportunities and more stable living conditions. In this course, students will examine the paradox that is Puerto Rico. Drawing from literature on culture, history, power, and politics, students will research a topic of their choosing, with the professor's approval. They will then work with local communities in Puerto Rico on a project of mutual interest and importance, culminating in an approach or proposal for addressing the issue(s) at hand. Students will be required to spend 5 days on-site in Puerto Rico, plus any necessary travel time. This course will give students broad exposure to the history and culture of Puerto Rico, in addition to a nuanced understanding of a specific industry, issue, or problem. It will additionally highlight the power, privilege, and oppression that exists in our own backyards on this U.S. Commonwealth island.

**GS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**GS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.



**GS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**GS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**GS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**GS 4991 Independent Study (1-5 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Health Informatics

Office: University College Student Support Center

Mail Code: 2211 S. Josephine St., Denver, CO 80208

Phone: 303-871-2291, 800-347-2042

Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)

Web Site: <http://www.universitycollege.du.edu> (<http://www.universitycollege.du.edu/>)

Students in Master of Science in Health Informatics will be at the forefront of the health industry, equipped with the technical, communication, and leadership skills needed to thrive in the fastest growing field: informatics. In this master's degree program accredited by HIMSS, students will learn to leverage health data tools and applications to achieve business and research outcomes within the health sector. Students will work on hands-on informatics projects using real-world data from a curated health data repository built with industry partners. Students will learn to optimize data to support evidence- and value-based results and enhance their knowledge in digital health, informatics, analytics data science, and artificial intelligence to solve the health challenges of our time.

**This degree prepares students to:**

- Employ quantitative and qualitative methods to achieve business and research outcomes for health informatics projects
- Utilize project management skills to operationalize health informatics goals
- Apply effective communication techniques to create collaborative teams focused on successful implementation of data-driven solutions
- Identify and solve real-world challenges in the health industry using workflow tools and gap analyses
- Design sustainable, data-driven business practices to support evidence- and value-based results

### Master of Science in Health Informatics with a Concentration in Health Data Informatics and Analytics

The Health Data Informatics and Analytics master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership and is accredited by HIMS. The concentration prepares students for the evolving environment in the health industry focused on healthcare system informatics and analytics. In addition, this concentration presents many opportunities to bridge the divide between field-level and director-level positions related to informatics and analytics within the healthcare delivery system. The program incorporates lessons learned from across the training spectrum and produces graduates with the necessary skills to create and populate the new mid- and higher-level management positions.

This concentration focuses on three areas of development. First, students develop a solid base of knowledge about healthcare delivery in the

U.S. within the framework of the "4 Ps": Patients/People, Providers, Payors, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in the health industry and U.S. healthcare today. Second, students will compare and contrast the similarities and differences between asking and answering research and business questions, as well as demonstrate competencies in this area. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

**This degree prepares students to:**

- Compare how healthcare data is generated, routed, and analyzed within the U.S. healthcare delivery system and the health industry from the perspectives of patients/people, providers, payors, and populations and how these processes affect interoperability
- Distinguish major, as well as innovative, health information systems as they relate to the perspectives of patients/people, providers, payors, and populations - utilizing both active and passive informatics
- Appraise healthcare and health industry informatics tools as they relate to the past, present, and future directions of healthcare reform - as well as how these differ from other industries
- Articulate the ways in which HIPAA regulations and biostatistics principles influence data informatics and analytics
- Evaluate the impact of data governance challenges, ethical implications, and security issues on stakeholders in healthcare data research, business workflows, and compliance
- Recommend study and project designs for healthcare informatics and analytics-based case studies incorporating frameworks such as database architecture, data warehousing, natural language processing, and epidemiology
- Defend the fundamental process of transforming data to information, knowledge, then insight (DIKI) through integrating disparate public data sets and modeling predictive analytics to create solutions, complete with data visualizations, to healthcare and health industry challenges
- Develop a professional, actionable implementation, change management, and assessment plan for bringing IT, clinical, engineering, and business individuals together to solve a healthcare industry challenge

## **Master of Science in Health Informatics with a Concentration in Digital Health**

The Digital Health master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing digital health in both the health industry and healthcare delivery systems. This program is accredited by HIMSS and for CAHIIM's Digital Health Leader program. Special focus is provided on workflow and gap analysis, finance, and communication and leadership skills required to implement digital health initiatives. The innovative classes in the concentration cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare.

In this master's degree concentration, students stay at the cutting-edge of emerging health technology, including telehealth, digital health, and virtual health by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. Students will gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with consumer digital health products, and the evolving use of distance medicine.

**This degree prepares students to:**

- Assess how technology affects diagnosis, treatment, training, record keeping, financial transactions and data outcome analysis.
- Compare and contrast emerging trends in medical and digital health technology including electronic health records, telehealth, and virtual health
- Analyze how technology can help improve quality of consumer/patient care and reduce costs as healthcare moves from a volume-based to value-based system
- Recommend different ways to facilitate discussion and communication between clinical providers and their counterparts

## **Master of Science in Health Informatics with a Concentration in Health Data Science**

In this master's program accredited by HIMSS, students will learn to leverage health data science tools and applications to achieve business and research outcomes within the health sector. Students will work with real hands-on data science projects using deidentified data from a curated health data repository built with industry partners. Students will learn to optimize data to support evidence- and value-based results and enhance their knowledge in analytics, data science, machine learning and artificial intelligence. In addition, virtual reality will be a main method of instructional support throughout this curriculum. Main areas of study will be integrating data platforms in the health and healthcare industries, data mining, machine learning, and reporting.

**This degree prepares students to:**

- Assimilate data platforms in the health or healthcare industries to solve health informatics challenges
- Illustrate health data mining skills to strengthen clinical partnerships and benefit stakeholders
- Execute healthcare statistical dynamics of machine learning as they relate to health informatics
- Compose health data science reporting for relevant health informatics audiences

## Master of Science in Health Informatics with a Concentration in Health Data Utilization and Analysis

The master's degree concentration in Health Data Utilization and Analysis integrates health informatics and workflows with introductory-level Python and SQL programming to elevate your experience with data from exposure to data analysis. By engaging with this program, you will gain insights into problem solving using Python and SQL, learn data design and protect techniques, and explore considerations for ethical data use.

### This degree prepares students to:

- Transform data to information, knowledge, then insight (DIKI) through data integration, predictive analytics, and data visualizations to create healthcare solutions.
- Apply health data mining techniques to make decisions that strengthen clinical partnerships and benefit stakeholders.
- Develop data queries and structured coding to solve health-related data challenges.
- Evaluate the safeguards required to protect data being utilized and analyzed.

## Master of Science in Health Informatics with a Concentration in Project Management

The Project Management master's degree concentration is accredited by HIMSS and offered online or on-campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Healthcare technology and data advancements require leaders that can oversee and manage projects. Gain practical experience in project management in healthcare by using the tools and techniques leveraged for large-scale and smaller projects. Healthcare organizations rely on project management to ensure timeline, scope, and budget goals are met while delivering exception patient care, so be prepared with skills needed to deliver. The curriculum aligns with the PMI® Project Management Body of Knowledge.

### This degree prepares students to:

- Apply the basic principles of project management to become proficient in the use of project management software
- Demonstrate the use of agile concepts and techniques to deliver complex projects
- Design a comprehensive risk management plan for a project
- Create strategies to manage the complexity inherent in large-scale projects
- Relate project scope to cost, time, and resource requirements
- Develop procurement plans and assess project contracts

## Master of Science in Health Informatics with a Concentration in Telehealth and Virtual Care

Advance your leadership and capabilities within the emerging areas of telehealth and virtual care. In this concentration, you will learn how to assess the business and healthcare environments to properly plan, implement, and sustain programs to support care in a virtual environment. Gain a deeper understanding of the social determinants of health (SDOH) that impact patients and staff virtually, technology for telehealth and virtual care, the business strategy and policy behind telehealth and virtual care, and systems planning and development for telehealth and virtual care programs.

### This degree prepares students to:

- Analyze systems and processes necessary to deliver telehealth and virtual care services
- Design strategic plans for successful telehealth and virtual care systems
- Investigate the opportunities and barriers to the 4Ps (patient, provider, payor, and populations) with regard to telehealth and virtual care
- Create models for the success of telehealth and virtual care teams
- Analyze risks, impact, and benefit analysis for implementing virtual care

## Graduate Certificate in Health Informatics with a Concentration in Health Data Informatics and Analytics

The Health Data Informatics and Analytics certificate is offered online or on-campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate is designed for three principal types of students. This certificate is appropriate for individuals in the health data informatics or analytics field who are currently working beyond their skillset capacity. This certificate seeks to match their skills to the competencies they would like to acquire. These students will benefit from instruction on theory and validation of their on-the-job experiences. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Alternatively, this certificate is appropriate for those who are ready to move to a managerial position and may need a new skillset to make this conversion. Additionally, this certificate is appropriate for individuals with solid business skills looking to transition from another industry into the health industry or healthcare but need support for the move. This certificate will aid in the transition to a health data informatics and analytics position within the healthcare or health industry. To this end, the certificate curriculum is aligned with AHIMA, CAHIIM and HIMSS certification specific core objectives and is accredited by HIMSS. This certificate focuses on three concentrated areas of development. First, students develop a solid base of knowledge about the healthcare delivery in the U.S. within the framework of the "4 Ps": Patients/People, Providers, Payors, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in health industry and U.S. healthcare today. Second, students will compare and contrast the similarities and differences between asking and answering research and business questions. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

## Graduate Certificate in Health Informatics with a Concentration in Digital Health

The Digital Health graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate has a set of courses addressing digital health in both the health industry and healthcare delivery systems. The certificate is accredited for CAHIIM Digital Health Leader competencies and is accredited by HIMSS. The innovative classes in the concentration cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare. Students stay at the cutting edge of emerging health technology, telehealth, digital, and virtual health with this certificate by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. You'll gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with consumer digital health products, and the evolving use of distance medicine.

## Graduate Certificate in Health Informatics with a Concentration in Health Data Science

The Health Data Science graduate certificate is offered completely online to meet the needs of busy adults. In this certificate program accredited by HIMSS, students will learn to leverage health data science tools and applications to achieve business and research outcomes within the health sector. Students will work with real hands-on data science projects using deidentified data from a curated health data repository built with industry partners. Students will learn to optimize data to support evidence- and value-based results and enhance their knowledge in analytics, data science, and machine learning.

## Graduate Certificate in Health Informatics with a Concentration in Health Data Utilization and Analysis

The graduate certificate in Health Data Utilization and Analysis integrates health informatics and workflows with introductory-level Python and SQL programming to elevate your experience with data from exposure to data analysis. By engaging with this program, you will gain insights into problem solving using Python and SQL, learn data design and protect techniques, and explore considerations for ethical data use.

## Specialized Graduate Certificate in Health Data Informatics and Analytics

The Health Data Informatics and Analytics specialized graduate certificate is offered online or on-campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate is designed for three principal types of students. This certificate is appropriate for individuals in the health data informatics or analytics field who are currently working beyond their skillset capacity. This certificate seeks to match their skills to the competencies they would like to acquire and is accredited by HIMSS.

These students will benefit from instruction on theory and validation of their on-the-job experiences. Alternatively, this certificate is appropriate for those who are ready to move to a managerial position and may need a new skillset to make this conversion. Additionally, this certificate is appropriate for individuals with solid business skills looking to transition from another industry into the health industry or healthcare but need support for the move. This certificate will aid in the transition to a health data informatics and analytics position within the healthcare or health industry. To this end, the certificate curriculum is aligned with AHIMA and HIMSS certification specific core objectives. This certificate focuses on three concentrated areas of development. First, students develop a solid base of knowledge about the healthcare delivery in the U.S. within the framework of the "4 Ps": Patients/People, Providers, Payors, and Population. This framework allows students to understand both informatics and analytics related to the process of transforming data into information, knowledge, and then insight (DIKI) along the broad scope that exists in health industry and U.S. healthcare today. Second, students will compare and contrast the similarities and differences between asking and answering research and business questions. Third, students will learn how to collaborate, organize projects, and formulate real-life solutions to existing healthcare industry issues.

## Specialized Graduate Certificate in Digital Health

The Digital Health specialized graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The certificate is accredited for CAHIIM Digital Health Leader competencies and is accredited by HIMSS. Special focus is provided on the finance, communication, and leadership skills required to implement digital health initiatives. The innovative classes in the concentration cover how to reduce costs and improve access to quality healthcare through technologies that comprise the framework of modern interconnected healthcare. Students stay at the cutting edge of emerging health technology, telehealth, digital, and virtual health with this certificate by learning how technology affects and improves diagnosis, treatment, training, patient records, and financial transactions. You'll gain high-level knowledge of the interoperability of healthcare information systems, the benefits and barriers associated with consumer digital health products, and the evolving use of distance medicine. Credits earned through this certificate may be applied toward a master's degree in Healthcare Management.

## Specialized Graduate Certificate in Health Data Science

The Health Data Science specialized graduate certificate is offered completely online to meet the needs of busy adults. In this specialized certificate program accredited by HIMSS, students will learn to leverage health data science tools and applications to achieve business and research outcomes within the health sector. Students will work with real, hands-on data science projects using deidentified data from a curated health data repository built with industry partners.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.

- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Science in Health Informatics with a Concentration in Digital Health

Code	Title	Credits
<b>Core coursework requirements</b>		
HINF 4010	Health Informatics Communication	4
HINF 4020	Healthcare Workflow and Gap Analysis	4
HINF 4030	Healthcare Finance	4
HINF 4650	Healthcare Project Management and Professionalism	4
HINF 4900	Experiential Learning in Health Informatics	4
HINF 4901 or HINF 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
HINF 4301	Foundations of Digital Health	4
HINF 4310	Healthcare Information Systems	4
HINF 4315	Digital and Virtual Health	4
HINF 4325	Values and Outcomes in Digital Health	4
HINF 4335	Healthcare Cybersecurity	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Master of Science in Health Informatics with a Concentration in Health Data Informatics and Analytics

Code	Title	Credits
<b>Core coursework requirements</b>		
HINF 4010	Health Informatics Communication	4
HINF 4020	Healthcare Workflow and Gap Analysis	4
HINF 4030	Healthcare Finance	4
HINF 4650	Healthcare Project Management and Professionalism	4
HINF 4900	Experiential Learning in Health Informatics	4
HINF 4901 or HINF 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
HINF 4600	Healthcare Data and Delivery by Perspective	4

HINF 4610	Healthcare Ethics and Biostatistics	4
HINF 4620	Healthcare Methods and Programming	4
HINF 4630	Healthcare Data Mining, Integration and Interpretation	4
HINF 4640	Healthcare Database Applications	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Health Informatics with a Concentration in Health Data Science

Code	Title	Credits
<b>Core coursework requirements</b>		
HINF 4010	Health Informatics Communication	4
HINF 4020	Healthcare Workflow and Gap Analysis	4
HINF 4030	Healthcare Finance	4
HINF 4650	Healthcare Project Management and Professionalism	4
HINF 4900	Experiential Learning in Health Informatics	4
HINF 4901	Capstone Project	4
or HINF 4902	Capstone Seminar	
<b>Concentration requirements</b>		
HINF 4210	Data Platforms in Healthcare	4
HINF 4220	Health Data Mining	4
HINF 4230	Healthcare Statistical Dynamics of Machine Learning	4
HINF 4240	Health Data Science Reporting	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Individuals enrolling in this program are encouraged to have experience with programming languages such as Python. This includes a fundamental understanding of programming terminology and concepts, reading and writing code, and designing algorithms for problem-solving.

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Health Informatics with a Concentration in Health Data Utilization and Analysis

Code	Title	Credits
<b>Core coursework requirements</b>		
HINF 4010	Health Informatics Communication	4
HINF 4020	Healthcare Workflow and Gap Analysis	4
HINF 4030	Healthcare Finance	4
HINF 4650	Healthcare Project Management and Professionalism	4
HINF 4900	Experiential Learning in Health Informatics	4
HINF 4901	Capstone Project	4
or HINF 4902	Capstone Seminar	
<b>Concentration requirements</b>		
ICT 4007	Creative Problem Solving and Programming Concepts	4
HINF 4210	Data Platforms in Healthcare	4
HINF 4335	Healthcare Cybersecurity	4
HINF 4610	Healthcare Ethics and Biostatistics	4
HINF 4620	Healthcare Methods and Programming	4

HINF 4630	Healthcare Data Mining, Integration and Interpretation	4
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Health Informatics with a Concentration in Project Management

Code	Title	Credits
<b>Core coursework requirements</b>		
HINF 4010	Health Informatics Communication	4
HINF 4020	Healthcare Workflow and Gap Analysis	4
HINF 4030	Healthcare Finance	4
HINF 4650	Healthcare Project Management and Professionalism	4
HINF 4900	Experiential Learning in Health Informatics	4
HINF 4901 or HINF 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
ICT 4100	Principles of Project Management	4
ICT 4105	Project Contracts and Procurement	4
ICT 4110	Project Risk and Quality Management	4
ICT 4170	Agile Techniques and Practices in Project Management	4
<b>Electives (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Health Informatics with a Concentration in Digital Health

Code	Title	Credits
<b>Concentration requirements</b>		
HINF 4301	Foundations of Digital Health	4
HINF 4310	Healthcare Information Systems	4
HINF 4315	Digital and Virtual Health	4
HINF 4325	Values and Outcomes in Digital Health	4
HINF 4335	Healthcare Cybersecurity	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Graduate Certificate in Health Informatics with a Concentration in Health Data Informatics and Analytics

Code	Title	Credits
<b>Concentration requirements</b>		
HINF 4600	Healthcare Data and Delivery by Perspective	4
HINF 4610	Healthcare Ethics and Biostatistics	4
HINF 4620	Healthcare Methods and Programming	4
HINF 4630	Healthcare Data Mining, Integration and Interpretation	4

HINF 4640	Healthcare Database Applications	4
<b>Elective requirements (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Health Informatics with a Concentration in Health Data Science

Code	Title	Credits
<b>Concentration requirements</b>		
HINF 4210	Data Platforms in Healthcare	4
HINF 4220	Health Data Mining	4
HINF 4230	Healthcare Statistical Dynamics of Machine Learning	4
HINF 4240	Health Data Science Reporting	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Individuals enrolling in this program are encouraged to have experience with programming languages such as Python. This includes a fundamental understanding of programming terminology and concepts, reading and writing code, and designing algorithms for problem-solving.

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Digital Health

Code	Title	Credits
HINF 4301	Foundations of Digital Health	4
HINF 4310	Healthcare Information Systems	4
HINF 4315	Digital and Virtual Health	4
HINF 4325	Values and Outcomes in Digital Health	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Health Data Informatics and Analytics

Code	Title	Credits
HINF 4600	Healthcare Data and Delivery by Perspective	4
HINF 4610	Healthcare Ethics and Biostatistics	4
HINF 4620	Healthcare Methods and Programming	4
HINF 4630	Healthcare Data Mining, Integration and Interpretation	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Health Data Science

Code	Title	Credits
HINF 4210	Data Platforms in Healthcare	4
HINF 4220	Health Data Mining	4
HINF 4230	Healthcare Statistical Dynamics of Machine Learning	4
HINF 4240	Health Data Science Reporting	4
<b>Total Credits</b>		<b>16</b>



Individuals enrolling in this program are encouraged to have experience with programming languages such as Python. This includes a fundamental understanding of programming terminology and concepts, reading and writing code, and designing algorithms for problem-solving.

**HINF 4010 Health Informatics Communication (4 Credits)**

This course will provide students with a foundational background in organizational communication strategies, develop knowledge and understanding of healthcare communication standards and policies and equip students with practical knowledge of current health informatics communication tools and trends. The student will contextualize the role of Informatics and Health Informatics/IT professionals through the development of course projects. Students will evaluate current industry communication modalities, construct plans to assess and improve communication, and advise stakeholders on how to successfully implement communication plans to achieve success in Health Informatics/IT projects. Through this process, students learn to bridge gaps between Health Informatics/IT professionals, clinicians, and health leaders.

**HINF 4020 Healthcare Workflow and Gap Analysis (4 Credits)**

The alignment between the steps of a business or patient care transaction in an information system and how that work is done significantly impacts the performance of that organization. It can also impact the quality of data gathered using information system resources in a healthcare organization. This course will provide the learner with a critical view of the interaction between operational processes in a healthcare organization and the information technology used to carry out those processes. The course will begin with an introduction to the System Development Life Cycle ("SDLC") and how work processes interact with technology. Students will review the skills needed to critically assess processes and identify technology needs. The course will wrap up with a review of operational process analysis with the design of health information systems resources.

**HINF 4030 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HINF 4210 Data Platforms in Healthcare (4 Credits)**

Data Platforms in Healthcare focuses on widely used data platforms in data collection, storage retrieval, and use in healthcare and healthy-industry settings. Students will learn the flow of data from data entry to data storage, and they will learn to query, process, and present healthcare data for actionable use. Students will also learn common pitfalls of healthcare data solutions and the legal restrictions involved with personal healthcare information. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**HINF 4220 Health Data Mining (4 Credits)**

Focusing on creating problem statements and research questions, this course allows you to hone skills related to accurate health data mining. Learn to create clinical partnerships with key stakeholders concerning data in Health Informatics/IT projects while gleaning valuable insight from large health data repositories.

**HINF 4230 Healthcare Statistical Dynamics of Machine Learning (4 Credits)**

HINF 4230 focuses on data cleaning, statistical analysis, and machine learning using healthcare data. Students will use Python to clean, prepare, and interpret a large dataset and then train and evaluate a machine learning model. Finally, students will debug their models and iterate to make improvements.

**HINF 4240 Health Data Science Reporting (4 Credits)**

This course will focus on best practices for health data science reporting to improve healthcare into the future. The learner will explore various ways to develop effective reports, inform healthcare leaders, and make appropriate recommendations. Upon completion of this course, students will understand the difference between data and how information provides key insights that allow healthcare leaders to draw conclusions, make decisions, and improve clinical and business outcomes. Preferred prerequisite: HINF 4210.

**HINF 4301 Foundations of Digital Health (4 Credits)**

This foundational course provides a working knowledge of key HIT definitions, concepts, and relevant advancing forms of technology. It encourages students to review the changes to HIT and evaluate the growth of these systems into the current and future forms of digital health tools. While this course is not designed to turn students into network administrators or software developers; it will equip students to become an active and valuable participant – or even a team leader – in the evaluation, selection, implementation, and ongoing operation of health information systems.

**HINF 4310 Healthcare Information Systems (4 Credits)**

Electronic health records systems (electronic medical records (EMRs), electronic health records (EHRs), personal health records (PHRs), and health information exchanges (HIEs)) are all the buzz these days, yet for the past 30 years the healthcare sector has clung to paper records, file folders, and clipboards. This course will explore the technical and controversial aspects of healthcare information technology in general, and the specific factors involving evaluation and adoption of EMR systems. The course also covers the fundamental components of modern electronic records systems and reviews their impact on both business and clinical functions. Key areas of interoperability, interfaces, and standards will be introduced. The course will be practical and thought-provoking as it emphasizes critical thinking and the synthesis of ideas from multiple sources and perspectives. Participants will be challenged to develop their own viewpoints and opinions, substantiated by the published work of those who are thought leaders in the field of HIT, as well as the participants' own experiences.

**HINF 4315 Digital and Virtual Health (4 Credits)**

With the widespread availability of health-oriented digital and virtual devices and software (apps), healthcare organizations are shifting their approaches to recognize how patients wish to communicate, manage their health, and share their health information. The shift in digital and virtual health is designed to improve healthcare access and quality—particularly in underserved populations, geographies, and specialties. This course will present the current and emerging digital and virtual health services, as well as the benefits and drawbacks of these technologies. This course will address various forms of telehealth, apps, portable devices, and remote monitoring strategies, as well as the role of artificial and augmented intelligence in enhancing digital and virtual experiences. After a broad review of the digital and virtual health field, this course will focus on evaluating, sustaining, and leading a digital or virtual program. Each lecture will discuss regulatory issues such as privacy, security, FDA review/approval, and when digital and virtual health services can be reimbursed. In addition to these regulatory issues, the course will instruct how to conduct a needs assessment, evaluate digital and virtual health products, implement different business models, and evaluate best practices for implementation and adoption. Preferred Prerequisite: HINF 4301.

**HINF 4325 Values and Outcomes in Digital Health (4 Credits)**

This course covers the major healthcare information technologies and topics other than electronic health records systems. Electronic health records systems represent a large focus in healthcare technology; however, many other important systems form the complete framework of modern connected healthcare. These include electronic practice management (EPM/PMS) systems, scheduling, billing, diagnostics/labs, reporting, payment interfaces, and business intelligence in healthcare. This course focuses on the fundamentals of how to be an analyst of health IT technology. Preferred prerequisite: HINF 4301.

**HINF 4335 Healthcare Cybersecurity (4 Credits)**

This course will introduce students to information security risks facing the healthcare industry. Students will learn how to protect healthcare organizations and their patients' data better. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore regulations of HIPAA, NIST/ONC, HITECH, and Meaningful Use and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course; however, the course covers how security is impacted by technology and what one must do across technology to secure healthcare systems, organizations and patients. Preferred prerequisite: HINF 4301.

**HINF 4600 Healthcare Data and Delivery by Perspective (4 Credits)**

This course evaluates the environment of the U.S. healthcare delivery system and introduces the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, towards the payer, and evolving into population health. Students will learn about the associated data that is generated from the patient as a consumer, from the provider through clinical operations, from the payer perspective, and finally how all of these contribute toward population health data. This course will cover the basics of U.S. healthcare research and clinical intervention, and students will have the ability to model the conceptual as well as practical application of health informatics.

**HINF 4610 Healthcare Ethics and Biostatistics (4 Credits)**

This course discusses research investigator training and outlines the progression of the Institutional Review Board (IRB) process. In addition, this IRB process will be compared with the business process improvement cycle. Health Insurance Portability and Accountability Act (HIPAA) as well as data governance issues are surveyed from the patient, provider, payer, and population perspectives. The connections between these topics and ethics are explored, and the principles of biostatistics are discussed. Common statistical packages used within healthcare research and business applications are covered, and this course concludes with an analysis of resulting ethical implications of short- and long-term healthcare data. Preferred prerequisite: HINF 4600.

**HINF 4620 Healthcare Methods and Programming (4 Credits)**

This course presents the basic study designs of epidemiology and illustrates the field's benefit to the healthcare industry. Randomized control trials (RCT) through correlation studies are explained through case studies as well as practical application. Informatics tools such as machine learning, clinical decision support, and natural language processing (NLP) are categorized with respect to their relative positions in the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. This course concludes with the many benefits of auditing as a check and balance for healthcare methods and programming. Preferred prerequisite: HINF 4600.

**HINF 4630 Healthcare Data Mining, Integration and Interpretation (4 Credits)**

This course explores available public healthcare data sets and the data mining process. In addition, this course articulates the value of mapping relationships between data points and workflows. This process determines the level of integration of disparate data sources and is explored through the 4P (patient, provider, payer, population) perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. Once the data sources are integrated, the focus becomes how to turn this data into information, knowledge, and insight. This course wraps up by exploring both business and research options for interpreting data through visualizations and predictive analytics. Preferred prerequisite: HINF 4600.

**HINF 4640 Healthcare Database Applications (4 Credits)**

This course covers the growing functions of security in healthcare data and specifically elaborates on the vulnerabilities and emerging solutions for dealing with data once it is stored. Database architecture is surveyed, which transitions into an exploration of terminologies and standards and how these impact interoperability of data in warehouses. A significant portion of this course focuses on the specifics of medical coding and how coding is affected by the 4P perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. The course wraps up with a compilation of Structured Query Language (SQL) capabilities and a study of the influence of their practical application. Prerequisite: recommended HINF 4600.

**HINF 4650 Healthcare Project Management and Professionalism (4 Credits)**

The course is designed to simultaneously teach project management concepts while preparing a student to operationalize a healthcare project. Students will analyze business problems healthcare organizations are facing to properly scope and plan a project. Students will also work on stakeholder engagement and project documentation development.

**HINF 4701 Topics in Health Informatics (1-4 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Health Informatics degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HINF 4810 Survey of Health Industry Artificial Intelligence (4 Credits)**

Artificial Intelligence (AI) is "the capability of a machine to imitate intelligent human behavior." AI is fast becoming a major player in the health and healthcare industries. In addition to having positive impacts in traditional medical areas such as radiology, pathology, EHR systems, oncology, and cardiology, AI is increasingly being used in the health industry to bridge gaps in the healthcare delivery systems. This course will provide students with the tools to understand how Artificial Intelligence platforms sort and learn from the immense amount of data available in the healthcare field. Students will engage in virtual learning as well as project-based learning offering the next generation of health industry professionals the skills to leverage massive amounts of data into meaningful knowledge.

**HINF 4825 Technology and Applications for Telehealth and Virtual Care Success (4 Credits)**

This course investigates the technology required for virtual care and technological concepts to advance virtual care models. This will include virtual care applications, telemonitoring systems, and technology concepts to include artificial intelligence, machine learning, informational robotics/ applications.

**HINF 4835 Design and Implementation of Telehealth and Virtual Care Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn the steps to implementation when designing telehealth and virtual care systems. Students will explore the factors that impact the success of telehealth and virtual care programming, including barriers to care, the social determinants of health (SDOH), and conducting risk and benefit analysis. Students will develop the skills needed to create a telehealth and virtual care plan that builds on the development of a business case to support the needs of the community it serves.

**HINF 4900 Experiential Learning in Health Informatics (4 Credits)**

This course is an opportunity to participate in experiential learning by connecting academic research with a real-world healthcare management or health informatics problem. Students may take this class either early in their degree program as an introduction to healthcare or health informatics, or later in the program as a prerequisite for their upcoming Capstone experience. First, students will conduct informational interviews with healthcare management and health informatics instructors to learn more about a chosen problem. Those taking this course as an introduction will learn key skills necessary to identify an independent research project topic, formulate a research question with a business, healthcare or health industry application, investigate research methodologies, explore the requirements for human subjects research through the Institutional Review Board (IRB), and draft a project proposal. Students preparing for their Capstone experience (all health informatics students and some healthcare management students) will prepare a Capstone project proposal according to approvable structure and deliverable guidelines. They will choose and schedule a meeting with their Capstone Advisor, select a research topic, formulate a research question with an industry application, develop a thesis statement, choose appropriate project methodologies, and draft a project proposal that will meet appropriate ethics and compliance requirements for human subjects research, and submit their proposal to the IRB for approval.

**HINF 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HINF 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HINF 4980 Internship (0-4 Credits)**

The Health Informatics Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HINF 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

**Courses****HINF 4010 Health Informatics Communication (4 Credits)**

This course will provide students with a foundational background in organizational communication strategies, develop knowledge and understanding of healthcare communication standards and policies and equip students with practical knowledge of current health informatics communication tools and trends. The student will contextualize the role of Informatics and Health Informatics/IT professionals through the development of course projects. Students will evaluate current industry communication modalities, construct plans to assess and improve communication, and advise stakeholders on how to successfully implement communication plans to achieve success in Health Informatics/IT projects. Through this process, students learn to bridge gaps between Health Informatics/IT professionals, clinicians, and health leaders.

**HINF 4020 Healthcare Workflow and Gap Analysis (4 Credits)**

The alignment between the steps of a business or patient care transaction in an information system and how that work is done significantly impacts the performance of that organization. It can also impact the quality of data gathered using information system resources in a healthcare organization. This course will provide the learner with a critical view of the interaction between operational processes in a healthcare organization and the information technology used to carry out those processes. The course will begin with an introduction to the System Development Life Cycle ("SDLC") and how work processes interact with technology. Students will review the skills needed to critically assess processes and identify technology needs. The course will wrap up with a review of operational process analysis with the design of health information systems resources.

**HINF 4030 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HINF 4210 Data Platforms in Healthcare (4 Credits)**

Data Platforms in Healthcare focuses on widely used data platforms in data collection, storage retrieval, and use in healthcare and healthy-industry settings. Students will learn the flow of data from data entry to data storage, and they will learn to query, process, and present healthcare data for actionable use. Students will also learn common pitfalls of healthcare data solutions and the legal restrictions involved with personal healthcare information. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**HINF 4220 Health Data Mining (4 Credits)**

Focusing on creating problem statements and research questions, this course allows you to hone skills related to accurate health data mining. Learn to create clinical partnerships with key stakeholders concerning data in Health Informatics/IT projects while gleaning valuable insight from large health data repositories.

**HINF 4230 Healthcare Statistical Dynamics of Machine Learning (4 Credits)**

HINF 4230 focuses on data cleaning, statistical analysis, and machine learning using healthcare data. Students will use Python to clean, prepare, and interpret a large dataset and then train and evaluate a machine learning model. Finally, students will debug their models and iterate to make improvements.

**HINF 4240 Health Data Science Reporting (4 Credits)**

This course will focus on best practices for health data science reporting to improve healthcare into the future. The learner will explore various ways to develop effective reports, inform healthcare leaders, and make appropriate recommendations. Upon completion of this course, students will understand the difference between data and how information provides key insights that allow healthcare leaders to draw conclusions, make decisions, and improve clinical and business outcomes. Preferred prerequisite: HINF 4210.

**HINF 4301 Foundations of Digital Health (4 Credits)**

This foundational course provides a working knowledge of key HIT definitions, concepts, and relevant advancing forms of technology. It encourages students to review the changes to HIT and evaluate the growth of these systems into the current and future forms of digital health tools. While this course is not designed to turn students into network administrators or software developers; it will equip students to become an active and valuable participant – or even a team leader – in the evaluation, selection, implementation, and ongoing operation of health information systems.

**HINF 4310 Healthcare Information Systems (4 Credits)**

Electronic health records systems (electronic medical records (EMRs), electronic health records (EHRs), personal health records (PHRs), and health information exchanges (HIEs)) are all the buzz these days, yet for the past 30 years the healthcare sector has clung to paper records, file folders, and clipboards. This course will explore the technical and controversial aspects of healthcare information technology in general, and the specific factors involving evaluation and adoption of EMR systems. The course also covers the fundamental components of modern electronic records systems and reviews their impact on both business and clinical functions. Key areas of interoperability, interfaces, and standards will be introduced. The course will be practical and thought-provoking as it emphasizes critical thinking and the synthesis of ideas from multiple sources and perspectives. Participants will be challenged to develop their own viewpoints and opinions, substantiated by the published work of those who are thought leaders in the field of HIT, as well as the participants' own experiences.

**HINF 4315 Digital and Virtual Health (4 Credits)**

With the widespread availability of health-oriented digital and virtual devices and software (apps), healthcare organizations are shifting their approaches to recognize how patients wish to communicate, manage their health, and share their health information. The shift in digital and virtual health is designed to improve healthcare access and quality—particularly in underserved populations, geographies, and specialties. This course will present the current and emerging digital and virtual health services, as well as the benefits and drawbacks of these technologies. This course will address various forms of telehealth, apps, portable devices, and remote monitoring strategies, as well as the role of artificial and augmented intelligence in enhancing digital and virtual experiences. After a broad review of the digital and virtual health field, this course will focus on evaluating, sustaining, and leading a digital or virtual program. Each lecture will discuss regulatory issues such as privacy, security, FDA review/approval, and when digital and virtual health services can be reimbursed. In addition to these regulatory issues, the course will instruct how to conduct a needs assessment, evaluate digital and virtual health products, implement different business models, and evaluate best practices for implementation and adoption. Preferred Prerequisite: HINF 4301.

**HINF 4325 Values and Outcomes in Digital Health (4 Credits)**

This course covers the major healthcare information technologies and topics other than electronic health records systems. Electronic health records systems represent a large focus in healthcare technology; however, many other important systems form the complete framework of modern connected healthcare. These include electronic practice management (EPM/PMS) systems, scheduling, billing, diagnostics/labs, reporting, payment interfaces, and business intelligence in healthcare. This course focuses on the fundamentals of how to be an analyst of health IT technology. Preferred prerequisite: HINF 4301.

**HINF 4335 Healthcare Cybersecurity (4 Credits)**

This course will introduce students to information security risks facing the healthcare industry. Students will learn how to protect healthcare organizations and their patients' data better. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore regulations of HIPAA, NIST/ONC, HITECH, and Meaningful Use and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course; however, the course covers how security is impacted by technology and what one must do across technology to secure healthcare systems, organizations and patients. Preferred prerequisite: HINF 4301.

**HINF 4600 Healthcare Data and Delivery by Perspective (4 Credits)**

This course evaluates the environment of the U.S. healthcare delivery system and introduces the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, towards the payer, and evolving into population health. Students will learn about the associated data that is generated from the patient as a consumer, from the provider through clinical operations, from the payer perspective, and finally how all of these contribute toward population health data. This course will cover the basics of U.S. healthcare research and clinical intervention, and students will have the ability to model the conceptual as well as practical application of health informatics.

**HINF 4610 Healthcare Ethics and Biostatistics (4 Credits)**

This course discusses research investigator training and outlines the progression of the Institutional Review Board (IRB) process. In addition, this IRB process will be compared with the business process improvement cycle. Health Insurance Portability and Accountability Act (HIPAA) as well as data governance issues are surveyed from the patient, provider, payer, and population perspectives. The connections between these topics and ethics are explored, and the principles of biostatistics are discussed. Common statistical packages used within healthcare research and business applications are covered, and this course concludes with an analysis of resulting ethical implications of short- and long-term healthcare data. Preferred prerequisite: HINF 4600.

**HINF 4620 Healthcare Methods and Programming (4 Credits)**

This course presents the basic study designs of epidemiology and illustrates the field's benefit to the healthcare industry. Randomized control trials (RCT) through correlation studies are explained through case studies as well as practical application. Informatics tools such as machine learning, clinical decision support, and natural language processing (NLP) are categorized with respect to their relative positions in the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. This course concludes with the many benefits of auditing as a check and balance for healthcare methods and programming. Preferred prerequisite: HINF 4600.

**HINF 4630 Healthcare Data Mining, Integration and Interpretation (4 Credits)**

This course explores available public healthcare data sets and the data mining process. In addition, this course articulates the value of mapping relationships between data points and workflows. This process determines the level of integration of disparate data sources and is explored through the 4P (patient, provider, payer, population) perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. Once the data sources are integrated, the focus becomes how to turn this data into information, knowledge, and insight. This course wraps up by exploring both business and research options for interpreting data through visualizations and predictive analytics. Preferred prerequisite: HINF 4600.

**HINF 4640 Healthcare Database Applications (4 Credits)**

This course covers the growing functions of security in healthcare data and specifically elaborates on the vulnerabilities and emerging solutions for dealing with data once it is stored. Database architecture is surveyed, which transitions into an exploration of terminologies and standards and how these impact interoperability of data in warehouses. A significant portion of this course focuses on the specifics of medical coding and how coding is affected by the 4P perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. The course wraps up with a compilation of Structured Query Language (SQL) capabilities and a study of the influence of their practical application. Prerequisite: recommended HINF 4600.

**HINF 4650 Healthcare Project Management and Professionalism (4 Credits)**

The course is designed to simultaneously teach project management concepts while preparing a student to operationalize a healthcare project. Students will analyze business problems healthcare organizations are facing to properly scope and plan a project. Students will also work on stakeholder engagement and project documentation development.

**HINF 4701 Topics in Health Informatics (1-4 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Health Informatics degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HINF 4810 Survey of Health Industry Artificial Intelligence (4 Credits)**

Artificial Intelligence (AI) is "the capability of a machine to imitate intelligent human behavior." AI is fast becoming a major player in the health and healthcare industries. In addition to having positive impacts in traditional medical areas such as radiology, pathology, EHR systems, oncology, and cardiology, AI is increasingly being used in the health industry to bridge gaps in the healthcare delivery systems. This course will provide students with the tools to understand how Artificial Intelligence platforms sort and learn from the immense amount of data available in the healthcare field. Students will engage in virtual learning as well as project-based learning offering the next generation of health industry professionals the skills to leverage massive amounts of data into meaningful knowledge.

**HINF 4825 Technology and Applications for Telehealth and Virtual Care Success (4 Credits)**

This course investigates the technology required for virtual care and technological concepts to advance virtual care models. This will include virtual care applications, telemonitoring systems, and technology concepts to include artificial intelligence, machine learning, informational robotics/ applications.

**HINF 4835 Design and Implementation of Telehealth and Virtual Care Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn the steps to implementation when designing telehealth and virtual care systems. Students will explore the factors that impact the success of telehealth and virtual care programming, including barriers to care, the social determinants of health (SDOH), and conducting risk and benefit analysis. Students will develop the skills needed to create a telehealth and virtual care plan that builds on the development of a business case to support the needs of the community it serves.

**HINF 4900 Experiential Learning in Health Informatics (4 Credits)**

This course is an opportunity to participate in experiential learning by connecting academic research with a real-world healthcare management or health informatics problem. Students may take this class either early in their degree program as an introduction to healthcare or health informatics, or later in the program as a prerequisite for their upcoming Capstone experience. First, students will conduct informational interviews with healthcare management and health informatics instructors to learn more about a chosen problem. Those taking this course as an introduction will learn key skills necessary to identify an independent research project topic, formulate a research question with a business, healthcare or health industry application, investigate research methodologies, explore the requirements for human subjects research through the Institutional Review Board (IRB), and draft a project proposal. Students preparing for their Capstone experience (all health informatics students and some healthcare management students) will prepare a Capstone project proposal according to approvable structure and deliverable guidelines. They will choose and schedule a meeting with their Capstone Advisor, select a research topic, formulate a research question with an industry application, develop a thesis statement, choose appropriate project methodologies, and draft a project proposal that will meet appropriate ethics and compliance requirements for human subjects research, and submit their proposal to the IRB for approval.

**HINF 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HINF 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HINF 4980 Internship (0-4 Credits)**

The Health Informatics Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HINF 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Healthcare Management

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Students in the Master of Science in Healthcare Management program will be at the forefront of a rapidly evolving healthcare market, equipped with the leadership, management, and communication skills necessary to bring strategic vision and innovation to the workplace. Students will learn how to transform the industry and better serve the patient, provider, payer, and population perspectives locally, nationally, and globally. Students will learn to thrive in a value-driven system by leveraging collaborative and integrative techniques that support high-quality, cost-effective healthcare delivery.

**This degree prepares students to:**

- Demonstrate effective communication techniques appropriate to the audience including healthcare and health industry professionals, patients, and the public
- Apply relevant program theory and research to formulate innovative solutions to vexing healthcare and health industry challenges
- Connect management strategies to action among healthcare and health industry teams across a variety of settings within an ethical framework
- Formulate visionary solutions to address current issues facing local, national, and global health and healthcare organizations
- Evaluate healthcare reform efforts and proposals to contextualize governmental regulation and oversight as they relate to healthcare delivery and health industry operations

### Master of Science in Healthcare Management with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this master's degree concentration, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

**This degree prepares students to:**

- Assess the influence of historical, social, cultural, and economic factors in shaping one's identity and conceptions of diversity, equity, and inclusion practices.
- Integrate an understanding of social and cultural difference, perspective-taking, and empathy to better inform interpersonal communication and problem-solving strategies.
- Develop practices that advance equity as an integrated component of organizational strategy.
- Design solutions that meaningfully leverage diversity to achieve organizational goals and cultivate a culture of belonging across different organizational settings.
- Apply change models, tools and techniques to successfully achieve a vision for change.

**Master of Science in Healthcare Management with a Concentration in Telehealth and Virtual Care**

Advance your leadership and capabilities within the emerging areas of telehealth and virtual care. In this concentration, you will learn how to assess the business and healthcare environments to properly plan, implement, and sustain programs to support care in a virtual environment. Gain a deeper understanding of the social determinants of health (SDOH) that impact patients and staff virtually, technology for telehealth and virtual care, the business strategy and policy behind telehealth and virtual care, and systems planning and development for telehealth and virtual care programs.

**This degree prepares students to:**

- Analyze systems and processes necessary to deliver telehealth and virtual care services
- Design strategic plans for successful telehealth and virtual care systems
- Investigate the opportunities and barriers to the 4Ps (patient, provider, payor, and populations) with regard to telehealth and virtual care
- Create models for the success of telehealth and virtual care teams
- Analyze risks, impact, and benefit analysis for implementing virtual care

**Master of Science in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership**

The Healthcare Policy and Regulatory Leadership master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The career-relevant courses within the concentration provide students with the knowledge and tools to help them gain leadership and management skills with a pulse on the dynamism in healthcare and continuing emergence of reform leading to changes in healthcare policy.

Students acquire the essential tools necessary to become leaders and managers who help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. Students improve their understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy. Students examine the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment.

**This degree prepares students to:**

- Compare variations in healthcare delivery domestically and internationally
- Examine the legislative process involved in the creation of healthcare public policy
- Assess how change leads to resistance and what measures must be adopted to incorporate change
- Correlate how professional standards and accreditation relate to quality assurance in various areas of healthcare
- Analyze the processes involved in the implementation of healthcare public policy and healthcare reform

**Master of Science in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations**

The Strategic Leadership in Healthcare Organizations master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This degree has a set of core courses addressing healthcare systems and regulatory environments, finance, and communication and leadership. The concentration prepares students to develop and administer strategic plans for various types of healthcare systems.

Students acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the interrelationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization's vision and goals. Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership.

**This degree prepares students to:**



- Compare leadership and administration characteristics that contribute to success in the provision of healthcare
- Evaluate basic components of a strategic plan and change management, relating them to financial planning and patient value within the healthcare system
- Analyze issues that support and detract from a harmonious workplace environment, and how these issues affect patient services, and provide solutions in effectively dealing with these issues
- Compare the strategic management functions required to lead and administer various types of healthcare systems
- Demonstrate expertise in the complex history and process of healthcare economics

## **Master of Science in Healthcare Management with a Concentration in Social Enterprise, Innovation and Entrepreneurship**

Are you ready to be a social entrepreneur? Innovate the change needed to move the needle on a social problem? The Social Innovation for Global Impact concentration will develop your knowledge and skills in the innovation needed to tackle global, and local, social problems. You will sharpen the social value proposition and mission-driven strategy to address global social problems, or the ones in your community. Courses will develop the why and how of taking an idea and launching it as a social enterprise. Students learn the language and financial insight needed to cultivate funding, initiate prototyping, consider scaling, as well as marketing and measuring impact of global social innovations. Practical experience with a global, national, or local nonprofit, for-profit, healthcare, or other organization enables students to apply theory, strategy and metrics that solve real problems and drive mission impact.

### **This degree prepares students to:**

- Examine existing global, national, and local social enterprises to determine the strengths and challenges in developing an impactful social enterprise
- Utilize innovation tools, design thinking, and other processes to examine a social enterprise idea's social value, scaling potential, and market possibilities
- Apply social innovation frameworks and tools to assess a social enterprise's business and financial structure in global, national, and local contexts

## **Master of Science in Healthcare Management with a Concentration in Supply Chain Management**

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets.

These systems link processes such as product design, sourcing, forecasting, planning, manufacturing, distribution, logistics, retailing and material disposal and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success.

Earned entirely online, in the Supply Chain Management concentration students learn the six pillars of the field, and how to solve problems through the use of Six Sigma principles and the use of data analytics. Through hands-on projects with companies students gain real-world experience on the challenges facing global supply chains in the 21st-century while learning from current leaders in the field.

### **This degree prepares students to:**

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.
- Apply best practices to address an authentic supply chain problem in a work setting.

## **Graduate Certificate in Healthcare Management with a Concentration in Telehealth and Virtual Care**

Advance your leadership and capabilities within the emerging areas of telehealth and virtual care. In this graduate certificate, you will learn how to assess the business and healthcare environments to properly plan, implement, and sustain programs to support care in a virtual environment. Gain a deeper understanding of the social determinants of health (SDOH) that impact patients and staff virtually, technology for telehealth and virtual care, the business strategy and policy behind telehealth and virtual care, and systems planning and development for telehealth and virtual care programs.

## **Graduate Certificate in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership**

The graduate certificate in Healthcare Policy and Regulatory Leadership concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will add new skills to their portfolio, including knowledge of how to help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. The Healthcare Policy and Regulatory Leadership concentration will provide an improved understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare-related public policy and healthcare law. Career-relevant courses provide students with the knowledge and tools to help them achieve leadership and management with a pulse on the dynamism in healthcare and continuing emergence of reform leading to changes in healthcare policy. Improve your understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy by earning a certificate. You'll examine the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned through this certificate may apply toward a master's degree in Healthcare Management.

## **Graduate Certificate in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations**

The Strategic Leadership in Healthcare Organizations graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate prepares students to develop and administer strategic plans for various types of healthcare systems.

Certificate students will acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the inter-relationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization's vision and goals. Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership. Students will also gain additional skills and knowledge in healthcare management through elective coursework. Credits earned in the graduate certificate may apply toward a master's degree in Healthcare Management.

## **Specialized Graduate Certificate in Telehealth and Virtual Care**

Advance your leadership and capabilities within the emerging areas of telehealth and virtual care. In this specialized certificate, you will learn how to assess the business and healthcare environments to properly plan, implement, and sustain programs to support care in a virtual environment. Gain a deeper understanding of the social determinants of health (SDOH) that impact patients and staff virtually, technology for telehealth and virtual care, the business strategy and policy behind telehealth and virtual care, and systems planning and development for telehealth and virtual care programs.

## **Specialized Graduate Certificate in Healthcare Policy and Regulatory Leadership**

The specialized graduate certificate in Healthcare Policy and Regulatory Leadership concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will add new skills to their portfolio, including knowledge of how to help shape, interpret, and implement policies and regulations that impact a value-driven healthcare system. The Healthcare Policy and Regulatory Leadership concentration will provide an improved understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare-related public policy and healthcare law. Career-relevant courses provide students with the knowledge and tools to help them achieve leadership and management with a pulse on the dynamism in healthcare and continuing emergence of reform leading to changes in healthcare policy. Improve your understanding of healthcare systems, legislative procedures, and trends as they relate to healthcare regulatory systems and public policy by earning a certificate. You'll examine the relationship between public policy, the patient as the consumer, and the impact of culture on the formation of policy and practice within a transitioning healthcare environment. Credits earned through this certificate may be applied toward a master's degree in Healthcare Management.

## **Specialized Graduate Certificate in Strategic Leadership in Healthcare Organizations**

The Strategic Leadership in Healthcare Organizations specialized graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. This certificate prepares students to develop and administer strategic plans for various types of healthcare systems.

Students will acquire the skills needed to successfully and strategically lead within healthcare organizations through the integrative process of a changing healthcare industry. Through analysis of the interrelationships of value, quality, and price, students examine the financial state of healthcare at the macro level, allowing them to better understand budgetary restraints while striving to realize an organization's vision and goals. Using case-based study techniques, students explore practice and system management, strategic planning, and change leadership. Credits earned in the certificate may be applied toward a master's degree in Healthcare Management.

## **Master's Degree Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the

baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Science in Healthcare Management with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
<b>Core coursework requirement</b>		
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4010	Healthcare Communication and Leadership	4
HC 4015	Healthcare Finance	4
HC 4900	Experiential Learning in Healthcare	4
HC 4901	Capstone Project	4
or HC 4902	Capstone Seminar	
or HC 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirement</b>		
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4
HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4

<b>Elective requirement (Choose three courses)</b>	<b>12</b>
<b>Total Credits</b>	<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Science in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

Code	Title	Credits
<b>Core coursework requirements</b>		
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4010	Healthcare Communication and Leadership	4
HC 4015	Healthcare Finance	4
HC 4900	Experiential Learning in Healthcare	4
HC 4901	Capstone Project	4
or HC 4902	Capstone Seminar	
or HC 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
HC 4200	Comparative Healthcare Systems	4
HC 4210	Quality Improvement for HC Leaders	4
HC 4220	Ethical Considerations in Healthcare	4
HC 4225	Healthcare Public Policy and the Legislative Process	4
or HC 4230	Implementation and Evaluation of Healthcare Public Policy	
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Science in Healthcare Management with a Concentration in Social Enterprise, Innovation and Entrepreneurship

Code	Title	Credits
<b>Core coursework requirement</b>		
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4010	Healthcare Communication and Leadership	4
HC 4015	Healthcare Finance	4
HC 4900	Experiential Learning in Healthcare	4
HC 4901	Capstone Project	4
or HC 4902	Capstone Seminar	
or HC 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirement</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4400	Principles and Practices in Social Enterprise, Innovation and Entrepreneurship	4
NFP 4405	Social Enterprise Strategies	4
NFP 4410	Social Enterprise Experiential Learning	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

Code	Title	Credits
<b>Core coursework requirements</b>		
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4010	Healthcare Communication and Leadership	4
HC 4015	Healthcare Finance	4
HC 4900	Experiential Learning in Healthcare	4
HC 4901	Capstone Project	4
or HC 4902	Capstone Seminar	
or HC 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
HC 4100	Management and Leadership in Healthcare	4
HC 4110	Healthcare: Innovative Strategies and Change Management	4
HC 4130	Organizational Behavior in Healthcare	4
HC 4005	Healthcare Macroeconomics	4
or HC 4915	Experiential Learning in Business	
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Healthcare Management with a Concentration in Telehealth and Virtual Care

Code	Title	Credits
<b>Core coursework requirement</b>		
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4010	Healthcare Communication and Leadership	4
HC 4015	Healthcare Finance	4
HC 4900	Experiential Learning in Healthcare	4
HC 4901	Capstone Project	4
or HC 4902	Capstone Seminar	
or HC 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirement</b>		
HC 4805	Virtual Care: Opportunities and Barriers for Health Systems	4
HC 4815	Analysis of Healthcare Environments for Virtual Care	4
HINF 4825	Technology and Applications for Telehealth and Virtual Care Success	4
HINF 4835	Design and Implementation of Telehealth and Virtual Care Systems	4
<b>Elective requirement (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Healthcare Management with a Concentration in Healthcare Policy and Regulatory Leadership

Code	Title	Credits
<b>Concentration requirements</b>		
HC 4200	Comparative Healthcare Systems	4
HC 4210	Quality Improvement for HC Leaders	4
HC 4220	Ethical Considerations in Healthcare	4
HC 4225	Healthcare Public Policy and the Legislative Process	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Healthcare Management with a Concentration in Strategic Leadership in Healthcare Organizations

Code	Title	Credits
<b>Concentration requirements</b>		
HC 4005 or HC 4915	Healthcare Macroeconomics Experiential Learning in Business	4
HC 4100	Management and Leadership in Healthcare	4
HC 4110	Healthcare: Innovative Strategies and Change Management	4
HC 4130	Organizational Behavior in Healthcare	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Healthcare Management with a Concentration in Telehealth and Virtual Care

Code	Title	Credits
<b>Concentration requirement</b>		
HC 4805	Virtual Care: Opportunities and Barriers for Health Systems	4
HC 4815	Analysis of Healthcare Environments for Virtual Care	4
HINF 4825	Technology and Applications for Telehealth and Virtual Care Success	4
HINF 4835	Design and Implementation of Telehealth and Virtual Care Systems	4
<b>Elective requirement (choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Healthcare Leadership Business Acumen

Code	Title	Credits
HC 4005	Healthcare Macroeconomics	4
HC 4015	Healthcare Finance	4

HC 4110	Healthcare: Innovative Strategies and Change Management	4
HC 4100	Management and Leadership in Healthcare	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Healthcare Leadership Business Expertise

Code	Title	Credits
HC 4000	Healthcare Systems and Regulatory Environments	4
HC 4015	Healthcare Finance	4
HC 4100	Management and Leadership in Healthcare	4
HC 4210	Quality Improvement for HC Leaders	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Healthcare Policy and Regulatory Leadership

Code	Title	Credits
HC 4200	Comparative Healthcare Systems	4
HC 4210	Quality Improvement for HC Leaders	4
HC 4220	Ethical Considerations in Healthcare	4
HC 4225	Healthcare Public Policy and the Legislative Process	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Strategic Leadership in Healthcare Organizations

Code	Title	Credits
HC 4005	Healthcare Macroeconomics	4
HC 4100	Management and Leadership in Healthcare	4
HC 4110	Healthcare: Innovative Strategies and Change Management	4
HC 4130	Organizational Behavior in Healthcare	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Telehealth and Virtual Care

Code	Title	Credits
HC 4805	Virtual Care: Opportunities and Barriers for Health Systems	4
HC 4815	Analysis of Healthcare Environments for Virtual Care	4
HINF 4825	Technology and Applications for Telehealth and Virtual Care Success	4
HINF 4835	Design and Implementation of Telehealth and Virtual Care Systems	4
<b>Total Credits</b>		<b>16</b>

#### HC 4000 Healthcare Systems and Regulatory Environments (4 Credits)

This course opens with a comprehensive overview of the functions of various types of healthcare organizations: providers, insurance companies, government agencies, and professional associations. Alternative payment and provider models are reviewed, regulatory bodies and issues are explored, and healthcare reform efforts and proposals are discussed. Supply and demand projections for personnel are examined. The work of key federal agencies (NIH, National Center for Disease Control, and Food and Drug Administration) is reviewed as well as the activity of national and international non-governmental organizations. Major national and global public health challenges are introduced.

**HC 4005 Healthcare Macroeconomics (4 Credits)**

This course focuses on macro analysis of the current financial state of healthcare in the United States. The relationships of value, quality, and price are analyzed. Transparency related to price and quality is considered. Fundamental items such as balance sheets/income statements, accounting vs. financial reporting, equity, cash flows, and debt financing are covered in detail. Payment and incentive models are considered in connection with employer-furnished benefits, private health insurance plans, Medicare and Medicaid. Current issues, such as pay for performance, shared savings, cost shifting, and healthcare for the aging, under and uninsured are discussed. Students will discuss variations in health policy related to payment and coverage systems.

**HC 4010 Healthcare Communication and Leadership (4 Credits)**

This course focuses on the welfare of patient, family, and community in the context of medical team communication and leadership. Models for communicating highly technical medical information with patients and others involved in their care are examined. Students weigh and assess differences in personal and organizational cultures to optimize patient-centered outcomes. Students acquire a sound body of knowledge and terminology to facilitate communication and leadership across a multitude of disciplines essential in the delivery of healthcare. NOTE: This course is strongly recommended within the first 3 terms of study.

**HC 4015 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HC 4100 Management and Leadership in Healthcare (4 Credits)**

Healthcare systems are complex, dynamic, and multilayered. They require constant situational awareness to maintain safety, efficiency, compliance, relevance, and fiscal responsibility while supporting an increasingly diverse workforce. Managers and administrators must be able to create and lead effective teams to address constant change. In this course, students explore the functions required to lead and support healthcare systems, organizations, and practices. Students will simulate the role of healthcare managers and leaders by gaining an understanding of leadership approaches, analyzing the performance of a business unit and identifying opportunities for improvement, building teams, identifying and tracking key metrics, and creating solutions that contribute to an effective, efficient, and equitable work environment.

**HC 4110 Healthcare: Innovative Strategies and Change Management (4 Credits)**

Effective healthcare takes continual innovation to meet the ever-changing needs of the population. Through an examination of disruptions that create a catalyst for change, this course focuses on teaching students how innovative strategies can enable quality care and sustainability both within the healthcare delivery system and the health industry. Further, the drivers of innovation are explored from their use in grassroots efforts through regulatory reform through the lens of supply and demand. Finally, strategic planning for maximum use of financial resources to meet stakeholder expectations is ventured into in this course.

**HC 4130 Organizational Behavior in Healthcare (4 Credits)**

Customer and employee satisfaction elements of healthcare management are often a result of how well the entire healthcare system functions. Students examine successful and less successful examples of cooperation, compatibility, and dedication within the workplace and explore what contributes to a harmonious and effective healthcare environment. Interpersonal skills are discussed, as are ethical guidelines and laws that define acceptable workplace behavior.

**HC 4200 Comparative Healthcare Systems (4 Credits)**

This course describes variations in healthcare delivery systems locally, nationally, and globally as they relate to policy, structure, and finance. Comparisons of systems are made relative to expenditure of resources and outcomes. Students learn about healthcare coverage, access to care, healthcare rationing, provider manpower distribution, and seeking healthcare in foreign countries (medical tourism). The discrepancy between the desirable and the practical is explored, and students are asked to outline and defend a system that they believe is both desirable and practical.

**HC 4210 Quality Improvement for HC Leaders (4 Credits)**

This course provides an analysis of successful healthcare quality programs. Students will review the essential elements of a quality program and the national, state, and local laws and regulations that impact a quality program. The course explores the types of data and scientific methods that can be used to ensure the effectiveness and efficiency of a quality program. Students will get the opportunity to design a healthcare quality program for a healthcare setting of their choice. Course content is beneficial to all types of individuals who work in healthcare, from entry level to high-level manager, administrators, and clinicians.

**HC 4220 Ethical Considerations in Healthcare (4 Credits)**

This course provides a survey of important ethical considerations encountered in U.S. and global healthcare, past and present. It covers issues on which consensus has generally been reached, and some on which debate is currently active. Clinical, professional, and organizational scenarios will be examined, with an occasional glance toward public policy. Students will practice recognizing the elements of ethical problems and applying a "toolbox" of principles, theories, and concepts to understand them. Through readings, class discussions, and assignments, students will review noteworthy cases and policies. They will evaluate the merits of ethical arguments taking different forms. They will compare different frameworks for making ethical judgments and solving dilemmas that arise from competing value perspectives. This background is an essential foundation for practitioners and leaders in every role in a healthcare environment.



**HC 4225 Healthcare Public Policy and the Legislative Process (4 Credits)**

This course provides students an opportunity to transform a healthcare policy-related idea or problem into policy and legislation reform, change, or development. Students examine political and legislative procedures; the functions of government agencies; the influences of lobbyists, public hearings and testimonies; and advocacy efforts on these processes. Students objectively evaluate how policy changes occur at the federal and state levels and subsequently affect citizens from differing backgrounds and professionals in a variety of settings. As such, students explore the importance of developing relationships, communicating, and creating advocacy strategies with elected officials and various stakeholder groups that interact with the federal and state legislative processes.

**HC 4230 Implementation and Evaluation of Healthcare Public Policy (4 Credits)**

This course examines strategies for implementation and evaluation of healthcare public policy. Students develop skills in analyzing issues, considering and weighing pros and cons of proposed policy, and defending strategies for bringing about change. Beginning with the passage of a new law, policy, or regulation, students track the process to implement and evaluate new policy. Topics related to implementation of a new policy include funding the implementation, effect on constituents and the overall national economy, sustainability, and short- and long-term evaluation of the policy. At the conclusion of this course, students will prepare an implementation plan for selected recently passed state legislation. Students are strongly encouraged to complete HC 4000 prior to registering for this course.

**HC 4300 Health Equity and Justice (4 Credits)**

In this course, definitions and historical perspectives of health equity, health disparity, and social justice will be introduced. Students will learn to recognize the geographic, cultural, and social contexts, where health inequities occur. Through reflection and journaling, students will explore the concept of implicit bias. From this critical reflection, students will gain an understanding of the impact of bias on patient care and population health in the U.S. healthcare system. Issues of, racial, ethnic, and gender status and their relationships to health disparities and inequities will be analyzed. Through course assignments, students will conceptualize interventions and design improvement projects aimed at making substantive positive changes toward health equity and justice.

**HC 4305 Healthy Aging: A Healthcare Imperative (4 Credits)**

As technology advances, the ability to healthcare to keep people alive increases, but not always in ways conducive to improving quality of life. It is the hope of healthcare providers that quality of life improves as well. However, there are many factors this piece of the puzzle challenging. In this course, the older adult population is examined both for the challenges they face and the effects of an increasing elder population on the healthcare delivery system. The course will focus on specific assessment of the impact of unhealthy lifestyles that create the co-morbidities, health disparities commonly seen in aging populations, and the improvements that can be made in health and technological illiteracy/accessibility on older adults. Extending this assessment, students create a cultural care model for end of life care. These explorations of older adulthood culminating in evaluating the underlying cultural issues that need to be addressed to improve population health and resiliency in meeting the challenges during the end of the life spectrum.

**HC 4400 Legal Dynamics of Healthcare Leadership (4 Credits)**

This course is a primer on the legal and compliance considerations associated with organization, payment, and administration of facilities and provider groups. Topics will include the corporate and contract law, Stark and anti-kickback law, licensure and credentialing, professional liability, professional review and patient safety, HIPAA and patient privacy, and other laws affecting healthcare providers and organizations.

**HC 4410 Legal Frameworks of the Healthcare Industry (4 Credits)**

This course reviews the recent history of healthcare reform in the United States beginning with the 2010 Affordable Care Act (ACA) and moving to health reform since the ACA. Students examine the influences and functions of Medicare and Medicaid as well as the Department of Health and Human Services' (HHS) role in shaping benefit coverage throughout the healthcare industry. Students will explore the importance of, and examine legal issues related to, public health and healthcare provided by entities within the Federal Government such as the Department of Veterans Affairs (VA), Department of Defense (DoD), and Indian Health Service (IHS). Students will objectively evaluate the legalities and ethical issues associated with clinical research as well as the Food and Drug Administration (FDA)'s involvement in the development of pharmaceutical agents and medical devices. The course concludes with students analyzing the future landscape of health reform and public sector influence in healthcare.

**HC 4420 Legal Fundamentals of Revenue in Healthcare (4 Credits)**

This course provides an understanding of the legal complexities of creating and managing delivery and payment models for healthcare services. Course content revolves around the current challenges of evolving from volume-based to value-based payment principles. Topics will include fraud and abuse and compliance, legal foundations of private and public payment systems, fee for service, managed care, value-based systems, and a review of current healthcare payment reform efforts. The course wraps up with the role of clinical health information and related data systems in healthcare delivery and payment.

**HC 4430 Significant Healthcare Policy and Law (4 Credits)**

This course provides a foundational overview of healthcare law and the sources of law, as well as the distinction between healthcare law and policy. Throughout the course, learners will examine major federal healthcare laws and policies and understand their relationship with stakeholders such as patients, providers, payers, lobbyists, and public health, all through a health equity lens. Learners will examine the intersection of traditional areas of law and healthcare, including torts, antitrust, contracts, and intellectual property. They will then delve deeper into understanding major healthcare policies, such as Medicare Part D and the Affordable Care Act (ACA), to include the Supreme Court's landmark decision regarding the ACA. This is a robust course with significant independent work/research on the part of learners and should be taken after introductory and concentration courses.

**HC 4500 Operational Challenges in Global Health Management (4 Credits)**

This course presents challenges in operations that are unique to healthcare services and products being delivered in the international market. Topics include international marketing of services and healthcare products, negotiation styles, ethical considerations, organizational structure, transporting of medical goods and personnel, individual travel health and medical tourism as a business model. Cultural and religious considerations in healthcare delivery are discussed. Grants and research management for global health are compared with domestic procedures.

**HC 4510 Legal and Employment Issues in Global Health Management (4 Credits)**

This course presents legal considerations involved in conducting global programs and business related to healthcare services and products. Employment and labor law are discussed in relationship to employment across international lines and within foreign countries. Intellectual property, patent and copyright of healthcare products, curriculum, and programs are examined. Customs laws, foreign trade, and other regulations such as healthcare licensing and credentialing of personnel are developed. Human resource challenges such as remote team management are discussed.

**HC 4520 Global Health NGO Management (4 Credits)**

Students will examine factors that impact organizational performance in the global nonprofit health sector. Students explore current challenges associated with Non-Government Organizations (NGOs) that operate in low-income and middle-income countries. Examples include Doctors Without Borders, Shoulder to Shoulder, and others. Students are empowered to research and compare different NGOs and analyze factors that impact organizational effectiveness. Key challenges facing NGO leaders are analyzed and students provide recommendations to improve organizational performance. Course topics include assessment of NGO strategies, organizational resources and financing, and stakeholder relations. Other topics include analysis of countries' demographics, culture, healthcare delivery, policies, and external environment. It is recommended that students in the Global Health Program Management concentration or certificate complete HC4500 and HC4510 prior to registering for this course. Students in other concentrations or programs may take this course at any time as an elective.

**HC 4530 Regulatory Affairs in Global Health Management (4 Credits)**

This course discusses the various regulatory requirements of conducting healthcare related business from the perspective of research, development, and marketing of medical devices and pharmaceuticals. Both domestic and international requirements will be examined. Students will develop a template of skills for investigating healthcare related compliance issues that can be adapted to specific markets as needed.

**HC 4701 Topics in Healthcare Management (1-10 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Healthcare Leadership degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HC 4805 Virtual Care: Opportunities and Barriers for Health Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn to balance the needs of the individual with the needs of populations. Students will explore the factors that impact the success of telehealth and virtual care programming including barriers to care, the social determinants of health (SDOH), and the concerns of special populations. Students will develop the skills needed to create a telehealth and virtual care plan that takes into account health policy and regulatory compliance, best practices in population health, and the social context of the healthcare system.

**HC 4815 Analysis of Healthcare Environments for Virtual Care (4 Credits)**

This course will provide an in-depth exploration of virtual care and its impact on healthcare delivery. Students will learn about the various technologies and platforms used in virtual care, along with key issues and challenges involved in implementing and integrating virtual care into healthcare systems. They will assess different healthcare environments, legal and regulatory issues, impact on patients, and financial considerations surrounding virtual care, as well as the need for a virtual care solution. The course will cover topics such as telemedicine, remote patient monitoring, virtual reality, augmented reality, artificial intelligence, and data analytics.

**HC 4900 Experiential Learning in Healthcare (4 Credits)**

This course is for students who want to do independent research by completing an industry project and serves as a connector between research methods and a student's Capstone Project. The course will connect an academic research question with an experiential learning opportunity in healthcare for students as they prepare for their Capstone Project experience. Students will choose a Capstone Advisor, choose a topic, develop a thesis statement, explore project methodologies, write a proposal, and complete the necessary Institutional Review Board (IRB) requirements. Students will also agree to the structure and deliverables of their projects. There is an expectation for face to face (virtual is acceptable) meetings between students and their prospective Capstone Advisor during this course. This course is a prerequisite for any students planning to complete the Capstone Project (HC 4901) as it is the beginning of the Capstone Project process. Prerequisites: approval by Academic Director, acceptance as a degree candidate, and completion of between 30-40 quarter-hours. This course meets an elective option.

**HC 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HC 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HC 4915 Experiential Learning in Business (4 Credits)**

This course is for learners who want to increase their range of business skills and industry experience. As learners navigate ten modules, they will walk through reflection on specific activities related to professional business skills. These skills include items such as building a personal brand, creating value add, informational interviewing, negotiating, and system evaluation. This course will use virtual reality to ensure an equitable experience for remote students. At the culmination of this course, learners will have a basic set of professional business skills they can use throughout their careers.

**HC 4980 Internship (0-4 Credits)**

The Healthcare Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HC 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

**Courses****HC 4000 Healthcare Systems and Regulatory Environments (4 Credits)**

This course opens with a comprehensive overview of the functions of various types of healthcare organizations: providers, insurance companies, government agencies, and professional associations. Alternative payment and provider models are reviewed, regulatory bodies and issues are explored, and healthcare reform efforts and proposals are discussed. Supply and demand projections for personnel are examined. The work of key federal agencies (NIH, National Center for Disease Control, and Food and Drug Administration) is reviewed as well as the activity of national and international non-governmental organizations. Major national and global public health challenges are introduced.

**HC 4005 Healthcare Macroeconomics (4 Credits)**

This course focuses on macro analysis of the current financial state of healthcare in the United States. The relationships of value, quality, and price are analyzed. Transparency related to price and quality is considered. Fundamental items such as balance sheets/income statements, accounting vs. financial reporting, equity, cash flows, and debt financing are covered in detail. Payment and incentive models are considered in connection with employer-furnished benefits, private health insurance plans, Medicare and Medicaid. Current issues, such as pay for performance, shared savings, cost shifting, and healthcare for the aging, under and uninsured are discussed. Students will discuss variations in health policy related to payment and coverage systems.

**HC 4010 Healthcare Communication and Leadership (4 Credits)**

This course focuses on the welfare of patient, family, and community in the context of medical team communication and leadership. Models for communicating highly technical medical information with patients and others involved in their care are examined. Students weigh and assess differences in personal and organizational cultures to optimize patient-centered outcomes. Students acquire a sound body of knowledge and terminology to facilitate communication and leadership across a multitude of disciplines essential in the delivery of healthcare. NOTE: This course is strongly recommended within the first 3 terms of study.

**HC 4015 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HC 4100 Management and Leadership in Healthcare (4 Credits)**

Healthcare systems are complex, dynamic, and multilayered. They require constant situational awareness to maintain safety, efficiency, compliance, relevance, and fiscal responsibility while supporting an increasingly diverse workforce. Managers and administrators must be able to create and lead effective teams to address constant change. In this course, students explore the functions required to lead and support healthcare systems, organizations, and practices. Students will simulate the role of healthcare managers and leaders by gaining an understanding of leadership approaches, analyzing the performance of a business unit and identifying opportunities for improvement, building teams, identifying and tracking key metrics, and creating solutions that contribute to an effective, efficient, and equitable work environment.

**HC 4110 Healthcare: Innovative Strategies and Change Management (4 Credits)**

Effective healthcare takes continual innovation to meet the ever-changing needs of the population. Through an examination of disruptions that create a catalyst for change, this course focuses on teaching students how innovative strategies can enable quality care and sustainability both within the healthcare delivery system and the health industry. Further, the drivers of innovation are explored from their use in grassroots efforts through regulatory reform through the lens of supply and demand. Finally, strategic planning for maximum use of financial resources to meet stakeholder expectations is ventured into in this course.

**HC 4130 Organizational Behavior in Healthcare (4 Credits)**

Customer and employee satisfaction elements of healthcare management are often a result of how well the entire healthcare system functions. Students examine successful and less successful examples of cooperation, compatibility, and dedication within the workplace and explore what contributes to a harmonious and effective healthcare environment. Interpersonal skills are discussed, as are ethical guidelines and laws that define acceptable workplace behavior.

**HC 4200 Comparative Healthcare Systems (4 Credits)**

This course describes variations in healthcare delivery systems locally, nationally, and globally as they relate to policy, structure, and finance. Comparisons of systems are made relative to expenditure of resources and outcomes. Students learn about healthcare coverage, access to care, healthcare rationing, provider manpower distribution, and seeking healthcare in foreign countries (medical tourism). The discrepancy between the desirable and the practical is explored, and students are asked to outline and defend a system that they believe is both desirable and practical.

**HC 4210 Quality Improvement for HC Leaders (4 Credits)**

This course provides an analysis of successful healthcare quality programs. Students will review the essential elements of a quality program and the national, state, and local laws and regulations that impact a quality program. The course explores the types of data and scientific methods that can be used to ensure the effectiveness and efficiency of a quality program. Students will get the opportunity to design a healthcare quality program for a healthcare setting of their choice. Course content is beneficial to all types of individuals who work in healthcare, from entry level to high-level manager, administrators, and clinicians.

**HC 4220 Ethical Considerations in Healthcare (4 Credits)**

This course provides a survey of important ethical considerations encountered in U.S. and global healthcare, past and present. It covers issues on which consensus has generally been reached, and some on which debate is currently active. Clinical, professional, and organizational scenarios will be examined, with an occasional glance toward public policy. Students will practice recognizing the elements of ethical problems and applying a "toolbox" of principles, theories, and concepts to understand them. Through readings, class discussions, and assignments, students will review noteworthy cases and policies. They will evaluate the merits of ethical arguments taking different forms. They will compare different frameworks for making ethical judgments and solving dilemmas that arise from competing value perspectives. This background is an essential foundation for practitioners and leaders in every role in a healthcare environment.

**HC 4225 Healthcare Public Policy and the Legislative Process (4 Credits)**

This course provides students an opportunity to transform a healthcare policy-related idea or problem into policy and legislation reform, change, or development. Students examine political and legislative procedures; the functions of government agencies; the influences of lobbyists, public hearings and testimonies; and advocacy efforts on these processes. Students objectively evaluate how policy changes occur at the federal and state levels and subsequently affect citizens from differing backgrounds and professionals in a variety of settings. As such, students explore the importance of developing relationships, communicating, and creating advocacy strategies with elected officials and various stakeholder groups that interact with the federal and state legislative processes.

**HC 4230 Implementation and Evaluation of Healthcare Public Policy (4 Credits)**

This course examines strategies for implementation and evaluation of healthcare public policy. Students develop skills in analyzing issues, considering and weighing pros and cons of proposed policy, and defending strategies for bringing about change. Beginning with the passage of a new law, policy, or regulation, students track the process to implement and evaluate new policy. Topics related to implementation of a new policy include funding the implementation, effect on constituents and the overall national economy, sustainability, and short- and long-term evaluation of the policy. At the conclusion of this course, students will prepare an implementation plan for selected recently passed state legislation. Students are strongly encouraged to complete HC 4000 prior to registering for this course.

**HC 4300 Health Equity and Justice (4 Credits)**

In this course, definitions and historical perspectives of health equity, health disparity, and social justice will be introduced. Students will learn to recognize the geographic, cultural, and social contexts, where health inequities occur. Through reflection and journaling, students will explore the concept of implicit bias. From this critical reflection, students will gain an understanding of the impact of bias on patient care and population health in the U.S. healthcare system. Issues of racial, ethnic, and gender status and their relationships to health disparities and inequities will be analyzed. Through course assignments, students will conceptualize interventions and design improvement projects aimed at making substantive positive changes toward health equity and justice.

**HC 4305 Healthy Aging: A Healthcare Imperative (4 Credits)**

As technology advances, the ability to healthcare to keep people alive increases, but not always in ways conducive to improving quality of life. It is the hope of healthcare providers that quality of life improves as well. However, there are many factors this piece of the puzzle challenging. In this course, the older adult population is examined both for the challenges they face and the effects of an increasing elder population on the healthcare delivery system. The course will focus on specific assessment of the impact of unhealthy lifestyles that create the co-morbidities, health disparities commonly seen in aging populations, and the improvements that can be made in health and technological illiteracy/accessibility on older adults. Extending this assessment, students create a cultural care model for end of life care. These explorations of older adulthood culminating in evaluating the underlying cultural issues that need to be addressed to improve population health and resiliency in meeting the challenges during the end of the life spectrum.

**HC 4400 Legal Dynamics of Healthcare Leadership (4 Credits)**

This course is a primer on the legal and compliance considerations associated with organization, payment, and administration of facilities and provider groups. Topics will include the corporate and contract law, Stark and anti-kickback law, licensure and credentialing, professional liability, professional review and patient safety, HIPAA and patient privacy, and other laws affecting healthcare providers and organizations.

**HC 4410 Legal Frameworks of the Healthcare Industry (4 Credits)**

This course reviews the recent history of healthcare reform in the United States beginning with the 2010 Affordable Care Act (ACA) and moving to health reform since the ACA. Students examine the influences and functions of Medicare and Medicaid as well as the Department of Health and Human Services' (HHS) role in shaping benefit coverage throughout the healthcare industry. Students will explore the importance of, and examine legal issues related to, public health and healthcare provided by entities within the Federal Government such as the Department of Veterans Affairs (VA), Department of Defense (DoD), and Indian Health Service (IHS). Students will objectively evaluate the legalities and ethical issues associated with clinical research as well as the Food and Drug Administration (FDA)'s involvement in the development of pharmaceutical agents and medical devices. The course concludes with students analyzing the future landscape of health reform and public sector influence in healthcare.

**HC 4420 Legal Fundamentals of Revenue in Healthcare (4 Credits)**

This course provides an understanding of the legal complexities of creating and managing delivery and payment models for healthcare services. Course content revolves around the current challenges of evolving from volume-based to value-based payment principles. Topics will include fraud and abuse and compliance, legal foundations of private and public payment systems, fee for service, managed care, value-based systems, and a review of current healthcare payment reform efforts. The course wraps up with the role of clinical health information and related data systems in healthcare delivery and payment.

**HC 4430 Significant Healthcare Policy and Law (4 Credits)**

This course provides a foundational overview of healthcare law and the sources of law, as well as the distinction between healthcare law and policy. Throughout the course, learners will examine major federal healthcare laws and policies and understand their relationship with stakeholders such as patients, providers, payers, lobbyists, and public health, all through a health equity lens. Learners will examine the intersection of traditional areas of law and healthcare, including torts, antitrust, contracts, and intellectual property. They will then delve deeper into understanding major healthcare policies, such as Medicare Part D and the Affordable Care Act (ACA), to include the Supreme Court's landmark decision regarding the ACA. This is a robust course with significant independent work/research on the part of learners and should be taken after introductory and concentration courses.

**HC 4500 Operational Challenges in Global Health Management (4 Credits)**

This course presents challenges in operations that are unique to healthcare services and products being delivered in the international market. Topics include international marketing of services and healthcare products, negotiation styles, ethical considerations, organizational structure, transporting of medical goods and personnel, individual travel health and medical tourism as a business model. Cultural and religious considerations in healthcare delivery are discussed. Grants and research management for global health are compared with domestic procedures.

**HC 4510 Legal and Employment Issues in Global Health Management (4 Credits)**

This course presents legal considerations involved in conducting global programs and business related to healthcare services and products. Employment and labor law are discussed in relationship to employment across international lines and within foreign countries. Intellectual property, patent and copyright of healthcare products, curriculum, and programs are examined. Customs laws, foreign trade, and other regulations such as healthcare licensing and credentialing of personnel are developed. Human resource challenges such as remote team management are discussed.

**HC 4520 Global Health NGO Management (4 Credits)**

Students will examine factors that impact organizational performance in the global nonprofit health sector. Students explore current challenges associated with Non-Government Organizations (NGOs) that operate in low-income and middle-income countries. Examples include Doctors Without Borders, Shoulder to Shoulder, and others. Students are empowered to research and compare different NGOs and analyze factors that impact organizational effectiveness. Key challenges facing NGO leaders are analyzed and students provide recommendations to improve organizational performance. Course topics include assessment of NGO strategies, organizational resources and financing, and stakeholder relations. Other topics include analysis of countries' demographics, culture, healthcare delivery, policies, and external environment. It is recommended that students in the Global Health Program Management concentration or certificate complete HC4500 and HC4510 prior to registering for this course. Students in other concentrations or programs may take this course at any time as an elective.

**HC 4530 Regulatory Affairs in Global Health Management (4 Credits)**

This course discusses the various regulatory requirements of conducting healthcare related business from the perspective of research, development, and marketing of medical devices and pharmaceuticals. Both domestic and international requirements will be examined. Students will develop a template of skills for investigating healthcare related compliance issues that can be adapted to specific markets as needed.

**HC 4701 Topics in Healthcare Management (1-10 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Healthcare Leadership degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HC 4805 Virtual Care: Opportunities and Barriers for Health Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn to balance the needs of the individual with the needs of populations. Students will explore the factors that impact the success of telehealth and virtual care programming including barriers to care, the social determinants of health (SDOH), and the concerns of special populations. Students will develop the skills needed to create a telehealth and virtual care plan that takes into account health policy and regulatory compliance, best practices in population health, and the social context of the healthcare system.

**HC 4815 Analysis of Healthcare Environments for Virtual Care (4 Credits)**

This course will provide an in-depth exploration of virtual care and its impact on healthcare delivery. Students will learn about the various technologies and platforms used in virtual care, along with key issues and challenges involved in implementing and integrating virtual care into healthcare systems. They will assess different healthcare environments, legal and regulatory issues, impact on patients, and financial considerations surrounding virtual care, as well as the need for a virtual care solution. The course will cover topics such as telemedicine, remote patient monitoring, virtual reality, augmented reality, artificial intelligence, and data analytics.

**HC 4900 Experiential Learning in Healthcare (4 Credits)**

This course is for students who want to do independent research by completing an industry project and serves as a connector between research methods and a student's Capstone Project. The course will connect an academic research question with an experiential learning opportunity in healthcare for students as they prepare for their Capstone Project experience. Students will choose a Capstone Advisor, choose a topic, develop a thesis statement, explore project methodologies, write a proposal, and complete the necessary Institutional Review Board (IRB) requirements. Students will also agree to the structure and deliverables of their projects. There is an expectation for face to face (virtual is acceptable) meetings between students and their prospective Capstone Advisor during this course. This course is a prerequisite for any students planning to complete the Capstone Project (HC 4901) as it is the beginning of the Capstone Project process. Prerequisites: approval by Academic Director, acceptance as a degree candidate, and completion of between 30-40 quarter-hours. This course meets an elective option.

**HC 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HC 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HC 4915 Experiential Learning in Business (4 Credits)**

This course is for learners who want to increase their range of business skills and industry experience. As learners navigate ten modules, they will walk through reflection on specific activities related to professional business skills. These skills include items such as building a personal brand, creating value add, informational interviewing, negotiating, and system evaluation. This course will use virtual reality to ensure an equitable experience for remote students. At the culmination of this course, learners will have a basic set of professional business skills they can use throughout their careers.

**HC 4980 Internship (0-4 Credits)**

The Healthcare Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HC 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Information Technology

Office: University College Student Support Center

Mail Code: 2211 S. Josephine St., Denver, CO 80208

Phone: 303-871-2291, 800-347-2042

Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)

Web Site: [www.universitycollege.du.edu](http://www.universitycollege.du.edu) (<http://www.universitycollege.du.edu>)

A successful career in the Information Technology (IT) industry requires more than just technical expertise; it also requires an integrated understanding of the industry as a whole and its practices, technologies, challenges, and trends. Additionally, given the industry's dynamic nature, successful IT professionals must be flexible and committed to continuous learning. The combination of continuous learning, flexibility, and knowledge and skills are traits employers seek when making hiring decisions in the IT industry. The IT program is designed to give the student a broad understanding of the IT industry and help develop the knowledge and skills needed across the industry, including "professional skills" such as communication, organization, critical thinking, problem solving, leadership and teamwork. The IT program also provides in-depth knowledge in concentration areas including AI Strategy and Application in IT, Cybersecurity Management, Database Design and Administration, Geographic Information Systems, Information Systems Security, Project Management, Software Design and Programming, Technology Management, and Web Design and Development.

This program prepares students to:

- Demonstrate effective oral, written, and non-verbal communication techniques appropriate to the context and audience in order to effect change
- Apply relevant program theory and principles to formulate clear, evidence-based arguments
- Collaborate appropriately with stakeholders regarding the selection, development, and management of technical solutions to meet business requirements
- Assess the key socioeconomic drivers, technical trends, and ethical concerns that shape global innovation, markets, and competition for technical resources to recommend appropriate strategies aligned with organizational goals
- Employ best practices in the evaluation, definition, architecture, design, development, implementation, and management of technical systems, projects, and solutions to meet industry demands

- Synthesize knowledge of diverse areas of technology that form an interrelated system of infrastructure, applications, data, and management practices to influence the future of information technology

## **Master of Science in Information Technology with a Concentration in AI Strategy and Application in IT**

This master's degree concentration is designed for IT professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

This program prepares students to:

- Apply a working knowledge of AI capabilities, limitations, and practical applications in order to develop strategies and adapt to a changing AI environment.
- Evaluate ethical, policy, and governance considerations in order to influence ethically responsible AI practices.
- Analyze the strategic potential of various AI tools and solutions to accomplish organizational goals.
- Develop technical solutions through the application of AI competencies.

## **Master of Science in Information Technology with a Concentration in Cybersecurity Management**

The Cybersecurity Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A master's degree concentration Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Information Technology (IT) security.

The Cybersecurity Management concentration is designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today's rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup> and supports the National Initiative for Cybersecurity Education (NICE) framework.

Students will be prepared to serve in a range of cybersecurity management and leadership roles to continuously strengthen security postures in a fluid environment of constantly changing human, machine, and state actor threats.

This degree prepares students to:

- Analyze methods to develop and implement cybersecurity management policies and procedures to meet organizational needs based on best practices
- Evaluate methods for the development and delivery of cybersecurity training and education at the institutional level
- Plan cybersecurity management oversight and governance through development of strategic cybersecurity policies and plans
- Examine best practices for communicating cybersecurity management issues with Boards of Director and other management leadership teams
- Evaluate methods for performing cybersecurity audits and documenting audit responses

## **Master of Science in Information Technology with a Concentration in Database Design and Administration**

The Database Design and Administration master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults who are current or aspiring database designers and administrators. Students will learn how to design, administer, fine-tune, and maintain databases with a database administration degree, plus develop business acumen that will help them excel in the Information Technology (IT) field. Master's degree students learn from expert instructors who work in the fields in which they teach, providing cutting-edge insight to what is needed to work efficiently and effectively in this sector of IT.

The combination of required and elective courses in the master's degree program covers common database management systems (DBMS) such as SQL Server and Oracle. The program encompasses key database technologies such as PL/SQL, Transact-SQL, and NoSQL databases. This comprehensive content delivered in a hands-on manner provides both the knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms.

This degree prepares students to:

- Analyze, design, develop, test, deploy, administer and maintain database applications and database security based on industry best practices and end-user requirements
- Apply data modeling, data warehousing, performance tuning, programming and maintenance through technologies such as SQL Server, Oracle, PL/SQL Transact-SQL, and NoSQL



- Create plans to solve organizational issues using business management strategies directly related to database administration theories and applications
- Formulate plans for database installation and configuration, maintenance, and backup and recovery

## Master of Science in Information Technology with a Concentration in Geographic Information Systems

The Geographic Information Systems (GIS) master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. GIS training prepares students to apply geographic information systems technology to solve real-world problems, whether determining the best location for a new store, analyzing environmental damage, or detecting crime patterns in a city. GIS solutions provide the capability to store, retrieve, and analyze spatial information by combining layers of data to yield valuable understanding of a locale.

As a current or aspiring GIS professional, you will receive applied instruction from professional practitioners who work in the fields in which they teach as you learn to plan, implement, and execute a GIS project through remote sensing, internet mapping, or digital image processing. Also, you will develop a valuable business background with creative, solution-oriented techniques through this versatile program, which emphasizes applied education that will propel your GIS career forward. Students will explore GIS fundamentals at a very hands-on, practical level necessary to succeed in the field of GIS.

This degree prepares students to:

- Analyze the nature of, uses for, and implementation processes for geographic data
- Select appropriate applications of GIS technology to solve spatial problems based on organizational/client needs
- Solve real-world problems through analysis and selection of appropriate GIS tools and processes to address the issues

## Master of Science in Information Technology with a Concentration in Information Systems Security

The Information Systems Security master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A master's degree concentration in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Information Technology (IT) security.

Master's degree students receive applied instruction as they learn to navigate real-world security challenges, such as setting up a secure network, securing servers, and problem-solving hypothetical security situations. Students also garner career-relevant knowledge on related IT subjects to better relate the challenges of the rapidly evolving world of information security and cyber threats to other key trends in the IT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup>. In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA), and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education.

This degree prepares students to:

- Develop and implement technical information security tools, policies and procedures to meet organizational needs based on best practices
- Analyze security scenarios to design secure network solutions and applications
- Create strategies to establish secure operations, access control methods, and system security to meet organizational/client requirements
- Evaluate encryption standards and solutions
- Conduct computer forensics analysis

## Master of Science in Information Technology with a Concentration in Project Management

The Project Management master's degree specialty through the Information Technology (IT) program is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students will combine information and communication technology skills with a project management and business background and become a proficient leader within the IT field.

Students will receive hands-on, practical instruction from professional practitioners, who work in the fields in which they teach, on the tools and techniques of effective project management. Students will learn how to develop a clear plan that places a project in the context of an organization's strategic plan, while considering the implications information and communication technologies present in any given project.

Graduates of the Project Management program will gain a firm grasp on converging information and communication technologies and learn to understand the fundamentals of each sector. Recognizing how each IT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this concentration has been developed to align with the current edition of the Project Management Institute's (PMI)<sup>®</sup> A Guide to the Project Management Body of Knowledge, (PMBOK<sup>®</sup> Guide), Project Management Institute, Inc. The unique curriculum equips students with the information and skills needed for the PMI<sup>®</sup> Project Management Professional (PMP)<sup>®</sup> Certification Exam.

This degree prepares students to:

- Apply the basic principles of project management to become proficient in the use of project management software
- Demonstrate the use of agile concepts and techniques to deliver complex projects
- Design a comprehensive risk management plan for a project
- Create strategies to manage the complexity inherent in large-scale projects
- Relate project scope to cost, time, and resource requirements
- Develop procurement plans and assess project contracts

## **Master of Science in Information Technology with a Concentration in Software Design and Programming**

The Software Design and Programming master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students will expand their knowledge of software design and programming principles while developing the in-depth skills needed to succeed in the field with a Software Design and Programming master's degree. Current or aspiring programmers will practice both structured and object-oriented methodologies focusing on industry best practices. Students are able to select from a variety of elective courses that best meet their specific Information Technology (IT) career goals.

Students learn how to develop software programs and applications using modern programming languages, current development frameworks, and Software Quality Assurance (SQA) practices. Students learn to select software solution design methodologies that meet requirements such as scalability, reliability, and implementation. With guidance from expert instructors, students learn and apply problem-solving skills while designing and programming software solutions.

This degree prepares students to:

- Design software solutions using best practices in security, Software Quality Assurance (SQA), and current development frameworks
- Apply both structured and object-oriented design methodologies to create robust, reusable software using modern programming languages
- Assess the role of frameworks in software design and development to lay the groundwork for full-stack development
- Examine distributed computing concepts relating to cloud computing—such as scalability, reliability, virtualization, implementation, and deployment—in order to make informed software development decisions

## **Master of Science in Information Technology with a Concentration in Technology Management**

The Technology Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The Technology Management degree concentration represents the convergence of business and technology and emphasizes the impact technology can have on strategic and operational objectives when applied through sound business management practices. With the right technical skills, combined with a strategic perspective regarding critical business needs, students will be prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

Graduates with a Technology Management master's degree concentration or graduate certificate become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. In addition to the practical education received online or on campus, Technology Management master's degree students will also receive a broader understanding of how related IT sectors impact their technology management roles.

This degree prepares students to:

- Formulate plans to manage technologies for strategic advantage
- Develop and evaluate business cases based on organizational and client requirements
- Assess the role of strategic alliances within an organization
- Summarize project management principles and processes in relation to technology management strategies
- Create and defend IT service assurance plans
- Analyze cloud and internet law across various IT scenarios
- Evaluate strategies and utilize best practices in technology forecasting and innovation

## **Master of Science in Information Technology with a Concentration in Web Design and Development**

The Web Design and Development master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The program provides an in-depth knowledge of web design and web development through hands-on instruction. Students will move beyond the development of first-generation HTML-based Web pages and learn to create interactive, state-of-the-art, web-based applications. Using a variety of essential software tools students will develop projects that support the demands of contemporary business models. The real-world development scenarios, coupled with the hands-on learning experience provided by professional practitioners who work in the fields in which they teach, result in a highly career-relevant, innovative degree in web design and development. In addition to IT fundamentals, students will also develop essential business and problem-solving skills that will help them thrive in any organization.

In an increasingly technological world, it is vital to understand the fundamentals of other areas of the Information Technology (IT) field, and how each converges with web design and web development.

This degree prepares students to:

- Create interactive web-based applications for e-business processes and consumer demands using tools such as cascading style sheets, web graphics construction, interface design and usability, web scripting, and databases
- Create requirements for user experience design by applying UX principles such as user personas, information design, wireframing, and prototyping
- Analyze enterprise goals to apply information architecture and web-design foundational principles for the development of client-server and cloud-based solutions
- Develop solutions for web, app, and mobile scenarios using the latest versions of JavaScript, HTML, CSS, XML, PHP, and Python
- Assess how web design and development converges within the context of security, software, database design, and telecommunications

### **Graduate Certificate in Information Technology with a Concentration in AI Strategy and Application in IT**

This certificate is designed for IT professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

### **Graduate Certificate in Information Technology with a Concentration in Cybersecurity Management**

The graduate certificate in Cybersecurity Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A graduate certificate in Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Cybersecurity Management.

Certificate classes at University College are designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today's rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup> and supports the National Initiative for Cybersecurity Education (NICE) framework.

### **Graduate Certificate in Information Technology with a Concentration in Database Design and Administration**

The graduate certificate in Database Design and Administration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults who are current or aspiring database designers and administrators. Certificate students will expand their skillsets to include designing, administering, fine-tuning, and maintaining databases with a graduate certificate in database design and administration concentration. Expert instructors who work in the fields in which they teach provide excellent insight to what is needed to work efficiently and effectively in this sector of IT.

This certificate prepares students to become leaders in database design, development, and administration while expanding their skillsets to include data modeling, data warehousing, performance tuning, programming, and building and maintaining client-server databases. The combination of required and elective courses in the master's degree program covers common database management systems (DBMS) such as SQL Server and Oracle. The program encompasses key database technologies such as PL/SQL, Transact-SQL programming, and NoSQL databases. This comprehensive content delivered in a hands-on manner provides both the knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms.

Students will also gain additional skills and knowledge in database design and administration through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Information Technology.

### **Graduate Certificate in Information Technology with a Concentration in Information Systems Security**

The graduate certificate in Information Systems Security is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. A graduate certificate in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Information Technology (IT) security.

Certificate classes at University College use innovative lab experiences to provide hands-on expertise with industry-current security tools. Students also garner career-relevant knowledge on related IT subjects to better relate the challenges of the rapidly evolving world of cyber security and cyber threats to other key trends in the IT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup>. In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA),

and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education. Credits earned through this graduate certificate may apply toward a master's degree in Information Technology.

### **Graduate Certificate in Information Technology with a Concentration in Project Management**

The graduate certificate in Project Management through the Information Technology program is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will learn to combine information technology skills with a project management and business background and become a proficient leader within the Information Technology (IT) field. Students will receive hands-on, practical instruction from professional practitioners who work in the fields in which they teach on the tools and techniques of effective project management. Additionally, students will learn how to develop a clear plan that places a project in the context of an organization's strategic plan, while considering the implications information and communication technologies present in any given project. Students will also gain additional skills and knowledge in project management through elective coursework.

Project Management concentration students will learn about converging information and communication technologies and the fundamentals of each sector. Recognizing how each IT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this graduate certificate has been developed to align with the current edition of the Project Management Institute's (PMI)® A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Project Management Institute, Inc. The unique curriculum equips students with the information and skills needed for the PMI® Project Management Professional (PMP)® Certification Exam. Credits earned through this graduate certificate may apply toward a master's degree in the Information Technology program.

### **Graduate Certificate in Information Technology with a Concentration in Software Design and Programming**

The Software Design and Programming graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Students will expand their knowledge of software design and programming principles while developing the in-depth skills needed to succeed in the field with a Software Design and Programming certificate. Current or aspiring programmers will practice both structured and object-oriented methodologies focusing on industry best practices. Students are able to select from a variety of elective courses that best meet their specific Information Technology (IT) career goals.

Certificate students learn how to develop software programs and applications using modern programming languages, current development frameworks, and Software Quality Assurance (SQA) practices. Students learn to select software solution design methodologies that meet requirements such as scalability, reliability, and implementation. With guidance from expert instructors, students learn and apply problem-solving skills while designing and programming software solutions.

### **Graduate Certificate in Information Technology with a Concentration in Technology Management**

The graduate certificate in Technology Management is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. Certificate students will learn how the convergence of business and technology impacts the strategic and operational objectives. Students will gain the right technical skills, combined with a strategic perspective regarding critical business needs, as they are prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

The Technology Management concentration allows students to become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. This applied Technology Management certificate offers professionals an opportunity to receive applied instruction from professional practitioners who bring deep expertise in business management strategies and their technological implications. Students will also gain additional skills and knowledge in technology management through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in the Information Technology program.

### **Graduate Certificate in Information Technology with a Concentration in Web Design and Development**

The Web Design and Development graduate certificate is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults. The certificate program provides an in-depth knowledge of web design and web development through hands-on instruction. Students will move beyond the development of first-generation HTML-based Web pages and learn to create interactive, state-of-the-art, web-based applications. Using a variety of essential software tools students will develop projects that support the demands of contemporary business models. The real-world development scenarios, coupled with the hands-on learning experience provided by professional practitioners who work in the fields in which they teach, result in a highly career-relevant, innovative graduate certificate in web design and development. In addition to IT fundamentals, students will also develop essential business and problem-solving skills that will help them thrive in any organization. In an increasingly technological world, it is vital to understand the fundamentals of other areas of the Information Technology (IT) field, and how each converges with web design and web development.

Credits earned through this graduate certificate may apply toward a master's degree in the Information Technology program.

### **Specialized Graduate Certificate in AI Strategy and Application in IT**

This specialized graduate certificate is designed for IT professionals and leaders seeking to leverage AI effectively and responsibly for application in industry. This program focuses on providing a working knowledge of AI's capabilities, limitations, and ethical considerations, alongside practical skills

for developing AI-driven solutions. It aims to prepare leaders and decision-makers to ethically harness AI strategically to meet organizational goals and adapt to the evolving AI landscape.

### **Specialized Graduate Certificate in Cybersecurity Management**

A specialized graduate certificate in Cybersecurity Management from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in Cybersecurity Management.

Certificate classes at University College are designed to equip students with knowledge of industry best practices and management skills demanded by private and public sector employers in today's rapidly evolving cybersecurity industry. Through hands-on interaction with a set of relevant industry case studies, students will gain knowledge of management tools and principles needed to define, establish, and grow effective and mature cybersecurity management programs for a wide range of organizations. Through experiential learning activities, students will gain an understanding of governance, compliance, regulatory, and business operations domains. These experiences will be enhanced with knowledge of policy and risk management frameworks most relevant to the cybersecurity management profession. The curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup> and supports the National Initiative for Cybersecurity Education (NICE) framework.

### **Specialized Graduate Certificate in Database Design and Administration**

Students in this specialized graduate certificate will expand their skillsets to include designing, administering, fine-tuning, and maintaining databases with a graduate certificate in database design and administration concentration. Expert instructors who work in the fields in which they teach provide excellent insight to what is needed to work efficiently and effectively in this sector of IT.

This certificate prepares students to become leaders in database design, development, and administration while expanding their skillsets to include data modeling, data warehousing, performance tuning, programming, and building and maintaining client-server databases. The combination of required and elective courses covers key database system (DBS) technologies such as SQL Server, Oracle PL/SQL, Transact-SQL programming, and NoSQL databases. This extensive content delivered in a hands-on manner provides both the knowledge and the specific skills needed to put the student on the path to earn key industry certifications for vendor database platforms. Credits earned through this certificate may apply toward a master's degree in Information Technology.

### **Specialized Graduate Certificate in Information Systems Security**

A specialized graduate certificate in Information Systems Security from University College—a designated National Center of Academic Excellence in Cyber Defense Education—combines technology, management, and business skills to prepare graduates for an exciting, high-demand career in IT security.

Certificate classes at University College use innovative lab experiences to provide hands-on expertise with industry-current security tools. Students also garner career-relevant knowledge on related IT subjects to better relate the challenges of the rapidly evolving world of cyber security and cyber threats to other key trends in the IT industry. To ensure up-to-the-minute knowledge and skills, the curriculum was designed around the Common Body of Knowledge for CISSP certification developed by the International Information Systems Security Certifications Consortium (ISC)<sup>2</sup>. In addition, the program was developed in collaboration with the Colorado Springs and Denver chapters of the Information Security Systems Association (ISSA), and the courses have been mapped to the Committee on National Security Systems (CNSS) standards. The University of Denver has been designated by NSA/DHS as a National Center of Academic Excellence in Cyber Defense Education. Credits earned through this certificate may apply toward a master's degree in Information Technology.

### **Specialized Graduate Certificate in Project Management**

Students in the specialized graduate certificate in Project Management will learn to combine information and communication technology skills with a project management and business background and become a proficient leader within the Information Technology (IT) field. Students will receive hands-on, practical instruction from professional practitioners who work in the fields in which they teach on the tools and techniques of effective project management. Additionally, students will learn how to develop a clear plan that places a project in the context of an organization's strategic plan, while considering the implications information and communication technologies present in any given project.

Students will learn about converging information and communication technologies and the fundamentals of each sector. Recognizing how each IT subject connects to one another, from information security systems to geographic information systems, will give students the competitive edge needed in this dynamic industry. The content for this graduate certificate has been developed to align with the current edition of the Project Management Institute's (PMI)<sup>®</sup> A Guide to the Project Management Body of Knowledge, (PMBOK<sup>®</sup> Guide), Project Management Institute, Inc. The unique curriculum equips students with the information and skills needed for the PMI<sup>®</sup> Project Management Professional (PMP)<sup>®</sup> Certification Exam. Credits earned through this certificate may apply toward a master's degree in the Information Technology program.

### **Specialized Graduate Certificate in Software Design and Programming**

Students in the Software Design and Programming specialized graduate certificate will expand their knowledge of software design and programming principles while developing the in-depth skills needed to succeed in the field with a Software Design and Programming certificate. Current or aspiring programmers will practice both structured and object-oriented methodologies focusing on industry best practices. Students are able to select from a variety of elective courses that best meet their specific Information Technology (IT) career goals.

Certificate students learn how to develop software programs and applications using modern programming languages, Software Development Life Cycle (SDLC) frameworks, and Software Quality Assurance (SQA) practices. Students learn to select software solution design methodologies that meet requirements such as scalability, reliability, and implementation. With guidance from expert instructors, students learn and apply problem-solving skills while designing and programming software solutions.

## Specialized Graduate Certificate in Technology Management

Students in the specialized graduate certificate in Technology Management will learn how the convergence of business and technology impacts the strategic and operational objectives. Students will gain the right technical skills, combined with a strategic perspective regarding critical business needs, as they are prepared to meet current industry demands, and positioned to meet the demands of tomorrow.

The Technology Management certificate allows students to become proficient in creating, managing, and using technology to accomplish strategic organizational goals as they expand and strengthen their knowledge and skills in creative thinking, strategic and tactical decision making, and global awareness. This applied Technology Management certificate offers professionals an opportunity to receive applied instruction from professional practitioners who bring deep expertise in business management strategies and their technological implications. Credits earned through this certificate may apply toward a master's degree in the Information Technology program.

## Specialized Graduate Certificate in Web Design and Development

Students in the Web Design and Development specialized graduate certificate gain in-depth knowledge of web design and web development through hands-on instruction. Students will move beyond the development of first-generation HTML-based Web pages and learn to create interactive, state-of-the-art, web-based applications. Using a variety of essential software tools students will develop projects that support the demands of contemporary business models. The real-world development scenarios, coupled with the hands-on learning experience provided by professional practitioners who work in the fields in which they teach, result in a highly career-relevant, innovative certificate in web design and development. In addition to IT fundamentals, students will also develop essential business and problem-solving skills that will help them thrive in any organization. In an increasingly technological world, it is vital to understand the fundamentals of other areas of the Information Technology (IT) field, and how each converges with web design and web development.

Credits earned through this graduate certificate may apply toward a master's degree in the Information Technology program.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Program

### Master of Science in Information Technology with a Concentration in AI Strategy and Application in IT

Code	Title	Credits
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901	Capstone Project	4
or ICT 4902	Capstone Seminar	
<b>Concentration requirements</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
ICT 4710	Strategic Application of AI in IT	4
ICT 4715	Developing AI Technical Solutions	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Master of Science in Information Technology with a Concentration in Cybersecurity Management

Code	Title	Credits
<b>Core course requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901	Capstone Project	4
or ICT 4902	Capstone Seminar	
<b>Concentration requirements</b>		
ICT 4205	Cybersecurity Management	4
ICT 4210	Cybersecurity Policy	4
ICT 4215	Cybersecurity Risk Management and Incident Response	4
ICT 4220	Cybersecurity Leadership and Strategic Planning	4
<b>Elective requirements (choose 4 courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Master of Science in Information Technology with a Concentration in Database Design and Administration

Code	Title	Credits
<b>Core course requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901	Capstone Project	4
or ICT 4902	Capstone Seminar	
<b>Concentration requirements</b>		
ICT 4400	Database Administration	4
ICT 4405	Database Design and Implementation	4
ICT 4410	Data Warehousing Design	4
ICT 4415	Database Backup and Recovery with Lab	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Master of Science in Information Technology with a Concentration in Geographic Information Systems

Code	Title	Credits
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901	Capstone Project	4
or ICT 4902	Capstone Seminar	
<b>Concentration requirements</b>		
GIS 4101	Introduction to Geographic Information Systems	4
GIS 4620	Geodatabase Application	4
GIS 4700	Remote Sensing I	4
GIS 4860	Web GIS	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Master of Science in Information Technology with a Concentration in Information Systems Security

Code	Title	Credits
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901	Capstone Project	4
or ICT 4902	Capstone Seminar	



<b>Concentration requirements</b>		
ICT 4605	Principles of Information Security	4
ICT 4615	Identity and Access Management	4
ICT 4670	Disaster Recovery and Business Continuity Planning	4
ICT 4845	Information Systems Attacks and Defenses	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### **Master of Science in Information Technology with a Concentration in Project Management**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901 or ICT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
ICT 4100	Principles of Project Management	4
ICT 4105	Project Contracts and Procurement	4
ICT 4110	Project Risk and Quality Management	4
ICT 4170	Agile Techniques and Practices in Project Management	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### **Master of Science in Information Technology with a Concentration in Software Design and Programming**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901 or ICT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
ICT 4300	Web Enabled Information Systems	4
ICT 4305	Object-Oriented Methods and Programming I	4
ICT 4315	Object-Oriented Methods and Programming II	4
ICT 4310	Distributed Computing	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Information Technology with a Concentration in Technology Management

Code	Title	Credits
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901 or ICT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
ICT 4015	Managing Technology for Strategic Value	4
ICT 4020	Business Forecasting and Planning	4
ICT 4025	Managing the Innovation Process	4
ICT 4100	Principles of Project Management	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Information Technology with a Concentration in Web Design and Development

Code	Title	Credits
<b>Core coursework requirements</b>		
ICT 4000	Business Essentials for Technology Leaders	4
ICT 4001	Technology Leadership	4
ICT 4005	Technical Essentials	4
ICT 4901 or ICT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
ICT 4300	Web Enabled Information Systems	4
ICT 4505	Website Design and Management	4
ICT 4510	Advanced Website Design and Management	4
ICT 4515	Usability Design for Websites	4
<b>Elective requirements (Choose four courses)</b>		<b>16</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Information Technology with a Concentration in AI Strategy and Application in IT

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
ICT 4710	Strategic Application of AI in IT	4
ICT 4715	Developing AI Technical Solutions	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Graduate Certificate in Information Technology with a Concentration in Cybersecurity Management**

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4205	Cybersecurity Management	4
ICT 4210	Cybersecurity Policy	4
ICT 4215	Cybersecurity Risk Management and Incident Response	4
ICT 4220	Cybersecurity Leadership and Strategic Planning	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

University College graduate-level programs require grades of "C" or higher to fulfill program requirements. Courses earning a grade of "C-" or lower renders the credit unacceptable for meeting degree or certificate requirements. In no case may more than one-fourth of the hours accepted toward a degree be grades of "C." A cumulative and program grade-point average of 3.0 or better must be maintained at all times.

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**Graduate Certificate in Information Technology with a Concentration in Database Design and Administration**

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4400	Database Administration	4
ICT 4405	Database Design and Implementation	4
ICT 4410	Data Warehousing Design	4
ICT 4415	Database Backup and Recovery with Lab	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

University College graduate-level programs require grades of "C" or higher to fulfill program requirements. Courses earning a grade of "C-" or lower renders the credit unacceptable for meeting degree or certificate requirements. In no case may more than one-fourth of the hours accepted toward a degree be grades of "C." A cumulative and program grade-point average of 3.0 or better must be maintained at all times.

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**Graduate Certificate in Information Technology with a Concentration in Information Systems Security**

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4605	Principles of Information Security	4
ICT 4615	Identity and Access Management	4
ICT 4670	Disaster Recovery and Business Continuity Planning	4
ICT 4845	Information Systems Attacks and Defenses	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

University College graduate-level programs require grades of "C" or higher to fulfill program requirements. Courses earning a grade of "C-" or lower renders the credit unacceptable for meeting degree or certificate requirements. In no case may more than one-fourth of the hours accepted toward a degree be grades of "C." A cumulative and program grade-point average of 3.0 or better must be maintained at all times.

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### Graduate Certificate in Information Technology with a Concentration in Project Management

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4100	Principles of Project Management	4
ICT 4105	Project Contracts and Procurement	4
ICT 4110	Project Risk and Quality Management	4
ICT 4170	Agile Techniques and Practices in Project Management	4
Elective requirements (Choose two courses)		8
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

University College graduate-level programs require grades of "C" or higher to fulfill program requirements. Courses earning a grade of "C-" or lower renders the credit unacceptable for meeting degree or certificate requirements. In no case may more than one-fourth of the hours accepted toward a degree be grades of "C." A cumulative and program grade-point average of 3.0 or better must be maintained at all times.

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### Graduate Certificate in Information Technology with a Concentration in Software Design and Programming

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4300	Web Enabled Information Systems	4
ICT 4305	Object-Oriented Methods and Programming I	4
ICT 4315	Object-Oriented Methods and Programming II	4
ICT 4310	Distributed Computing	4
Elective requirements (Choose two courses)		8
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Graduate Certificate in Information Technology with a Concentration in Technology Management

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4015	Managing Technology for Strategic Value	4
ICT 4020	Business Forecasting and Planning	4
ICT 4025	Managing the Innovation Process	4
ICT 4100	Principles of Project Management	4
Elective requirements (Choose two courses)		8
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Information Technology with a Concentration in Web Design and Development

Code	Title	Credits
<b>Concentration requirements</b>		
ICT 4300	Web Enabled Information Systems	4
ICT 4505	Website Design and Management	4
ICT 4510	Advanced Website Design and Management	4
ICT 4515	Usability Design for Websites	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in AI Strategy and Application in IT

Code	Title	Credits
<b>Required courses</b>		
ICT 4700	AI Concepts, Capabilities, and Tools	4
ICT 4705	AI Ethics, Policy, & Governance	4
ICT 4710	Strategic Application of AI in IT	4
ICT 4715	Developing AI Technical Solutions	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Cybersecurity Management

Code	Title	Credits
ICT 4205	Cybersecurity Management	4
ICT 4210	Cybersecurity Policy	4
ICT 4215	Cybersecurity Risk Management and Incident Response	4
ICT 4220	Cybersecurity Leadership and Strategic Planning	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Database Design and Administration

Code	Title	Credits
ICT 4400	Database Administration	4
ICT 4405	Database Design and Implementation	4
ICT 4410	Data Warehousing Design	4
ICT 4415	Database Backup and Recovery with Lab	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Information Systems Security

Code	Title	Credits
ICT 4605	Principles of Information Security	4
ICT 4615	Identity and Access Management	4
ICT 4670	Disaster Recovery and Business Continuity Planning	4

ICT 4845	Information Systems Attacks and Defenses	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Project Management

Code	Title	Credits
ICT 4100	Principles of Project Management	4
ICT 4105	Project Contracts and Procurement	4
ICT 4110	Project Risk and Quality Management	4
ICT 4170	Agile Techniques and Practices in Project Management	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Software Design and Programming

Code	Title	Credits
ICT 4300	Web Enabled Information Systems	4
ICT 4305	Object-Oriented Methods and Programming I	4
ICT 4310	Distributed Computing	4
ICT 4315	Object-Oriented Methods and Programming II	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Technology Management

Code	Title	Credits
ICT 4015	Managing Technology for Strategic Value	4
ICT 4100	Principles of Project Management	4
ICT 4020	Business Forecasting and Planning	4
ICT 4025	Managing the Innovation Process	4
<b>Total Credits</b>		<b>16</b>

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### Specialized Graduate Certificate in Web Design and Development

Code	Title	Credits
ICT 4300	Web Enabled Information Systems	4
ICT 4505	Website Design and Management	4
ICT 4510	Advanced Website Design and Management	4
ICT 4515	Usability Design for Websites	4
<b>Total Credits</b>		<b>16</b>

#### ICT 4000 Business Essentials for Technology Leaders (4 Credits)

In this course, students will explore the essential attributes of business research and analysis in the Information Technology (IT) field to make appropriate business decisions. Students will individually and in teams explore the economic principles that drive the IT industry. This course sets the foundation for research, analysis, and critical thinking that will be encountered and required throughout the program. As such, a major component of this course is writing research papers on various topics including economic and technical drivers and challenges, IT economic principles, and the regulatory framework. Additionally, students will participate in collaborative teams as they consider industry trends and customer/user needs during the development process to create a product or service proposal and business case. Lastly, students will have the opportunity to evaluate and utilize management and process tools which will guide class discussions as well as critical thinking and analyses in a structured format. The applicability of these tools extends beyond this course and into the operation and management of an IT organization.

**ICT 4001 Technology Leadership (4 Credits)**

This course is designed to give technology students a broader perspective on technology in organizations. The content will focus on bringing students a new set of skills that will enable them to evaluate what it means to be a technology leader. Students will explore how an IT organization establishes a technology vision and strategy and will develop skills such as communicating effectively, building and managing technology teams, managing risk, and technology budgeting. At the end of the ten weeks, students will demonstrate their technology leadership abilities in an executive presentation.

**ICT 4005 Technical Essentials (4 Credits)**

In this course, students will examine the essential technologies that comprise the field of Information Technology (IT). Students will explore each technical discipline as groundwork for pursuing a specialized discipline while also gaining an understanding of how the disciplines work together. A major component of this course is conducting research and writing analyses of the various technical topics that drive the IT industry. This course sets the foundation for technical research, analysis, and critical thinking that will be encountered and required throughout the IT program.

**ICT 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**ICT 4010 Enterprise Architecture (4 Credits)**

In this course, students will learn how to integrate IT to effectively support business goals. The course examines how enterprise architecture (EA) informs business and technology strategy. The course will explore the basics of EA, such as reference architectures, architecture patterns, and a comparison of EA and other architecture types. Students will also examine the opportunities and limitations of various EA frameworks and will apply the methods and tools of one of those frameworks, TOGAF, to design and document an EA initiative. Additionally, the EA implications of IT related topics such as cloud computing, global regulatory compliance, data protection, artificial intelligence, and IT ecosystems will be explored. Prerequisite: Recommended ICT 4000, ICT 4005.

**ICT 4015 Managing Technology for Strategic Value (4 Credits)**

Technology's impact on business organizations is tremendous, and will likely only intensify in the future. While some businesses still view technology as an expense to the bottom line, other organizations use technology to gain a competitive advantage. Considering the impact of technology on smaller or startup companies as well as large corporations, this course will explore concepts, tools and frameworks to understand how technology can be used to inform business strategy. Students will apply current methodologies to case studies and projects to gain insight into business and digital transformation. Topics include digital future, business organization framework, technology financial management, data proliferation, technology risk management, disruptive innovations, and performance measurement. Prerequisite: Recommended ICT 4000.

**ICT 4020 Business Forecasting and Planning (4 Credits)**

This course includes a wide diversity of skills required in one's professional career. Topics include the importance of accurate planning and scheduling for successful projects, risk/opportunity analysis, resource planning and allocation, building budgets, revenue forecasting, profit and loss statements, balance sheet analysis, the importance of managing customer perceptions and expectations, and the impact of economic issues on project success. Students will develop business analyses, including budgets and business plans, for several increasingly difficult scenarios addressing a range of technology applications and services. The final case study will culminate in a presentation to be given to potential investors, banks, or venture capitalists to secure a commitment for funding for a simulated telecom project. Recommended prerequisite: ICT 4000.

**ICT 4025 Managing the Innovation Process (4 Credits)**

Students will experience innovation management by developing a new product from ideation to adoption. Students will craft compelling product visions, create innovative cultures, and align teams to their innovation strategy. They will develop a product roadmap and a team that can not only deliver the product, but support its ongoing operations in the market. Students will practice setting strategic objectives for the new product, and explore regulatory, licensing, and pricing concepts – and then bring that information together in a product forecast that helps an enterprise understand product performance from awareness to adoption. All of these elements come together as the project's new product introduction plan, delivered in the final presentation. Required Prerequisite: ICT 4000.

**ICT 4100 Principles of Project Management (4 Credits)**

This course will provide students with practical knowledge, tools, and techniques to become an effective project manager and work successfully within a project team. Students will learn real-world application of foundational concepts and develop skills such as stakeholder management, balancing competing constraints, delivery of value, navigating risks and ambiguity, building and running a high-performance project team, defining scope, managing change, and productive communication strategies. Students will practice classroom concepts through hands-on exercises individually and in teams.

**ICT 4105 Project Contracts and Procurement (4 Credits)**

This course is designed to provide students with leadership and practical skills in project contracts and procurement. The course covers current trends in the procurement marketplace, including digital transformation, supplier relationship management, sustainability, cyber security and agile processes. Students will gain knowledge of the various elements of the contract and procurement process, including procurement plans, requests for proposal (RFP), Statements of Work (SOW), and various types of contracts. Students will learn project management and negotiating skills, and gain hands-on experience developing a procurement plan, supplier selection criteria, an RFP or other appropriate RFx, and contract terms. Recommended prerequisite: ICT 4100.

**ICT 4110 Project Risk and Quality Management (4 Credits)**

This course introduces students to project risk and quality management and develops advanced skills in applying the project management tools and techniques learned in ICT 4100. A focused examination of scheduling, cost, quality, and risk management processes using advanced tools and techniques is included. Emphasis is placed on the project planning, execution, and monitoring and controlling processes. This course is on the Project Management Institute's (PMI) certification track. Recommended prerequisite: ICT 4100.

**ICT 4115 Project Management Dynamics (4 Credits)**

This is an advanced course that applies project management knowledge and skills to identify and analyze a complex project dynamics. Case studies will be used to explore the PMI project domains and project management dynamics. Learning is based on reading case material, the PMBOK Standard, completing project management simulations and the practical application of project management tools and techniques. Students receive hands-on simulation experiences in planning and running projects, and working in learning teams to practice project management roles. Students develop a workable project change management system, exercise project integration and communication skills, and demonstrate the ability to keep an overall project on track. They also demonstrate decision-making skills, with emphasis on making trade-offs based on solid business rationale.

**ICT 4155 Strategic Alliances in the Technology Sector (4 Credits)**

Strategic alliances are one of the key drivers in today's global economy and they have gradually replaced vertical integration as the chief method of corporate expansion. Business-to-Business alliances provide organizations with a variety of benefits including enhancing the capability of organizations and helping to extract maximum value from available resources. While applicable to any industry, strategic alliances are particularly important in the technology sector. This course defines and discusses the roles of various types of strategic alliances in the technology sector, including informal alliances, partnerships, joint ventures, and outsourcing arrangements. Students will use case studies to explore strategies for managing profitability and leveraging these external business relationships. Students will analyze successful and unsuccessful alliances from the perspective of each alliance participant, 3rd party vendors, customers, and a variety of other stakeholders.

**ICT 4170 Agile Techniques and Practices in Project Management (4 Credits)**

Agile principles and practices are used across many project domains, each with its own unique characteristics and challenges. As the term implies, Agile techniques for the successful use of Agile project management processes are not static; they are dynamic and continuously evolving. The Agile debate is now turning from the tactical to the strategic. Realizing the full benefits of Agile (e.g., faster time to market, improved responsiveness to customers, higher quality, and greater efficiency), means more than improving project execution. It requires understanding the right place for Agile versus traditional methods within a modern enterprise comprised of multiple teams or groups of teams. This course examines both the Agile processes and practices for delivering projects, how to choose when Agile is appropriate versus Predictive methods, and the cultural challenges encountered when transforming into strategic Agile teams. Recommended prerequisite: ICT 4100.

**ICT 4200 Cybersecurity Foundations (4 Credits)**

This course will provide students with an understanding of cybersecurity and the importance of implementing sound cybersecurity policies, procedures, and systems. The course is for students who are new to cybersecurity (e.g., newly appointed managers with little cybersecurity experience) or those who need a refresher of cybersecurity fundamentals prior to taking additional courses in the concentration.

**ICT 4205 Cybersecurity Management (4 Credits)**

This course places students in cybersecurity manager roles to expose them to multiple security viewpoints. Students will interact with the full breadth of cybersecurity dimensions, including people, internal and external organizations, systems, and networks. They will learn how organizations strive to control all possible outcomes and occurrences within defined risk contexts as defined by company Directors. Students walk through the management discipline of cybersecurity, starting with the determination of needs and goals and the application of best practices before moving to the continual maintenance and improvement of an organization's cybersecurity stance. The course will provide students with an understanding of management roles and responsibilities including policy and process oversight, adherence to laws and regulations, cybersecurity program management, and understanding the types of reports created and reviewed by cybersecurity managers (such as reports for a Board of Directors). Prerequisite: Recommended ICT 4200 or practical experience in Information Security Principles and Practices.

**ICT 4210 Cybersecurity Policy (4 Credits)**

This course will help students understand critical events that shaped the U.S. cybersecurity landscape. Students will explore the impact of international cybersecurity policy such as the European General Data Protection Regulation (GDPR) on U.S. businesses. Students will learn how to analyze new cybersecurity policies and regulations to determine their impact on organizations.

**ICT 4215 Cybersecurity Risk Management and Incident Response (4 Credits)**

This course covers how to manage cybersecurity risk including mitigating risk, responding to incidents, and incident reporting (in particular when governmental and regulatory agencies need to be notified). This course will also address working with a public relations team and the Board of Directors to create press statements regarding cybersecurity incidents or breaches.

**ICT 4220 Cybersecurity Leadership and Strategic Planning (4 Credits)**

This course covers senior and strategic cybersecurity leadership roles and responsibilities, including the skills required for supervising and managing employees performing cybersecurity-related work. The course will provide students with an understanding of the tools and techniques required for analyzing technology, management, and leadership issues related to organizational processes and problem-solving. Students will learn how to develop new policies and advocate for changes to existing policies that align with organizational goals and cyberspace initiatives, including compliance with various laws and regulatory requirements. The course will also cover cybersecurity risk management concepts and practices. Recommended prerequisite: ICT 4200 or practical experience in information systems security principles and practices.



**ICT 4225 Cybersecurity Audits (4 Credits)**

Cybersecurity audits play a key role in addressing today's rapidly changing cyber threat landscape. Executives, including members of the Board of Directors may be required to certify that they have taken reasonable steps to protect information assets. Cybersecurity audits are a primary way to verify that information system and process controls effectively address cybersecurity risks. This course will cover cybersecurity audits, providing aspiring audit professionals with the information needed to manage a comprehensive audit of cybersecurity controls. Recommended prerequisite: ICT 4210.

**ICT 4300 Web Enabled Information Systems (4 Credits)**

This course is an introduction to the development of modern software systems from the desktop to the cloud. The course examines best practices for software development and introduces the three tiers of software development from the web frontend to the database backend using available tools and software. It covers security issues and best practices related to developing web and cloud applications. This course lays the groundwork for a common understanding of full stack development. This should be the first course taken in: Software Design and Programming and Web.

**ICT 4305 Object-Oriented Methods and Programming I (4 Credits)**

This is the first of two courses that will present Object-Oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course examines Object-Oriented concepts such as abstraction, encapsulation, generalization, and polymorphism. Students will exercise these concepts with hands-on programming practice and define testing procedures. Additionally, students will use Integrated Development Tools and determine the role of software design frameworks. Students without any Java experience are recommended to take ICT 4361 Java Programming before taking this class. Recommended prerequisite: ICT 4300.

**ICT 4310 Distributed Computing (4 Credits)**

This course provides a practical, hands-on introduction to distributed applications and the use of cloud technologies. The course develops students' understanding of application scalability, reliability and virtualization through the design, implementation, and deployment of cloud applications and services. Students will evaluate, recommend, and justify distributed technology solutions based on complexity, reliability and cost. Recommended prerequisites: ICT 4300, ICT 4315.

**ICT 4315 Object-Oriented Methods and Programming II (4 Credits)**

This is the second of two courses that will present object-oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course builds on the material from ICT-4305 to create code based on models written using the UML while applying industry standard object-oriented design patterns. Students will learn critical skills in designing inheritance hierarchies, working with object persistence and serialization frameworks and multi-threaded code. Additionally, the course will cover critical topics in privacy and security, including recent legislation such as the GDPR. Prerequisite: ICT 4305.

**ICT 4351 .NET Programming with C# (4 Credits)**

Students will explore the fundamentals of C# and object-oriented programming by using Visual Studio to develop desktop and web applications, test and debug applications, perform object-relational mapping using Entity Framework, and connect with XML and SQL data sources. Students will identify and describe various .NET components, design issues, development solutions, and package managers, while gaining familiarity with the core .NET languages and CLR execution. Recommended prerequisite: ICT 4305.

**ICT 4361 Java Programming (4 Credits)**

This course introduces students to the fundamentals of procedural and object-oriented programming, using the Java language. It teaches how to write, run, and debug basic programs before moving to a study of discrete, manageable building blocks that can be composed together to form software of any complexity. It will show how to use Java's built-in tools to load, store, and discover information, both in transient memory and persisted files. Students will interpret and modify sample code, with the help of various online learning aids, and gradually build up the confidence needed to write novel programs based on provided specifications.

**ICT 4370 Python Programming (4 Credits)**

This course starts with an introduction to Python programming covering basic programming concepts and Python syntax. It then continues to deepen students' knowledge of Python by teaching how to access data (text files, databases and other data storage technologies), and process and manipulate that data. Basics of creating front-end interfaces with Python are covered in order to allow students to produce more intuitive interaction with application users. Beyond core Python libraries, other commonly used Python libraries will also be utilized in the course. The course will focus on good programming practices and solving problems effectively. At the successful completion of the class, students will be able to create a number of different types of projects and execute them in Python, as well as continue learning and applying Python skills to data analytics, GIS and other areas of focus. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**ICT 4375 Blockchain, Cryptocurrency, and Web3 Foundations (4 Credits)**

Novel protocols, tools, and techniques are restructuring the web itself into a more distributed, trusted, and self-managing network than ever before. Welcome to Web3. This course will help students master foundational blockchain concepts and explore Web3-enabling technologies. Students will gain the ability to confidently apply decentralized technologies like blockchains, cryptocurrencies, tokens, peer-to-peer apps, and more. Furthermore, students will understand how these technologies are being applied in industries around the world and why. Students will gain the ability to critically assess when Web3 technology is advantageous over other solutions both from a technical and financial perspective. Knowledge of basic programming principles is recommended.

**ICT 4390 iOS Application Development (4 Credits)**

This course is designed to help students build a solid foundation in programming fundamentals utilizing the Swift programming language. Students will gain practical experience with the tools, techniques, and concepts required to build an iOS app both on their own and as a part of a team. Students will also learn the fundamental user interface design principles that are necessary for creating a meaningful user experience. Prior programming experience is not required for this course, but students must have a Mac/Apple computer.

**ICT 4395 Android Application Development (4 Credits)**

In the Information and Communications Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4400 Database Administration (4 Credits)**

This course introduces the roles and responsibilities, as well as the critical knowledge and skills, needed to function as a database administrator. The course focuses on Oracle and Microsoft SQL Server RDBMSs and the Oracle NoSQL databases. Database administration covers a range of topics which are covered in this course; installation, configuration, performance tuning, maintenance, and database security. Special focus will be paid to the architecture of the RDBMS and NoSQL systems, using it as the basis of much of the work throughout the course. There will be weekly hands-on lab work that afford students opportunities to gain valuable practical experience in managing databases. This course will function as an introduction to other courses in the Database Design and Administration concentration, which will give students the occasion to study these topics in greater depth. The course will conclude with an examination of the future of the database field, discussing quantum computing, cloud computing and block-chain technology.

**ICT 4405 Database Design and Implementation (4 Credits)**

In this course, students will focus on database design from a holistic view of a database from inception to implementation. Students will start by exploring the history and evolution of database systems and models and then proceed to hands-on application of database design theory. The course concentrates on the relational database model and the conceptual, logical, and physical phases of database design and development. Entity-relationship modeling, data normalization, and Structured Query Language application are core components of the class. Students will gain hands-on experience with database design concepts and have the opportunity to build a relational database using the foundational principles of database design within the framework of the database life cycle (DBLC).

**ICT 4410 Data Warehousing Design (4 Credits)**

Data warehouses are one of the most valuable assets an organization can possess to remain competitive in a quickly evolving global marketplace. This course provides students an introduction to the role of data warehouses in effective decision-making based on data for strategic and operational objectives and supporting decision support systems. This course will provide students foundational knowledge and skills around data warehouse design and broad coverage of data warehouse concepts, architecture, data modeling, security, implementation and trends underlying current and future development. Prerequisite: Recommended ICT 4400.

**ICT 4415 Database Backup and Recovery with Lab (4 Credits)**

This course explores database backup and recovery strategies and tactics using both Oracle and SQL Server database systems. The course will include weekly lab work that will give students an opportunity to gain experience with Oracle and SQL Server databases. Topics include preparing backup, recovery and disaster plans, as well as performing complete and incomplete database recoveries using the Oracle Export/Import utility. Students also work with a SQL Server database, utilizing the SQL Server Management Studio. Students will be assigned a Linux Virtual environment that will be used for all Oracle administration, and they will install a SQL Server database locally that will be used for all SQL Server administration. Prerequisite: ICT 4400.

**ICT 4430 Database Security (4 Credits)**

As the world has become increasingly data-driven, IT professionals have been forced to dramatically rethink how to protect their most valuable corporate asset, data. This course strives to provide a perspective that intersects several technology disciplines: database administration, web-based application development, and technology management. Taking a defense-in-layers view, Database Security will provide students with an opportunity to gain an understanding of how data is protected from several perspectives. A wide range of database security concepts will be explored, including those specific to the Oracle, MySQL, and Microsoft SQL Server RDBMSs. Students will gain an understanding of the different types of threats and vulnerabilities present in a data-centric world and will develop strategies to protect an enterprise's data footprint.

**ICT 4451 Database Programming: Oracle PL/SQL (4 Credits)**

This course builds on skills learned in ICT 4405 Database Design and Programming. Students will transform a database schema design into a database application using Oracle's PL/SQL programming language. Topics include advanced SQL DDL, DML, and scripting, PL/SQL constructs, stored procedures, modular design and development (packages), software development processes, views, sequences, cursors, dynamic SQL, and error handling. Using weekly assignments, students will practice different aspects of design and development of database applications. Prerequisite: ICT 4405 or SQL experience.

**ICT 4462 SQL Server and T-SQL Lab (4 Credits)**

This course provides a comprehensive introduction to Microsoft SQL Server, utilizing the SQL Management Studio for administrative and development tasks. This course offers a solid foundation of the Transact-SQL (T-SQL) constructs that will enable students to build, query, maintain, and finetune SQL Server databases. The course focuses on basic to advanced queries including joins, functions, data types, stored procedures, declaration and execution, cursors, temp tables, triggers, error handling, transaction management, and security. This course also offers an introduction to common administrative and maintenance tasks, SQL Integration Services, SQL Analysis Services, and SQL Reporting Services are covered. Working in Microsoft SQL Server, students experience hands-on learning in weekly labs to prepare them for real-world situations. Prerequisite: Recommended ICT 4400.

**ICT 4485 NoSQL Databases for Big Data (4 Credits)**

Structured Query Language (SQL) based database management systems (DBMS), commonly referred to as relational databases, have been dominant in the market for over forty years and remain so today. However, the emergence of real-time streaming data from technologies such as the Internet of Things (IoT) and relationship-based dynamic datasets from e-commerce and social networks gave rise to big data. Big data is characterized by volume (petabytes), velocity (data rate), and variety (structured and unstructured). Relational databases are not suitable for big data. The requirements of big data have created the need for alternate databases. NoSQL databases were developed to address the requirements of big data. The requirements of big data cannot be satisfied by a single NoSQL database model because real-time streaming data is structured very differently from relationship-based dynamic data. Many large, well-known companies use different types of NoSQL databases to solve problems in their domain. In this course we will examine four NoSQL database models: key-value, document, column, and graph. Students will learn about advantages and disadvantages of each type of NoSQL database model. The course will include hands-on experience with a relational database and each type of NoSQL database. Students will also learn to analyze the structure of data and select the appropriate NoSQL database model to store and manipulate big data.

**ICT 4505 Website Design and Management (4 Credits)**

This course extends your web design and development skills and includes advanced HTML techniques and enhanced page design capabilities using CSS. The key to great web design is rooted in a solid foundation, which requires a plan or a "blueprint." We will explore best practices in information architecture (IA) and how to incorporate user-centered design (UCD) techniques as a standard practice in web design. Students will also develop an understanding and working knowledge of Cascading Style Sheets. Through the use of readings, examples, hands-on projects, and discussions, the class will build an understanding of the foundations and applications of user-centered design to plan, build, and manage a website. Through participation in a project and regular discussions, class members will experience working as active and contributing members of the class and knowledge-building community.

**ICT 4510 Advanced Website Design and Management (4 Credits)**

Web development has become an integral part of the tech industry and has created a multitude of career options for job seekers. This course will enhance the knowledge gained in ICT-4505 by delving into HTML5 JavaScript APIs and Responsive design using a common CSS framework. Students will be introduced to beginner, intermediate and advanced JavaScript concepts. Finally, the foundational web languages HTML5, CSS and JavaScript will be used to build a fully functional client-side application. Prerequisite: ICT 4505.

**ICT 4515 Usability Design for Websites (4 Credits)**

This course expands on the basic knowledge of website design and development by providing an in-depth understanding of how to design a website with the user in mind. Students will gain knowledge about how the fields of human factors engineering and psychology (e.g., visual perception, attention, cognition, learning and memory, information processing) relate to the basis of usability design as well as how usability assessments are conducted. Usability guidelines for common functions such as web navigation, search, menus, scrolling, links, text, page layout, visual organization, etc. will be explored. Students will have the opportunity to develop a website that demonstrates appropriate use of important usability guidelines and conduct usability assessments with real users. Prerequisite: ICT 4505.

**ICT 4540 Data in Web Application Development (4 Credits)**

XML is an open, text-based markup language (Extensible Markup Language) that provides structural and semantic information to data. XML was designed to store and send data, and it can also be used by software and web-based applications for display. This course explores several common industry-leading approaches, models, and techniques for XML in business applications. Hands-on experience with the XML formats and manipulation, which includes syntax, structure, context, and programmatic uses of XML, form the weekly assignments, culminating in a summary project. Other related standards, such as JSON, are discussed, as well as use of CSS for display of XML data. Some JavaScript is introduced to illustrate the document object model and techniques for integration of data. Prerequisites: Students should have familiarity with constructing HTML web pages and data concepts. Familiarity with data manipulation, APIs, or a programming language will be helpful but not required.

**ICT 4560 Web Graphics Production (4 Credits)**

This course introduces the fundamental concepts and techniques of digital graphics creation and image processing for both online publication and website interface design using industry-leading tools as well as topics around use policy and considerations of image manipulation in the digital age. Students learn the basics of manipulating, correcting and modifying images, bitmap painting tools, vector drawing tools, typography, masking, web production techniques, and advanced image compositing in hands-on exercises and assignments. Basic integration of images and generated code into a website layout employing CSS is also covered. Experience with tools like Adobe Photoshop is useful but not required.

**ICT 4570 Web Scripting with JavaScript (4 Credits)**

This course presents students with the principles necessary to design and develop client-side and server-side scripts used to build dynamic websites and applications. JavaScript concepts such as data types, control structures, functions and objects are discussed. Students learn how to write beginner and intermediate scripts. Students will be introduced to frameworks and libraries such as Node.js and Arrow Functions that are used to create interactive and dynamic client-side and server-side applications. Real world examples will be included. Technologies covered in the course include JavaScript/ECMAScript, JSON (a JavaScript-friendly data format), XML (Extensible Markup Language) JavaScript as the J in AJAX, and JavaScript in HTML5 form interaction and validation. Prerequisite: Recommended ICT 4505, ICT 4510.

**ICT 4580 Cross-Platform Mobile Application Development (4 Credits)**

The mobile device market has grown tremendously over the past few years. Self-contained apps that are focused on one concept account for a large percentage of this growth. This course teaches the basic concepts of developing a mobile application using a framework so that the application runs on different devices. Students will synthesize the basic knowledge of the framework to create building blocks of various tools. They will follow best practices in the development lifecycle of building a mobile application. Students will compare and contrast various frameworks for mobile application projects. They will construct their mobile application that could be deployed across many platforms that use native device APIs and hardware. Prior programming experience recommended.

**ICT 4605 Principles of Information Security (4 Credits)**

This is a comprehensive Information Systems Security management course covering the eight basic principles of Information Assurance and Information Systems Security. The course follows the Common Body of Knowledge (CBK) convention established by the International Information System Security Certification Consortium, Inc. (ISC)2. In this course, students learn about information security risk management, asset security, security architecture and engineering, communication and network security, identity and access management, security assessment and testing, security operations, and software development security. The course applies a systems approach to security issues to analyze and develop security solutions. The information covered includes contemporary issues of cybercrime and how to mitigate cybersecurity risks. All topics are discussed in the context of a total enterprise-wide framework.

**ICT 4610 TCP/IP Networks (4 Credits)**

This course explores the design, architecture, capabilities, and security of the TCP/IP protocol stack by looking at its history, development, and current applications. The course also explores how TCP/IP has supported the growth of the Internet, Internet of Things (IoT), and next-generation wireless networks and services. The TCP/IP model, standards, and key architectural principles that support data flow are examined through familiarization with the full TCP/IP v4 and v6 protocol suites. Students explore TCP/IP capabilities, addressing/subnetting, performance, and cybersecurity issues. The course also covers security-specific protocols to support secure network communications, user identity protection, and the security aspects of all other protocols. Students will examine secure VPN services and mechanisms for personal and business Internet connectivity. The course concludes with a survey of modern topics including Real-Time Communications and IPv6.

**ICT 4615 Identity and Access Management (4 Credits)**

Identity is the new security perimeter. Access can be determined based on a persona, a role, or a user type. Identity and Access Management (IAM), then, is the foundation for access to any secured computer resource and must be handled and managed carefully and deliberately. This course will provide students with the skills they will need to succeed at designing and implementing access control mechanisms on networked systems. The course covers the principles and mechanisms that compose an overall IAM system and is based on modern technology that supports Zero Trust, Federated Identity, Role-based Access Controls (RBAC), and Attribute-based Access Controls (ABAC).

**ICT 4670 Disaster Recovery and Business Continuity Planning (4 Credits)**

This course is an introduction to Disaster Recovery and Business Continuity (DR/BC) Planning. The course examines the steps required to identify mission-critical continuity needs of an organization, analyzes the legal & regulatory requirements for data security, and evaluates the various risks management approaches to identify and quantify business risk associated with business continuity. The course provides students the opportunity to create a Disaster Recover/Business Continuity (DR/BC) plan that incorporates business resumption planning, emergency response & communication, and data/system recovery techniques.

**ICT 4680 Principles of Cryptography (4 Credits)**

E-commerce has made cryptography a cornerstone of modern information systems security. Cryptology is a core component of all recognized information security certifications; however, it may be the least understood of the information security disciplines. This course focuses on the terminology and concepts needed to understand how cryptographic techniques are used to protect sensitive information. Topics include different types of ciphers (substitution, transposition, block and stream), Digital Signatures and Message Authentication Codes, public key infrastructure (PKI), secure sockets layer (SSL), and network protocols for encryption, among others. Lecture and reading materials are reinforced by hands-on experimentation in a virtual lab environment focused on real-world uses of cryptography. Internet resources are used to tie the course material to current technology trends. No programming experience or advanced mathematical skills are required for this course. Recommended prerequisite: ICT 4605.

**ICT 4685 Cloud and Internet Law (4 Credits)**

This course explores the legal and technical ramifications and implications created by cloud computing and Internet Law. This course also examines the types of issues and concerns that exist in the US and the world by the dynamic change in software, computer networking, and cloud infrastructure. This rapid change in computer networking, data, information, Internet, and cloud architecture directly impacts governments, companies, and individuals. Issues include how to handle data, information, security, privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries, and parts of the world. It is important that all of these issues are balanced by differing cultural standards and mores from all 50 States, all over our country and all around the world, including the legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing, "always-connected" world.

**ICT 4690 Computer Forensics with Lab (4 Credits)**

This course will introduce students to current methods and techniques in computer forensics with a focus on the appropriate procedures for evidence collection and processing. As electronic information increases in its importance and use in the court of law, future investigators need to be able to collect and analyze forensics data from computer systems in support of incident investigations, including e-Discovery, forensic analysis and reporting, evidence acquisition, Internet browser forensics and tracing user and application activities on computing systems. The course is supplemented by hands-on exercises, case studies, and a final culminating assignment. Prerequisites: Required ICT 4605 (unless prior ISS experience), Recommended ICT 4610.

**ICT 4695 Application Security (4 Credits)**

In this course, students explore the security concepts, principles, training needs, and practices that are used to secure the modern software development lifecycle (SDLC). Topics include enhancing Agile/Scrum development processes with secure design models and application risk analysis, application lifecycle management, defensive programming, secure DevOps, and AppSec (application security) issues with new technology and new consumer devices. Recommended prerequisite: ICT 4605.

**ICT 4700 AI Concepts, Capabilities, and Tools (4 Credits)**

This graduate-level course provides a comprehensive exploration of evolving artificial intelligence (AI) concepts, tools, and their applications in organizational settings. The course is tailored for all learners seeking to gain a foundational understanding of AI concepts. Students will gain a deep understanding of the benefits, limitations, and tradeoffs associated with designing and engaging with AI tools. The course aims to empower students to champion appropriate AI use within organizations, identify business or organizational problems suitable for AI solutions, and navigate the dynamic landscape of AI in their respective industries.

**ICT 4701 Topics in Information Technology (4 Credits)**

This is an advanced special topics seminar course that may be offered to address a developing concept, an industry trend, or a new technology. The focus is on specialized areas of interest. Topics courses may be used as electives within the Information Technology degree and certificate programs, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate program.

**ICT 4800 Network Communications and the Internet (4 Credits)**

This course focuses on the fundamental concepts and technologies of communications networks and the Internet, including Network Communications theory through the TCP/IP stack, which is the foundation of modern communication systems. The course also emphasizes application of these concepts to the analysis and design of network solutions for various Enterprise and Service Providers requirements. Topics include in-depth analysis of the layered structure of networking protocols, network media, communications standards, LAN and WAN network architectures, in-depth IP routing, and current trends in networking via the Internet. Students will analyze the purpose of network routing protocols, their respective algorithms, and IP addressing. Students will apply critical thinking via discussions of current and future trends in network technology, expanding to IP Services, Network Virtualization, and their role in networking evolution. Prerequisite: Recommended ICT 4005.

**ICT 4820 Advanced Network Technologies (4 Credits)**

Technological advancements in networking within the last few years are revolutionizing networking concepts for both enterprises and service providers. This course demystifies those latest advancements in network technologies. Topics include in-depth coverage of modern networking elements, network requirements, and network virtualization technologies, including Software Defined Networks (SDN) and Network Function Virtualization (NFV). The course will also explore the latest network technologies' requirements, such as elastic traffic, mobility, ultra-low latency, on-demand bandwidth, and more. Further, students will discuss the motivations behind network softwarization, SDN and NFV components, architecture, protocols, and use cases. The course emphasizes deep understanding, analyses, and evaluation of modern network architectures. Prerequisite: Required ICT 4800.

**ICT 4830 Broadband Wireless Networks (4 Credits)**

This course examines how Broadband radio technologies are changing to meet the growing demands for autonomous vehicles, smart cities/smart homes using smart IoT devices, cellular communications that deliver consumer entertainment/relevant and specific information content, support remote workers, and online learning. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to meet the demands of continually increasing data traffic from devices such as mobile smartphones, tablets, hotspots, smart IoT devices, new emerging technologies like cellular-vehicle-to-everything (C-V2x), as well as broadband services like VOIP and mobile video. Current and dominant wireless telecom technologies and protocols are presented, including 3G, 4G LTE, OFDM, MIMO, Mobile IP, WIMAX, and Wi-Fi. The new 5G NR technology standards and services (eMBB, URLLC, mMTC) will be presented. The wireless telecom industry is studied from standards, carrier, and technology perspectives, with an emphasis on radio networks designed to support key use cases. Prerequisite: Recommended ICT 4835.

**ICT 4840 Next Generation Wireless Networks and Services (4 Credits)**

The rapid innovation in wireless networks that is at the center of today's IT industry takes place in the four areas of broadband radio, core and edge networks, wireless services, as well as smart objects. This course focuses on the key next generation technologies at the core network, service, and object layers. First, the role of the Internet Protocol Multimedia Subsystem (IMS) in the core network is examined, which is at the heart of many service provider deployments. At the service layer, this course emphasizes wireless service architecture, including popular applications such as mobile real-time messaging, video, and mobile web services. The production of networks and services through cloud technologies is highlighted. The course also explores The Internet of Things (IoT), which plays a prominent role in modern wireless networks. A case study approach is taken to highlight core use cases from key industries including Smart Cities, the Smart Grid, and Industry 4.0. Finally, wireless product development and operations are examined in the critical context of the conflict between over-the-top (OTT) and network operator ecosystems. Prerequisite: Required ICT 4800.

**ICT 4845 Information Systems Attacks and Defenses (4 Credits)**

This course will provide students with the knowledge and skills necessary to conduct effective penetration testing and develop defensive techniques that prevent the attack(s) or reduce the effectiveness or impact of those attacks, should they succeed. Students will focus on real-world examples of both perimeter network security and desktop security across almost any computing environment. Students can work with a range of network security toolboxes in a hands-on, robust software lab environment. Students will also learn how to use the MITRE ATT&CK framework to identify and analyze various attack techniques, tactics, and procedures (TTPs) used by adversaries and will understand how to apply Cyber Kill-chain strategies, followed by using the MITRE D3FEND framework to implement effective defensive measures to mitigate and prevent these and future attacks. Recommended Prerequisite: ICT 4605.

**ICT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and who can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ICT 4902 Capstone Seminar (4 Credits)**

In the Information Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4980 Internship (0-4 Credits)**

The IT internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the IT master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all IT students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the IT degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ICT 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**ICT 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Courses

**ICT 4000 Business Essentials for Technology Leaders (4 Credits)**

In this course, students will explore the essential attributes of business research and analysis in the Information Technology (IT) field to make appropriate business decisions. Students will individually and in teams explore the economic principles that drive the IT industry. This course sets the foundation for research, analysis, and critical thinking that will be encountered and required throughout the program. As such, a major component of this course is writing research papers on various topics including economic and technical drivers and challenges, IT economic principles, and the regulatory framework. Additionally, students will participate in collaborative teams as they consider industry trends and customer/user needs during the development process to create a product or service proposal and business case. Lastly, students will have the opportunity to evaluate and utilize management and process tools which will guide class discussions as well as critical thinking and analyses in a structured format. The applicability of these tools extends beyond this course and into the operation and management of an IT organization.

**ICT 4001 Technology Leadership (4 Credits)**

This course is designed to give technology students a broader perspective on technology in organizations. The content will focus on bringing students a new set of skills that will enable them to evaluate what it means to be a technology leader. Students will explore how an IT organization establishes a technology vision and strategy and will develop skills such as communicating effectively, building and managing technology teams, managing risk, and technology budgeting. At the end of the ten weeks, students will demonstrate their technology leadership abilities in an executive presentation.

**ICT 4005 Technical Essentials (4 Credits)**

In this course, students will examine the essential technologies that comprise the field of Information Technology (IT). Students will explore each technical discipline as groundwork for pursuing a specialized discipline while also gaining an understanding of how the disciplines work together. A major component of this course is conducting research and writing analyses of the various technical topics that drive the IT industry. This course sets the foundation for technical research, analysis, and critical thinking that will be encountered and required throughout the IT program.

**ICT 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**ICT 4010 Enterprise Architecture (4 Credits)**

In this course, students will learn how to integrate IT to effectively support business goals. The course examines how enterprise architecture (EA) informs business and technology strategy. The course will explore the basics of EA, such as reference architectures, architecture patterns, and a comparison of EA and other architecture types. Students will also examine the opportunities and limitations of various EA frameworks and will apply the methods and tools of one of those frameworks, TOGAF, to design and document an EA initiative. Additionally, the EA implications of IT related topics such as cloud computing, global regulatory compliance, data protection, artificial intelligence, and IT ecosystems will be explored. Prerequisite: Recommended ICT 4000, ICT 4005.

**ICT 4015 Managing Technology for Strategic Value (4 Credits)**

Technology's impact on business organizations is tremendous, and will likely only intensify in the future. While some businesses still view technology as an expense to the bottom line, other organizations use technology to gain a competitive advantage. Considering the impact of technology on smaller or startup companies as well as large corporations, this course will explore concepts, tools and frameworks to understand how technology can be used to inform business strategy. Students will apply current methodologies to case studies and projects to gain insight into business and digital transformation. Topics include digital future, business organization framework, technology financial management, data proliferation, technology risk management, disruptive innovations, and performance measurement. Prerequisite: Recommended ICT 4000.

**ICT 4020 Business Forecasting and Planning (4 Credits)**

This course includes a wide diversity of skills required in one's professional career. Topics include the importance of accurate planning and scheduling for successful projects, risk/opportunity analysis, resource planning and allocation, building budgets, revenue forecasting, profit and loss statements, balance sheet analysis, the importance of managing customer perceptions and expectations, and the impact of economic issues on project success. Students will develop business analyses, including budgets and business plans, for several increasingly difficult scenarios addressing a range of technology applications and services. The final case study will culminate in a presentation to be given to potential investors, banks, or venture capitalists to secure a commitment for funding for a simulated telecom project. Recommended prerequisite: ICT 4000.

**ICT 4025 Managing the Innovation Process (4 Credits)**

Students will experience innovation management by developing a new product from ideation to adoption. Students will craft compelling product visions, create innovative cultures, and align teams to their innovation strategy. They will develop a product roadmap and a team that can not only deliver the product, but support its ongoing operations in the market. Students will practice setting strategic objectives for the new product, and explore regulatory, licensing, and pricing concepts – and then bring that information together in a product forecast that helps an enterprise understand product performance from awareness to adoption. All of these elements come together as the project's new product introduction plan, delivered in the final presentation. Required Prerequisite: ICT 4000.

**ICT 4100 Principles of Project Management (4 Credits)**

This course will provide students with practical knowledge, tools, and techniques to become an effective project manager and work successfully within a project team. Students will learn real-world application of foundational concepts and develop skills such as stakeholder management, balancing competing constraints, delivery of value, navigating risks and ambiguity, building and running a high-performance project team, defining scope, managing change, and productive communication strategies. Students will practice classroom concepts through hands-on exercises individually and in teams.

**ICT 4105 Project Contracts and Procurement (4 Credits)**

This course is designed to provide students with leadership and practical skills in project contracts and procurement. The course covers current trends in the procurement marketplace, including digital transformation, supplier relationship management, sustainability, cyber security and agile processes. Students will gain knowledge of the various elements of the contract and procurement process, including procurement plans, requests for proposal (RFP), Statements of Work (SOW), and various types of contracts. Students will learn project management and negotiating skills, and gain hands-on experience developing a procurement plan, supplier selection criteria, an RFP or other appropriate RFx, and contract terms. Recommended prerequisite: ICT 4100.

**ICT 4110 Project Risk and Quality Management (4 Credits)**

This course introduces students to project risk and quality management and develops advanced skills in applying the project management tools and techniques learned in ICT 4100. A focused examination of scheduling, cost, quality, and risk management processes using advanced tools and techniques is included. Emphasis is placed on the project planning, execution, and monitoring and controlling processes. This course is on the Project Management Institute's (PMI) certification track. Recommended prerequisite: ICT 4100.

**ICT 4115 Project Management Dynamics (4 Credits)**

This is an advanced course that applies project management knowledge and skills to identify and analyze a complex project dynamics. Case studies will be used to explore the PMI project domains and project management dynamics. Learning is based on reading case material, the PMBOK Standard, completing project management simulations and the practical application of project management tools and techniques. Students receive hands-on simulation experiences in planning and running projects, and working in learning teams to practice project management roles. Students develop a workable project change management system, exercise project integration and communication skills, and demonstrate the ability to keep an overall project on track. They also demonstrate decision-making skills, with emphasis on making trade-offs based on solid business rationale.

**ICT 4155 Strategic Alliances in the Technology Sector (4 Credits)**

Strategic alliances are one of the key drivers in today's global economy and they have gradually replaced vertical integration as the chief method of corporate expansion. Business-to-Business alliances provide organizations with a variety of benefits including enhancing the capability of organizations and helping to extract maximum value from available resources. While applicable to any industry, strategic alliances are particularly important in the technology sector. This course defines and discusses the roles of various types of strategic alliances in the technology sector, including informal alliances, partnerships, joint ventures, and outsourcing arrangements. Students will use case studies to explore strategies for managing profitability and leveraging these external business relationships. Students will analyze successful and unsuccessful alliances from the perspective of each alliance participant, 3rd party vendors, customers, and a variety of other stakeholders.

**ICT 4170 Agile Techniques and Practices in Project Management (4 Credits)**

Agile principles and practices are used across many project domains, each with its own unique characteristics and challenges. As the term implies, Agile techniques for the successful use of Agile project management processes are not static; they are dynamic and continuously evolving. The Agile debate is now turning from the tactical to the strategic. Realizing the full benefits of Agile (e.g., faster time to market, improved responsiveness to customers, higher quality, and greater efficiency), means more than improving project execution. It requires understanding the right place for Agile versus traditional methods within a modern enterprise comprised of multiple teams or groups of teams. This course examines both the Agile processes and practices for delivering projects, how to choose when Agile is appropriate versus Predictive methods, and the cultural challenges encountered when transforming into strategic Agile teams. Recommended prerequisite: ICT 4100.

**ICT 4200 Cybersecurity Foundations (4 Credits)**

This course will provide students with an understanding of cybersecurity and the importance of implementing sound cybersecurity policies, procedures, and systems. The course is for students who are new to cybersecurity (e.g., newly appointed managers with little cybersecurity experience) or those who need a refresher of cybersecurity fundamentals prior to taking additional courses in the concentration.

**ICT 4205 Cybersecurity Management (4 Credits)**

This course places students in cybersecurity manager roles to expose them to multiple security viewpoints. Students will interact with the full breadth of cybersecurity dimensions, including people, internal and external organizations, systems, and networks. They will learn how organizations strive to control all possible outcomes and occurrences within defined risk contexts as defined by company Directors. Students walk through the management discipline of cybersecurity, starting with the determination of needs and goals and the application of best practices before moving to the continual maintenance and improvement of an organization's cybersecurity stance. The course will provide students with an understanding of management roles and responsibilities including policy and process oversight, adherence to laws and regulations, cybersecurity program management, and understanding the types of reports created and reviewed by cybersecurity managers (such as reports for a Board of Directors). Prerequisite: Recommended ICT 4200 or practical experience in Information Security Principles and Practices.

**ICT 4210 Cybersecurity Policy (4 Credits)**

This course will help students understand critical events that shaped the U.S. cybersecurity landscape. Students will explore the impact of international cybersecurity policy such as the European General Data Protection Regulation (GDPR) on U.S. businesses. Students will learn how to analyze new cybersecurity policies and regulations to determine their impact on organizations.

**ICT 4215 Cybersecurity Risk Management and Incident Response (4 Credits)**

This course covers how to manage cybersecurity risk including mitigating risk, responding to incidents, and incident reporting (in particular when governmental and regulatory agencies need to be notified). This course will also address working with a public relations team and the Board of Directors to create press statements regarding cybersecurity incidents or breaches.

**ICT 4220 Cybersecurity Leadership and Strategic Planning (4 Credits)**

This course covers senior and strategic cybersecurity leadership roles and responsibilities, including the skills required for supervising and managing employees performing cybersecurity-related work. The course will provide students with an understanding of the tools and techniques required for analyzing technology, management, and leadership issues related to organizational processes and problem-solving. Students will learn how to develop new policies and advocate for changes to existing policies that align with organizational goals and cyberspace initiatives, including compliance with various laws and regulatory requirements. The course will also cover cybersecurity risk management concepts and practices. Recommended prerequisite: ICT 4200 or practical experience in information systems security principles and practices.

**ICT 4225 Cybersecurity Audits (4 Credits)**

Cybersecurity audits play a key role in addressing today's rapidly changing cyber threat landscape. Executives, including members of the Board of Directors may be required to certify that they have taken reasonable steps to protect information assets. Cybersecurity audits are a primary way to verify that information system and process controls effectively address cybersecurity risks. This course will cover cybersecurity audits, providing aspiring audit professionals with the information needed to manage a comprehensive audit of cybersecurity controls. Recommended prerequisite: ICT 4210.



**ICT 4300 Web Enabled Information Systems (4 Credits)**

This course is an introduction to the development of modern software systems from the desktop to the cloud. The course examines best practices for software development and introduces the three tiers of software development from the web frontend to the database backend using available tools and software. It covers security issues and best practices related to developing web and cloud applications. This course lays the groundwork for a common understanding of full stack development. This should be the first course taken in: Software Design and Programming and Web.

**ICT 4305 Object-Oriented Methods and Programming I (4 Credits)**

This is the first of two courses that will present Object-Oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course examines Object-Oriented concepts such as abstraction, encapsulation, generalization, and polymorphism. Students will exercise these concepts with hands-on programming practice and define testing procedures. Additionally, students will use Integrated Development Tools and determine the role of software design frameworks. Students without any Java experience are recommended to take ICT 4361 Java Programming before taking this class. Recommended prerequisite: ICT 4300.

**ICT 4310 Distributed Computing (4 Credits)**

This course provides a practical, hands-on introduction to distributed applications and the use of cloud technologies. The course develops students' understanding of application scalability, reliability and virtualization through the design, implementation, and deployment of cloud applications and services. Students will evaluate, recommend, and justify distributed technology solutions based on complexity, reliability and cost. Recommended prerequisites: ICT 4300, ICT 4315.

**ICT 4315 Object-Oriented Methods and Programming II (4 Credits)**

This is the second of two courses that will present object-oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course builds on the material from ICT-4305 to create code based on models written using the UML while applying industry standard object-oriented design patterns. Students will learn critical skills in designing inheritance hierarchies, working with object persistence and serialization frameworks and multi-threaded code. Additionally, the course will cover critical topics in privacy and security, including recent legislation such as the GDPR. Prerequisite: ICT 4305.

**ICT 4351 .NET Programming with C# (4 Credits)**

Students will explore the fundamentals of C# and object-oriented programming by using Visual Studio to develop desktop and web applications, test and debug applications, perform object-relational mapping using Entity Framework, and connect with XML and SQL data sources. Students will identify and describe various .NET components, design issues, development solutions, and package managers, while gaining familiarity with the core .NET languages and CLR execution. Recommended prerequisite: ICT 4305.

**ICT 4361 Java Programming (4 Credits)**

This course introduces students to the fundamentals of procedural and object-oriented programming, using the Java language. It teaches how to write, run, and debug basic programs before moving to a study of discrete, manageable building blocks that can be composed together to form software of any complexity. It will show how to use Java's built-in tools to load, store, and discover information, both in transient memory and persisted files. Students will interpret and modify sample code, with the help of various online learning aids, and gradually build up the confidence needed to write novel programs based on provided specifications.

**ICT 4370 Python Programming (4 Credits)**

This course starts with an introduction to Python programming covering basic programming concepts and Python syntax. It then continues to deepen students' knowledge of Python by teaching how to access data (text files, databases and other data storage technologies), and process and manipulate that data. Basics of creating front-end interfaces with Python are covered in order to allow students to produce more intuitive interaction with application users. Beyond core Python libraries, other commonly used Python libraries will also be utilized in the course. The course will focus on good programming practices and solving problems effectively. At the successful completion of the class, students will be able to create a number of different types of projects and execute them in Python, as well as continue learning and applying Python skills to data analytics, GIS and other areas of focus. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**ICT 4375 Blockchain, Cryptocurrency, and Web3 Foundations (4 Credits)**

Novel protocols, tools, and techniques are restructuring the web itself into a more distributed, trusted, and self-managing network than ever before. Welcome to Web3. This course will help students master foundational blockchain concepts and explore Web3-enabling technologies. Students will gain the ability to confidently apply decentralized technologies like blockchains, cryptocurrencies, tokens, peer-to-peer apps, and more. Furthermore, students will understand how these technologies are being applied in industries around the world and why. Students will gain the ability to critically assess when Web3 technology is advantageous over other solutions both from a technical and financial perspective. Knowledge of basic programming principles is recommended.

**ICT 4390 iOS Application Development (4 Credits)**

This course is designed to help students build a solid foundation in programming fundamentals utilizing the Swift programming language. Students will gain practical experience with the tools, techniques, and concepts required to build an iOS app both on their own and as a part of a team. Students will also learn the fundamental user interface design principles that are necessary for creating a meaningful user experience. Prior programming experience is not required for this course, but students must have a Mac/Apple computer.

**ICT 4395 Android Application Development (4 Credits)**

In the Information and Communications Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4400 Database Administration (4 Credits)**

This course introduces the roles and responsibilities, as well as the critical knowledge and skills, needed to function as a database administrator. The course focuses on Oracle and Microsoft SQL Server RDBMSs and the Oracle NoSQL databases. Database administration covers a range of topics which are covered in this course; installation, configuration, performance tuning, maintenance, and database security. Special focus will be paid to the architecture of the RDBMS and NoSQL systems, using it as the basis of much of the work throughout the course. There will be weekly hands-on lab work that afford students opportunities to gain valuable practical experience in managing databases. This course will function as an introduction to other courses in the Database Design and Administration concentration, which will give students the occasion to study these topics in greater depth. The course will conclude with an examination of the future of the database field, discussing quantum computing, cloud computing and block-chain technology.

**ICT 4405 Database Design and Implementation (4 Credits)**

In this course, students will focus on database design from a holistic view of a database from inception to implementation. Students will start by exploring the history and evolution of database systems and models and then proceed to hands-on application of database design theory. The course concentrates on the relational database model and the conceptual, logical, and physical phases of database design and development. Entity-relationship modeling, data normalization, and Structured Query Language application are core components of the class. Students will gain hands-on experience with database design concepts and have the opportunity to build a relational database using the foundational principles of database design within the framework of the database life cycle (DBLC).

**ICT 4410 Data Warehousing Design (4 Credits)**

Data warehouses are one of the most valuable assets an organization can possess to remain competitive in a quickly evolving global marketplace. This course provides students an introduction to the role of data warehouses in effective decision-making based on data for strategic and operational objectives and supporting decision support systems. This course will provide students foundational knowledge and skills around data warehouse design and broad coverage of data warehouse concepts, architecture, data modeling, security, implementation and trends underlying current and future development. Prerequisite: Recommended ICT 4400.

**ICT 4415 Database Backup and Recovery with Lab (4 Credits)**

This course explores database backup and recovery strategies and tactics using both Oracle and SQL Server database systems. The course will include weekly lab work that will give students an opportunity to gain experience with Oracle and SQL Server databases. Topics include preparing backup, recovery and disaster plans, as well as performing complete and incomplete database recoveries using the Oracle Export/Import utility. Students also work with a SQL Server database, utilizing the SQL Server Management Studio. Students will be assigned a Linux Virtual environment that will be used for all Oracle administration, and they will install a SQL Server database locally that will be used for all SQL Server administration. Prerequisite: ICT 4400.

**ICT 4430 Database Security (4 Credits)**

As the world has become increasingly data-driven, IT professionals have been forced to dramatically rethink how to protect their most valuable corporate asset, data. This course strives to provide a perspective that intersects several technology disciplines: database administration, web-based application development, and technology management. Taking a defense-in-layers view, Database Security will provide students with an opportunity to gain an understanding of how data is protected from several perspectives. A wide range of database security concepts will be explored, including those specific to the Oracle, MySQL, and Microsoft SQL Server RDBMSs. Students will gain an understanding of the different types of threats and vulnerabilities present in a data-centric world and will develop strategies to protect an enterprise's data footprint.

**ICT 4451 Database Programming: Oracle PL/SQL (4 Credits)**

This course builds on skills learned in ICT 4405 Database Design and Programming. Students will transform a database schema design into a database application using Oracle's PL/SQL programming language. Topics include advanced SQL DDL, DML, and scripting, PL/SQL constructs, stored procedures, modular design and development (packages), software development processes, views, sequences, cursors, dynamic SQL, and error handling. Using weekly assignments, students will practice different aspects of design and development of database applications. Prerequisite: ICT 4405 or SQL experience.

**ICT 4462 SQL Server and T-SQL Lab (4 Credits)**

This course provides a comprehensive introduction to Microsoft SQL Server, utilizing the SQL Management Studio for administrative and development tasks. This course offers a solid foundation of the Transact-SQL (T-SQL) constructs that will enable students to build, query, maintain, and finetune SQL Server databases. The course focuses on basic to advanced queries including joins, functions, data types, stored procedures, declaration and execution, cursors, temp tables, triggers, error handling, transaction management, and security. This course also offers an introduction to common administrative and maintenance tasks, SQL Integration Services, SQL Analysis Services, and SQL Reporting Services are covered. Working in Microsoft SQL Server, students experience hands-on learning in weekly labs to prepare them for real-world situations. Prerequisite: Recommended ICT 4400.

**ICT 4485 NoSQL Databases for Big Data (4 Credits)**

Structured Query Language (SQL) based database management systems (DBMS), commonly referred to as relational databases, have been dominant in the market for over forty years and remain so today. However, the emergence of real-time streaming data from technologies such as the Internet of Things (IoT) and relationship-based dynamic datasets from e-commerce and social networks gave rise to big data. Big data is characterized by volume (petabytes), velocity (data rate), and variety (structured and unstructured). Relational databases are not suitable for big data. The requirements of big data have created the need for alternate databases. NoSQL databases were developed to address the requirements of big data. The requirements of big data cannot be satisfied by a single NoSQL database model because real-time streaming data is structured very differently from relationship-based dynamic data. Many large, well-known companies use different types of NoSQL databases to solve problems in their domain. In this course we will examine four NoSQL database models: key-value, document, column, and graph. Students will learn about advantages and disadvantages of each type of NoSQL database model. The course will include hands-on experience with a relational database and each type of NoSQL database. Students will also learn to analyze the structure of data and select the appropriate NoSQL database model to store and manipulate big data.

**ICT 4505 Website Design and Management (4 Credits)**

This course extends your web design and development skills and includes advanced HTML techniques and enhanced page design capabilities using CSS. The key to great web design is rooted in a solid foundation, which requires a plan or a "blueprint." We will explore best practices in information architecture (IA) and how to incorporate user-centered design (UCD) techniques as a standard practice in web design. Students will also develop an understanding and working knowledge of Cascading Style Sheets. Through the use of readings, examples, hands-on projects, and discussions, the class will build an understanding of the foundations and applications of user-centered design to plan, build, and manage a website. Through participation in a project and regular discussions, class members will experience working as active and contributing members of the class and knowledge-building community.

**ICT 4510 Advanced Website Design and Management (4 Credits)**

Web development has become an integral part of the tech industry and has created a multitude of career options for job seekers. This course will enhance the knowledge gained in ICT-4505 by delving into HTML5 JavaScript APIs and Responsive design using a common CSS framework. Students will be introduced to beginner, intermediate and advanced JavaScript concepts. Finally, the foundational web languages HTML5, CSS and JavaScript will be used to build a fully functional client-side application. Prerequisite: ICT 4505.

**ICT 4515 Usability Design for Websites (4 Credits)**

This course expands on the basic knowledge of website design and development by providing an in-depth understanding of how to design a website with the user in mind. Students will gain knowledge about how the fields of human factors engineering and psychology (e.g., visual perception, attention, cognition, learning and memory, information processing) relate to the basis of usability design as well as how usability assessments are conducted. Usability guidelines for common functions such as web navigation, search, menus, scrolling, links, text, page layout, visual organization, etc. will be explored. Students will have the opportunity to develop a website that demonstrates appropriate use of important usability guidelines and conduct usability assessments with real users. Prerequisite: ICT 4505.

**ICT 4540 Data in Web Application Development (4 Credits)**

XML is an open, text-based markup language (Extensible Markup Language) that provides structural and semantic information to data. XML was designed to store and send data, and it can also be used by software and web-based applications for display. This course explores several common industry-leading approaches, models, and techniques for XML in business applications. Hands-on experience with the XML formats and manipulation, which includes syntax, structure, context, and programmatic uses of XML, form the weekly assignments, culminating in a summary project. Other related standards, such as JSON, are discussed, as well as use of CSS for display of XML data. Some JavaScript is introduced to illustrate the document object model and techniques for integration of data. Prerequisites: Students should have familiarity with constructing HTML web pages and data concepts. Familiarity with data manipulation, APIs, or a programming language will be helpful but not required.

**ICT 4560 Web Graphics Production (4 Credits)**

This course introduces the fundamental concepts and techniques of digital graphics creation and image processing for both online publication and website interface design using industry-leading tools as well as topics around use policy and considerations of image manipulation in the digital age. Students learn the basics of manipulating, correcting and modifying images, bitmap painting tools, vector drawing tools, typography, masking, web production techniques, and advanced image compositing in hands-on exercises and assignments. Basic integration of images and generated code into a website layout employing CSS is also covered. Experience with tools like Adobe Photoshop is useful but not required.

**ICT 4570 Web Scripting with JavaScript (4 Credits)**

This course presents students with the principles necessary to design and develop client-side and server-side scripts used to build dynamic websites and applications. JavaScript concepts such as data types, control structures, functions and objects are discussed. Students learn how to write beginner and intermediate scripts. Students will be introduced to frameworks and libraries such as Node.js and Arrow Functions that are used to create interactive and dynamic client-side and server-side applications. Real world examples will be included. Technologies covered in the course include JavaScript/ECMAScript, JSON (a JavaScript-friendly data format), XML (Extensible Markup Language) JavaScript as the J in AJAX, and JavaScript in HTML5 form interaction and validation. Prerequisite: Recommended ICT 4505, ICT 4510.

**ICT 4580 Cross-Platform Mobile Application Development (4 Credits)**

The mobile device market has grown tremendously over the past few years. Self-contained apps that are focused on one concept account for a large percentage of this growth. This course teaches the basic concepts of developing a mobile application using a framework so that the application runs on different devices. Students will synthesize the basic knowledge of the framework to create building blocks of various tools. They will follow best practices in the development lifecycle of building a mobile application. Students will compare and contrast various frameworks for mobile application projects. They will construct their mobile application that could be deployed across many platforms that use native device APIs and hardware. Prior programming experience recommended.

**ICT 4605 Principles of Information Security (4 Credits)**

This is a comprehensive Information Systems Security management course covering the eight basic principles of Information Assurance and Information Systems Security. The course follows the Common Body of Knowledge (CBK) convention established by the International Information System Security Certification Consortium, Inc. (ISC)<sup>2</sup>. In this course, students learn about information security risk management, asset security, security architecture and engineering, communication and network security, identity and access management, security assessment and testing, security operations, and software development security. The course applies a systems approach to security issues to analyze and develop security solutions. The information covered includes contemporary issues of cybercrime and how to mitigate cybersecurity risks. All topics are discussed in the context of a total enterprise-wide framework.

**ICT 4610 TCP/IP Networks (4 Credits)**

This course explores the design, architecture, capabilities, and security of the TCP/IP protocol stack by looking at its history, development, and current applications. The course also explores how TCP/IP has supported the growth of the Internet, Internet of Things (IoT), and next-generation wireless networks and services. The TCP/IP model, standards, and key architectural principles that support data flow are examined through familiarization with the full TCP/IP v4 and v6 protocol suites. Students explore TCP/IP capabilities, addressing/subnetting, performance, and cybersecurity issues. The course also covers security-specific protocols to support secure network communications, user identity protection, and the security aspects of all other protocols. Students will examine secure VPN services and mechanisms for personal and business Internet connectivity. The course concludes with a survey of modern topics including Real-Time Communications and IPv6.

**ICT 4615 Identity and Access Management (4 Credits)**

Identity is the new security perimeter. Access can be determined based on a persona, a role, or a user type. Identity and Access Management (IAM), then, is the foundation for access to any secured computer resource and must be handled and managed carefully and deliberately. This course will provide students with the skills they will need to succeed at designing and implementing access control mechanisms on networked systems. The course covers the principles and mechanisms that compose an overall IAM system and is based on modern technology that supports Zero Trust, Federated Identity, Role-based Access Controls (RBAC), and Attribute-based Access Controls (ABAC).

**ICT 4670 Disaster Recovery and Business Continuity Planning (4 Credits)**

This course is an introduction to Disaster Recovery and Business Continuity (DR/BC) Planning. The course examines the steps required to identify mission-critical continuity needs of an organization, analyzes the legal & regulatory requirements for data security, and evaluates the various risks management approaches to identify and quantify business risk associated with business continuity. The course provides students the opportunity to create a Disaster Recover/Business Continuity (DR/BC) plan that incorporates business resumption planning, emergency response & communication, and data/system recovery techniques.

**ICT 4680 Principles of Cryptography (4 Credits)**

E-commerce has made cryptography a cornerstone of modern information systems security. Cryptology is a core component of all recognized information security certifications; however, it may be the least understood of the information security disciplines. This course focuses on the terminology and concepts needed to understand how cryptographic techniques are used to protect sensitive information. Topics include different types of ciphers (substitution, transposition, block and stream), Digital Signatures and Message Authentication Codes, public key infrastructure (PKI), secure sockets layer (SSL), and network protocols for encryption, among others. Lecture and reading materials are reinforced by hands-on experimentation in a virtual lab environment focused on real-world uses of cryptography. Internet resources are used to tie the course material to current technology trends. No programming experience or advanced mathematical skills are required for this course. Recommended prerequisite: ICT 4605.

**ICT 4685 Cloud and Internet Law (4 Credits)**

This course explores the legal and technical ramifications and implications created by cloud computing and Internet Law. This course also examines the types of issues and concerns that exist in the US and the world by the dynamic change in software, computer networking, and cloud infrastructure. This rapid change in computer networking, data, information, Internet, and cloud architecture directly impacts governments, companies, and individuals. Issues include how to handle data, information, security, privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries, and parts of the world. It is important that all of these issues are balanced by differing cultural standards and mores from all 50 States, all over our country and all around the world, including the legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing, "always-connected" world.

**ICT 4690 Computer Forensics with Lab (4 Credits)**

This course will introduce students to current methods and techniques in computer forensics with a focus on the appropriate procedures for evidence collection and processing. As electronic information increases in its importance and use in the court of law, future investigators need to be able to collect and analyze forensics data from computer systems in support of incident investigations, including e-Discovery, forensic analysis and reporting, evidence acquisition, Internet browser forensics and tracing user and application activities on computing systems. The course is supplemented by hands-on exercises, case studies, and a final culminating assignment. Prerequisites: Required ICT 4605 (unless prior ISS experience), Recommended ICT 4610.

**ICT 4695 Application Security (4 Credits)**

In this course, students explore the security concepts, principles, training needs, and practices that are used to secure the modern software development lifecycle (SDLC). Topics include enhancing Agile/Scrum development processes with secure design models and application risk analysis, application lifecycle management, defensive programming, secure DevOps, and AppSec (application security) issues with new technology and new consumer devices. Recommended prerequisite: ICT 4605.

**ICT 4700 AI Concepts, Capabilities, and Tools (4 Credits)**

This graduate-level course provides a comprehensive exploration of evolving artificial intelligence (AI) concepts, tools, and their applications in organizational settings. The course is tailored for all learners seeking to gain a foundational understanding of AI concepts. Students will gain a deep understanding of the benefits, limitations, and tradeoffs associated with designing and engaging with AI tools. The course aims to empower students to champion appropriate AI use within organizations, identify business or organizational problems suitable for AI solutions, and navigate the dynamic landscape of AI in their respective industries.

**ICT 4701 Topics in Information Technology (4 Credits)**

This is an advanced special topics seminar course that may be offered to address a developing concept, an industry trend, or a new technology. The focus is on specialized areas of interest. Topics courses may be used as electives within the Information Technology degree and certificate programs, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate program.

**ICT 4800 Network Communications and the Internet (4 Credits)**

This course focuses on the fundamental concepts and technologies of communications networks and the Internet, including Network Communications theory through the TCP/IP stack, which is the foundation of modern communication systems. The course also emphasizes application of these concepts to the analysis and design of network solutions for various Enterprise and Service Providers requirements. Topics include in-depth analysis of the layered structure of networking protocols, network media, communications standards, LAN and WAN network architectures, in-depth IP routing, and current trends in networking via the Internet. Students will analyze the purpose of network routing protocols, their respective algorithms, and IP addressing. Students will apply critical thinking via discussions of current and future trends in network technology, expanding to IP Services, Network Virtualization, and their role in networking evolution. Prerequisite: Recommended ICT 4005.

**ICT 4820 Advanced Network Technologies (4 Credits)**

Technological advancements in networking within the last few years are revolutionizing networking concepts for both enterprises and service providers. This course demystifies those latest advancements in network technologies. Topics include in-depth coverage of modern networking elements, network requirements, and network virtualization technologies, including Software Defined Networks (SDN) and Network Function Virtualization (NFV). The course will also explore the latest network technologies' requirements, such as elastic traffic, mobility, ultra-low latency, on-demand bandwidth, and more. Further, students will discuss the motivations behind network softwarization, SDN and NFV components, architecture, protocols, and use cases. The course emphasizes deep understanding, analyses, and evaluation of modern network architectures. Prerequisite: Required ICT 4800.

**ICT 4830 Broadband Wireless Networks (4 Credits)**

This course examines how Broadband radio technologies are changing to meet the growing demands for autonomous vehicles, smart cities/smart homes using smart IoT devices, cellular communications that deliver consumer entertainment/relevant and specific information content, support remote workers, and online learning. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to meet the demands of continually increasing data traffic from devices such as mobile smartphones, tablets, hotspots, smart IoT devices, new emerging technologies like cellular-vehicle-to-everything (C-V2x), as well as broadband services like VOIP and mobile video. Current and dominant wireless telecom technologies and protocols are presented, including 3G, 4G LTE, OFDM, MIMO, Mobile IP, WIMAX, and Wi-Fi. The new 5G NR technology standards and services (eMBB, URLLC, mMTC) will be presented. The wireless telecom industry is studied from standards, carrier, and technology perspectives, with an emphasis on radio networks designed to support key use cases. Prerequisite: Recommended ICT 4835.

**ICT 4840 Next Generation Wireless Networks and Services (4 Credits)**

The rapid innovation in wireless networks that is at the center of today's IT industry takes place in the four areas of broadband radio, core and edge networks, wireless services, as well as smart objects. This course focuses on the key next generation technologies at the core network, service, and object layers. First, the role of the Internet Protocol Multimedia Subsystem (IMS) in the core network is examined, which is at the heart of many service provider deployments. At the service layer, this course emphasizes wireless service architecture, including popular applications such as mobile real-time messaging, video, and mobile web services. The production of networks and services through cloud technologies is highlighted. The course also explores The Internet of Things (IoT), which plays a prominent role in modern wireless networks. A case study approach is taken to highlight core use cases from key industries including Smart Cities, the Smart Grid, and Industry 4.0. Finally, wireless product development and operations are examined in the critical context of the conflict between over-the-top (OTT) and network operator ecosystems. Prerequisite: Required ICT 4800.

**ICT 4845 Information Systems Attacks and Defenses (4 Credits)**

This course will provide students with the knowledge and skills necessary to conduct effective penetration testing and develop defensive techniques that prevent the attack(s) or reduce the effectiveness or impact of those attacks, should they succeed. Students will focus on real-world examples of both perimeter network security and desktop security across almost any computing environment. Students can work with a range of network security toolboxes in a hands-on, robust software lab environment. Students will also learn how to use the MITRE ATT&CK framework to identify and analyze various attack techniques, tactics, and procedures (TTPs) used by adversaries and will understand how to apply Cyber Kill-chain strategies, followed by using the MITRE D3FEND framework to implement effective defensive measures to mitigate and prevent these and future attacks. Recommended Prerequisite: ICT 4605.

**ICT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and who can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ICT 4902 Capstone Seminar (4 Credits)**

In the Information Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4980 Internship (0-4 Credits)**

The IT internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the IT master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all IT students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the IT degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ICT 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**ICT 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Instructional Design and Technology

Office: University College Student Support Center

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From curriculum development to technology integration, planning and analysis to implementation and evaluation, the instructional design strategies and skills learned in this program will fully equip you to meet the diverse needs of adult learners. You'll build critical competencies in instructional design while cultivating an inclusive mindset and design approach. This graduate program is ideal for aspiring or current instructional design professionals working in higher education, corporations, and government or non-profit organizations who want to advance careers and foster best practices centered on equity.

This program prepares students to:

- Apply contemporary adult learning theories, models, and principles to learning situations using effective instructional design strategies.
- Create inclusive learning experiences by applying research-based practices in creating assessments, content, and learning activities to align with diverse learner needs and instructional goals.
- Plan for the use of technology-supported learning design by evaluating the course outcomes and modalities, technology availability, support systems, and instructor expertise.

- Evaluate the implementation of instructional designs to assess effectiveness and determine potential interventions.
- Apply skills in theory, research, data collection, and critical thinking to employ effective instructional design practices.

## Master of Arts in Instructional Design and Technology with a Concentration in Adult Learning and Inclusive Design

Forge innovative paths to best engage adult learners through inclusive design in the digital age with this master's degree concentration offered entirely online. As you develop critical competencies within instructional design, you'll also cultivate an inclusive mindset and best practices related to instructional strategies, assessment, and interventions. Whether leading instructional design within higher education, government, or corporations, you'll gain hands-on practice in andragogy, learner-centered design, and research to ensure the diverse needs of adult learners of all types are met.

This degree prepares students to do the following:

- Analyze the impact of adult learning theories on instructional strategies.
- Determine measurable learning outcomes based on identified learning needs.
- Develop inclusive learning materials, activities, and assessments with available resources and considering the diverse needs of learners.
- Create technology modules to meet organizational goals and user needs.
- Develop strategies for examining assessment data and other measures of the student learning experience to refine design practices.

## Graduate Certificate in Instructional Design and Technology with a Concentration in Adult Learning and Inclusive Design

Uncover innovative paths to effectively engage adult learners with a graduate certificate in Adult Learning and Inclusive Design offered entirely online. In this certificate program, you'll gain hands-on experience in instructional design, from creating engaging multi-media content to providing evaluations. With a curriculum centered on equity, the program helps you develop an inclusive mindset to best serve diverse adult learners. Gain insight into adult learning theories, instructional strategies, and inclusive assessment through learner-centered design.

## Specialized Graduate Certificate in Adult Learning and Inclusive Design

Uncover innovative paths to effectively engage adult learners with a certificate in Adult Learning and Inclusive Design offered entirely online. In this certificate program, you'll gain hands-on experience in instructional design, from creating engaging multi-media content to providing evaluations. With a curriculum centered on equity, the program helps you develop an inclusive mindset to best serve diverse adult learners. Gain insight into adult learning theories, instructional strategies, and inclusive assessment through learner-centered design.

## Master's Degree Program

### Master of Arts in Instructional Design and Technology with a Concentration in Adult Learning and Inclusive Design

Code	Title	Credits
<b>Core Course Requirement:</b>		
IDT 4000	Strategic Planning for Accessible Learning Design	4
IDT 4203	Adult Learning Strategies and Theories	4
IDT 4010	Curricular Development and Program Assessment for Adult Learning	4
IDT 4910	Research Practices and Applications	4
IDT 4920	Portfolio Capstone	4
<b>Concentration Requirement:</b>		
IDT 4100	E-Learning: Course Design, Models, and Practice	4
IDT 4120	E-Learning: Multimedia Application	4
IDT 4130	Equity, Justice, and Inclusivity with Learning Design	4
IDT 4140	Universal Design for Learning	4
IDT 4150	Project Management and Stakeholder Communication	4
<b>Electives Requirement (Choose 2 courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Program

### Graduate Certificate in Instructional Design and Technology with a Concentration in Adult Learning and Inclusive Design

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<b>Core Requirement</b>		
IDT 4100	E-Learning: Course Design, Models, and Practice	4
IDT 4120	E-Learning: Multimedia Application	4
IDT 4130	Equity, Justice, and Inclusivity with Learning Design	4
IDT 4140	Universal Design for Learning	4
IDT 4150	Project Management and Stakeholder Communication	4
<b>Elective Requirement (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

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## Specialized Graduate Certificate Program

### Specialized Graduate Certificate in Adult Learning and Inclusive Design

Code	Title	Credits
IDT 4100	E-Learning: Course Design, Models, and Practice	4
IDT 4120	E-Learning: Multimedia Application	4
IDT 4130	Equity, Justice, and Inclusivity with Learning Design	4
IDT 4140	Universal Design for Learning	4
<b>Total Credits</b>		<b>16</b>

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the



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IDT 4910	Research Practices and Applications	4
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<b>Concentration Requirement:</b>		
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IDT 4120	E-Learning: Multimedia Application	4
IDT 4130	Equity, Justice, and Inclusivity with Learning Design	4
IDT 4140	Universal Design for Learning	4
IDT 4150	Project Management and Stakeholder Communication	4
<b>Electives Requirement (Choose 2 courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Program

### Graduate Certificate in Instructional Design and Technology with a Concentration in Adult Learning and Inclusive Design

Code	Title	Credits
<b>Core Requirement</b>		
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<b>Elective Requirement (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Program

### Specialized Graduate Certificate in Adult Learning and Inclusive Design

Code	Title	Credits
IDT 4100	E-Learning: Course Design, Models, and Practice	4
IDT 4120	E-Learning: Multimedia Application	4
IDT 4130	Equity, Justice, and Inclusivity with Learning Design	4
IDT 4140	Universal Design for Learning	4
<b>Total Credits</b>		<b>16</b>

#### IDT 4000 Strategic Planning for Accessible Learning Design (4 Credits)

This course will help students develop expertise in accessibility principles, institutional processes, and legal considerations. The course explores federal accessibility regulations, common practices for implementing accessibility, and solutions to common challenges of accessibility implementation.

#### IDT 4001 Portfolio Foundations (0 Credits)

Master's and certificate-seeking students in Instructional Design and Technology program must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

#### IDT 4010 Curricular Development and Program Assessment for Adult Learning (4 Credits)

This course will provide students with the skills to develop and maintain program-level or department-wide training curricula for adult learning environments. By taking a holistic continuous-improvement perspective, this course will explore how learner needs assessments lead to the development of measurable learning outcomes, teaching practices, and then to a curricular plan. The course will examine inclusive practices that assist departments in creating equitable, authentic assessments.

#### IDT 4100 E-Learning: Course Design, Models, and Practice (4 Credits)

This course introduces instructional design theories, models, processes, and strategies for adult e-learning. We focus on instructional design principles that inform the methodology, skills, and techniques necessary for designing e-learning experiences for adult learners. Students will practice designing and selecting e-learning materials and analyzing the types of activities that best serve online learners.

#### IDT 4120 E-Learning: Multimedia Application (4 Credits)

This course will take a deep dive into the development of key media assets such as video, interactives, and other course design elements incorporating inclusive best practices. The course will explore both the technical aspects of creating media for learning purposes, as well as the pedagogical and UX considerations in media design. Prerequisite: IDT 4100.

#### IDT 4130 Equity, Justice, and Inclusivity with Learning Design (4 Credits)

This theory-to-practice course will explore a theoretical and a practical understanding of justice, equity, and inclusivity (JEI) in learning design. Students will be encouraged to connect their experiences to the foundational concepts in this course and develop an understanding of the impact of equity, inclusion, and justice in course design. Students will leave this course with practical tools for advocating for justice, equity, and inclusion in educational contexts.

#### IDT 4140 Universal Design for Learning (4 Credits)

#### IDT 4150 Project Management and Stakeholder Communication (4 Credits)

Whether in a corporate, higher ed, or government setting, instructional design projects require meticulous management from start to finish. This course will cover strategies and tools to equip instructional designers with the skills necessary to assess project needs, plan design iterations, and meet stakeholder expectations all while meeting project timelines.

#### IDT 4203 Adult Learning Strategies and Theories (4 Credits)

Individuals involved in adult learning design and development benefit from a strong foundation in adult learning theories and strategies to develop effective practices. Adult learners bring unique needs, life experiences, and prior knowledge to learning situations and thrive when inclusive, motivational, and relevant application of knowledge, concepts and skills are utilized. In this course, foundational and emerging theories regarding how adults learn best, along with analysis of key instructional strategies, provide solid grounding for implementing best practice in adult learning.

#### IDT 4701 Topics in Instructional Design and Technology (4 Credits)

#### IDT 4901 Capstone Project (4 Credits)

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**IDT 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**IDT 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the course produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**IDT 4980 Internship (0-4 Credits)**

Instructional Design and Technology Internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notifications to all IDT students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**IDT 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## Nonprofit Leadership

The Nonprofit Leadership program prepares graduates to think critically, act ethically, and inclusively lead the changes needed to solve the pressing issues in society and nonprofit/nongovernmental organizations. Courses engage students in legal, financial, ethical, equitable and scalable considerations of program and organizational leadership and management. Coursework spans the four concentrations of: Executive Leadership and Governance; Philanthropy and Resource Development; Social Enterprise, Innovation and Entrepreneurship; and Mission-Driven Operations and Management. Core courses engage students in healthy nonprofit indicators, sector history, graduate research and writing, and leadership development. Faculty are experienced in development and fundraising, social innovation, governance, program management, and evaluation. They are leadership experts who examine sector trends, historical context, and current nonprofit theory and practices with practical and real world experience. Students will develop practical knowledge to better serve the public good and develop critical thinking and innovation skills needed to craft fundraising strategy, impactful program operations, and social enterprises that address societal problems through healthy organizations. Graduates will increase their community and world impact with practical tools to implement needed changes.

The Nonprofit Leadership Program prepares students to:

- Evaluate knowledge, skills, and attributes developed that impact nonprofit organizational health, governance, performance, and/or community engagement.
- Demonstrate critical thinking that integrates leadership, history, financial knowledge, fundraising strategy, program design, organizational governance, and strategy to heighten their organization's impact.
- Apply analytic methods to examining problems and designing solutions to nonprofit organization or societal issues.
- Develop inclusive leadership knowledge and skills that prepare them to effectively lead and guide change across the world.

### Master of Science in Nonprofit Leadership with a Concentration in Executive Leadership and Governance

Leading a nonprofit/nongovernmental organization of any size requires examining individual and organizational practices and behaviors. Nonprofit staff need to develop a broad spectrum of leadership, change management, and diversity, equity, and inclusion tools increases a leader's successful navigation of organizational change and challenges. Leaders must also navigate organizational culture to ensure high performance, stability and an impactful mission. Students will build their knowledge of board and senior team leadership, value-centered leadership, strategic direction and planning, program evaluation, and organization culture development.

This degree prepares students to:

- Assess leadership strengths, skills, and behaviors to craft leadership development plans
- Evaluate effective leadership behaviors, skills and characteristics that positively impact nonprofit organizational health, governance, performance, and community impact
- Demonstrate critical thinking skills to evaluate different leadership views and arguments that influence decision making

- Evaluate organizational capacity, operations, governance and program implementation to determine organizational health and opportunities for change
- Demonstrate financial and organizational-planning knowledge and skills that ensure an organization's impact and health

### **Master of Science in Nonprofit Leadership with a Concentration in Mission-Driven Operations and Management**

Program operations and organizational management work together to accomplish a nonprofit organization's mission, vision, and impact.

Organizations need effective structures to manage programs that include staffing, performance evaluation, impact measurement, and human and financial resources to ensure success. Examining an organization's financial and operational goals allows students to assess operational needs and to consider partnerships and community-based strategies that further the organization's impact. Students examine strategic and operational planning and program evaluation strategies from a diversity, equity and inclusion lens that demonstrate community impact and mission accomplishment. Students also study managing staff and volunteer operations that accomplish a nonprofit's mission.

This degree prepares students to:

- Demonstrate planning practices for effectively resourced nonprofit/nongovernmental program development through a diversity, equity and inclusion lens
- Evaluate existing nonprofit programs' design using critical thinking to determine resource allocation and impact measurement
- Demonstrate evaluation and planning skills that ensure mission accomplishment and operational alignment
- Examine diverse organizational funding structures including grants and other funding structures to determine how best to resource program operations

### **Master of Science in Nonprofit Leadership with a Concentration in Philanthropy and Resource Development**

Change is continual in the philanthropy, resource development, and fundraising areas of the nonprofit and nongovernmental sectors. Technology continues to evolve fundraising approaches to expand giving opportunities, inform campaigns, and programs through data and dashboards, and provide networks to better understand donors and giving trends. Through their studies, students will learn key relationship-building practices that include individual giving and major gift cultivation and their philanthropic philosophy to better cultivate diverse communities. They will craft plans and community-centric strategies to increase their fundraising impact. Engaging both their passion and pragmatism, students will learn about the scale and planning needed to develop the financial resources to carry out their nonprofit's mission and vision.

This degree prepares students to:

- Assess diverse development approaches for appropriateness according to the scale, size, and mission for nonprofit/nongovernmental organizations
- Evaluate the transformative effects of emerging technologies on the development and execution of effective fundraising strategies
- Craft practical and relevant development/fundraising plans that employ effective community and donor strategies for nonprofit organization's programming and mission fulfillment.
- Apply nonprofit funding approaches, tools, and technology for successful financial resource deployment in a nonprofit organization

### **Master of Science in Nonprofit Leadership with a Concentration in Social Enterprise, Innovation and Entrepreneurship**

Are you a social entrepreneur or aspiring to become one? Will a social innovation move the needle on a social problem or challenge about which you are passionate? Is your organization considering a social enterprise? A focus on social enterprise, innovation, and entrepreneurship will sharpen the social value proposition and mission-driven strategy to address key social problems in your community or the world. Courses in this concentration will develop your understanding, knowledge and skills in taking an idea and launching it as a social enterprise. Students will develop the language and

financial insights into funding, prototyping, scaling, marketing, and measuring impact of social enterprises and innovations. Students gain practical experience with a nonprofit or for-profit organization to apply theory, strategy, and metrics that solve real problems and drive mission impact.

This degree prepares students to:

- Examine successful social enterprise ventures to determine the strengths and challenges in developing a successful and impactful social enterprise.
- Cultivate innovation, design thinking and other processes to examine a social enterprise idea's social value and market possibilities
- Apply social innovation frameworks and tools to test a social enterprise's business and financial structure

### **Graduate Certificate in Nonprofit Leadership with a Concentration in Executive Leadership and Governance**

The graduate certificate in Executive Leadership and Governance is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials. Leading a nonprofit/nongovernmental organization of any size requires examining individual and organizational practices and behaviors. Developing a broad spectrum of leadership, change management, and diversity, equity and inclusion tools increases a leader's successful navigation of organizational change and challenges. Leaders must also navigate organizational culture to ensure high performance, stability and an

impactful mission. Students build their knowledge of board and senior team leadership, value centered leadership, strategic direction and planning, program evaluation, and organization culture development.

### **Graduate Certificate in Nonprofit Leadership with a Concentration in Mission-Driven Operations and Management**

The graduate certificate in Mission-Driven Operations and Management is offered entirely online to meet the needs of busy adults seeking to expand their skillset or credentials. Program operations and organizational management work together to accomplish a nonprofit organization's mission, vision, and impact. Organizations need effective structures to manage programs that include staffing, performance evaluation, impact measurement, and human and financial resources to ensure success. Examining an organization's financial and operational goals allows students to assess operational needs and to consider partnerships and community-based strategies that further the organization's impact. Students examine program evaluation strategies from a diversity, equity and inclusion lens that demonstrate community impact and mission accomplishment. Students also study managing staff and volunteer operations that accomplish a nonprofit's mission.

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### **Specialized Graduate Certificate in Executive Leadership and Governance**

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### Master's Degree Admission

#### Degree and GPA Requirements

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English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Master's Degree Programs

### Master of Science in Nonprofit Leadership with a Concentration in Philanthropy and Resource Development

Code	Title	Credits
<b>Core coursework requirements</b>		
NFP 4010	Leading Nonprofit/Nongovernmental Organizations	4
NFP 4015	Healthy Nonprofit/Nongovernmental Organizations	4
NFP 4020	Legacy and Trends of Nonprofit Organizations and Civil Society	4
NFP 4905	Graduate Social Research Methods	4
NFP 4901	Capstone Project	4
or NFP 4920	Portfolio Capstone	
<b>Concentration requirements</b>		
NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4110	Advanced Fundraising Strategies and Planned Giving	4
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4120	Technology Strategy for Fundraising	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Master of Science in Nonprofit Leadership with a Concentration in Social Enterprise, Innovation and Entrepreneurship

Code	Title	Credits
<b>Core coursework requirements</b>		
NFP 4010	Leading Nonprofit/Nongovernmental Organizations	4
NFP 4015	Healthy Nonprofit/Nongovernmental Organizations	4
NFP 4020	Legacy and Trends of Nonprofit Organizations and Civil Society	4
NFP 4905	Graduate Social Research Methods	4
NFP 4901	Capstone Project	4
or NFP 4920	Portfolio Capstone	
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4400	Principles and Practices in Social Enterprise, Innovation and Entrepreneurship	4
NFP 4405	Social Enterprise Strategies	4
NFP 4410	Social Enterprise Experiential Learning	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Master of Science in Nonprofit Leadership with a Concentration in Executive Leadership and Governance

Code	Title	Credits
<b>Core coursework requirements</b>		
NFP 4010	Leading Nonprofit/Nongovernmental Organizations	4
NFP 4015	Healthy Nonprofit/Nongovernmental Organizations	4
NFP 4020	Legacy and Trends of Nonprofit Organizations and Civil Society	4

NFP 4905	Graduate Social Research Methods	4
NFP 4901 or NFP 4920	Capstone Project Portfolio Capstone	4
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4200	Executive and Board Roles, Responsibilities, and Leadership	4
NFP 4205	Leading Strategically	4
NFP 4230	Participatory Evaluation for Program and Community Impact	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Nonprofit Leadership with a Concentration in Mission-Driven Operations and Management

Code	Title	Credits
<b>Core coursework requirements</b>		
NFP 4010	Leading Nonprofit/Nongovernmental Organizations	4
NFP 4015	Healthy Nonprofit/Nongovernmental Organizations	4
NFP 4020	Legacy and Trends of Nonprofit Organizations and Civil Society	4
NFP 4905	Graduate Social Research Methods	4
NFP 4901 or NFP 4920	Capstone Project Portfolio Capstone	4
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4300	Operational Strategy and Structures	4
NFP 4305	Nonprofit Program and People Management	4
NFP 4230	Participatory Evaluation for Program and Community Impact	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Nonprofit Leadership with a Concentration in Philanthropy and Resource Development

Code	Title	Credits
<b>Concentration requirements</b>		
NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4110	Advanced Fundraising Strategies and Planned Giving	4
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4120	Technology Strategy for Fundraising	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives..

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## Graduate Certificate in Nonprofit Leadership with a Concentration in Social Enterprise, Innovation and Entrepreneurship

Code	Title	Credits
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4400	Principles and Practices in Social Enterprise, Innovation and Entrepreneurship	4
NFP 4405	Social Enterprise Strategies	4
NFP 4410	Social Enterprise Experiential Learning	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Nonprofit Leadership with a Concentration in Executive Leadership and Governance

Code	Title	Credits
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4200	Executive and Board Roles, Responsibilities, and Leadership	4
NFP 4205	Leading Strategically	4
NFP 4230	Participatory Evaluation for Program and Community Impact	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Nonprofit Leadership with a Concentration in Mission-Driven Operations and Management

Code	Title	Credits
<b>Concentration requirements</b>		
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4300	Operational Strategy and Structures	4
NFP 4305	Nonprofit Program and People Management	4
NFP 4230	Participatory Evaluation for Program and Community Impact	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Nonprofit Leadership with a Concentration in Philanthropy and Resource Development

Code	Title	Credits
<b>Concentration requirements</b>		
NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4110	Advanced Fundraising Strategies and Planned Giving	4
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4120	Technology Strategy for Fundraising	4

<b>Elective requirements (Choose two courses)</b>	<b>8</b>
<b>Total Credits</b>	<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives..

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Mission-Driven Operations and Management

Code	Title	Credits
NFP 4300	Operational Strategy and Structures	4
NFP 4305	Nonprofit Program and People Management	4
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4230	Participatory Evaluation for Program and Community Impact	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Philanthropy and Resource Development

Code	Title	Credits
NFP 4105	Applied Fundraising and Donor Relations	4
NFP 4115	Leading Nonprofit Financial Health	4
NFP 4110	Advanced Fundraising Strategies and Planned Giving	4
NFP 4120	Technology Strategy for Fundraising	4
<b>Total Credits</b>		<b>16</b>

#### NFP 4001 Nonprofit Leadership Portfolio Foundations (0 Credits)

Master's and certificate-seeking students in Nonprofit Leadership must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

#### NFP 4010 Leading Nonprofit/Nongovernmental Organizations (4 Credits)

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout the role changes we make within organizations. This course will examine and develop core self-competency with a focus on leading in an organization. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move operational and program missions forward. By identifying organizational structure, markers of healthy culture, and leadership for financial and fund-raising functions students will identify the leadership approach needed to accomplish their organization's mission.

#### NFP 4011 Leadership Development in Action (4 Credits)

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout our career journey. In this course, inclusive leaders will be examined, including core leadership competencies and practices that may vary due to the organizational culture and structure. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move an organization forward. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

#### NFP 4015 Healthy Nonprofit/Nongovernmental Organizations (4 Credits)

Healthy nonprofit/nongovernmental organizations have effective leaders to ensure that their organization attains and maintains high standards of operational excellence. Best practices in executive leadership, strategic management, accountability, legal compliance, strategic planning, outcome measurement, finance, and funding models are key components that assist in assessing an organization's overall health. Students will analyze an actual nonprofit/nongovernmental organization and interview a senior executive to determine the quality and presence of these best practices. A final health assessment assignment will help students synthesize key organizational components.

#### NFP 4020 Legacy and Trends of Nonprofit Organizations and Civil Society (4 Credits)

A diverse historical legacy and philanthropic philosophy have laid the foundation of charity, volunteering, and community impact in the US and across the world. In a rapidly changing and technology-oriented world, philanthropy philosophy, donor motivations, and ways of giving have radically changed. Changing demographics, government policies, and wealth stratification are influencing trends in philanthropy. This course links history and future as it explores the genesis of American wealth creation, giving and voluntarism, as well as the diverse global philosophy and approaches to philanthropy. Nonprofits' collective impact, the rise of social enterprises and nonprofit innovation, and economic trends are examined to enable and inform how students, as developing leaders, will design their organizations' approach to meeting community needs and resource development.

**NFP 4100 Philanthropy Principles and Roles in Nonprofit Organizations (4 Credits)**

Great fundraisers are not born, they are made. These fundraisers, or development professionals, must learn principles and guidelines that inform their roles in organizations of different sizes. Students will differentiate philanthropy, development, and fundraising as well as donor cultivation basics, which is at the heart of all fundraising methods. This is the connection to a giver's passions and the nonprofit mission. Students will analyze and contrast a nonprofit's core fundraising approaches including finding prospects, using donor management technology, making the ask, and building a strong and flourishing fundraising network.

**NFP 4105 Applied Fundraising and Donor Relations (4 Credits)**

Nonprofit development encompasses all the practices of fundraising and structuring this important function within nonprofit/nongovernmental organizations. Students will learn about the development and financial strategy needed to balance diverse fundraising approaches. Considerations such as an organization's business model, strategic plan and growth, as well as strategic initiatives and future planning are central to organizing for development activities. Students will examine, using the four pillars of donor relations, different fundraising approaches such as individual solicitation, foundation and government grants, online donations, and future giving strategies to better understand their applications, scale, results potential and impact. Linking development to the financial functions of nonprofits is essential for every development director and staff.

**NFP 4110 Advanced Fundraising Strategies and Planned Giving (4 Credits)**

Established nonprofit/nongovernmental organizations develop a long-term mission-driven strategy that guides donor cultivation, stewardship efforts, and underpins financial success. Planning for success begins with legacy planning as a growth strategy to include long-term and planned giving fundraising tools. Cultivating donors means investing time, money and resources that an organization will need to weigh together to make good decisions for its future. Students will evaluate planning strategies that include prospecting for donors, offering events, cultivating bequests and endowments, accessing donor advised funds, or buying real estate as sustainable approaches. Additionally, students will evaluate grant cultivation and major gift-solicitation tactics that may help nonprofits strengthen their development portfolios.

**NFP 4115 Leading Nonprofit Financial Health (4 Credits)**

Nonprofit finance is a cornerstone to organizational health and sustainability. In this course students will learn the differences between nonprofit and for-profit accounting, as well as basic finance concepts including balance sheets, income statements, cash flow statements, and key accounting principles. Students will examine different budget models, conduct staff and salary planning and decision making for resource allocation. Students will identify Internal Revenue Service issues as well as current issues impacting the tax environment in the U.S.

**NFP 4120 Technology Strategy for Fundraising (4 Credits)**

Nonprofit development depends on technology. Developing a clear technology strategy allows a nonprofit/non-governmental organization to invest in the most appropriate tools to achieve fundraising success. The course addresses the application of technology categories such as Customer Relationship Management (CRM) products, communication tools, gift processing, social networking, and crowdfunding. Students learn to assess a nonprofit/non-governmental organization's technology needs for fundraising, develop criteria for technology selection, and develop a technology implementation plan. Students examine issues around donor privacy, data security, fundraising ethics related to technology, and legal and tax implications. Students critically think through applying assessment and decision-making principles discussed in this course to current and future technologies.

**NFP 4200 Executive and Board Roles, Responsibilities, and Leadership (4 Credits)**

This course will analyze the interdependent roles, responsibilities, and relationships of nonprofit/nongovernment executives and board of directors, and explore the exercise of leadership required in these differentiated roles. The critical distinctions between the management and governance functions within the nonprofit/nongovernmental sector will be examined. Students will also conduct focused reviews of governance models and best practices that optimize organizational performance and the mission-driven partnership between the executive and board.

**NFP 4205 Leading Strategically (4 Credits)**

Executive nonprofit/nongovernmental leaders must be strategic and insightful as they guide their organizations' direction and ensure community impact. Leaders must be skilled in strategic and systems thinking as they guide the organization's vision, communicate performance expectations, drive performance, align the organization's systems, cultivate partnerships, develop organizational culture, catalyze change and foster innovation. In this course students practice these skills and examine decision making tools and employee coaching practices.

**NFP 4210 Leading Policy and Advocacy (4 Credits)**

Nonprofit/nongovernmental organizations play an important role in the development and implementation of public policy and influence corporations and other private organizations. Advocacy encompasses a wide range of activities that influence decision makers who craft policies and laws that may impact nonprofit/nongovernmental organizations, communities, constituents, and stakeholders. Students will differentiate advocacy and lobbying, examine federal, state and local legislative structures, craft advocacy messages and design campaigns to develop advocacy strategy. Students will also assess the resources needed for an advocacy campaign and its impact.

**NFP 4230 Participatory Evaluation for Program and Community Impact (4 Credits)**

Evaluating the impact and progress of nonprofit programs is essential to confronting disparities and advancing equity. This course reviews qualitative, quantitative and participatory methods to recognize the value and constraints of various approaches to data collection and analysis. By contextualizing evaluation methods, students will learn to engage people most impacted by nonprofit programs in order to identify relevant indicators of change and measure program performance. Students examine relationships between people, groups and institutions to help explain collective impact. Students practice and compare methodologies to assess program effectiveness and community impact with an emphasis on racial equity.

**NFP 4300 Operational Strategy and Structures (4 Credits)**

Passionate people create nonprofit/nongovernmental organizations that lead with vision and drive. These leaders must build the systems, strategic activities, and supportive environments that enable the organizational mission to thrive. This course focuses on developing leaders and managers who build and grow an organizational plan that includes business planning, data-driven decision making, program evaluation, service enterprise, strategic planning and internal innovation to lead a thriving organizational culture of learning to guide the organization's evolution and relevance.

**NFP 4305 Nonprofit Program and People Management (4 Credits)**

Nonprofit/nongovernmental organizations of different sizes must develop effective human resource and program management systems to be well-managed and deliver mission impact. These foundational systems include relevant professional development for managers, staff and board members that support continuous improvement, engagement and cultivate a positive organizational culture. This course will examine effective program management practices including performance monitoring and improvement, relationship management, remote work, cross-generational work, minimizing churn, feedback systems, workflow analysis, appropriate resource allocation, and closure. Course content will tie together the program and people management systems and practices needed in diverse organizations to ensure leaders and managers have the tools to deliver mission impact.

**NFP 4310 Community Organizing, Voice and Empowerment (4 Credits)**

Leading meaningful community change to address social problems involves effective organization strategies and communication that include storytelling, social media, and community engagement. Students will examine power, privilege, and oppression in personal and community contexts to develop strategies that honor and engage community members. Developing impactful messages and crafting different delivery methods are key components to effective community organization and empowerment. Nonprofit/nongovernmental organization leaders need to develop their voice and empowerment strategies to meet community members in community contexts and to engage them through diverse strategies. Evaluating outreach efforts and community impact are also examined.

**NFP 4320 Leading Volunteer Programs with a DEI Lens (4 Credits)**

Change initiatives and improved services and programs designed to meet critical community needs have historically relied on the service of volunteers; comprehensive volunteer programming; and ethical, culturally responsive leadership. Nonprofit/nongovernmental leaders who develop and maintain diversity, equity, and inclusion lens are capable of attracting, engaging, partnering, and maintaining relationships with a much greater segment of the population that is culturally and economically diverse. Strategies volunteer program leaders employ to outreach, message, recruit, onboard, screen, place, supervise, award, recognize, develop and advance volunteers will all be analyzed for their level of inclusivity, cultural responsiveness, and ability to interrupt and remedy historic inequities and harmful narratives. Students will deepen their knowledge about the impact of volunteering in a global context and expand their toolbox of inclusive practices as they apply to volunteer programming.

**NFP 4400 Principles and Practices in Social Enterprise, Innovation and Entrepreneurship (4 Credits)**

To address increasingly complex developmental challenges with meaningful solutions, nonprofit leaders seek to foster innovation, strengthen strategy, and build agile organizations in the social sector to create a more sustainable and scalable impact. In this course, students explore the why, what, and how of social enterprise in the nonprofit and NGO sectors. Additionally, the course provides an overview of the shared characteristics of social enterprises and the frameworks and tools that help build and make them effective. All course content is examined through a global lens with insights into the benefits and risks of using social enterprise strategies for social impact in diverse organizations.

**NFP 4405 Social Enterprise Strategies (4 Credits)**

This course prepares students for social enterprise global leadership by guiding them through the process of designing, launching, or scaling a social enterprise adapted to region-specific global conditions. Students apply specific strategies and tools to select a social impact goal and design a viable business model that creates and delivers value for targeted beneficiaries and customers. The business model assignment can be for a new social enterprise or a growth strategy for an existing one. In either case, the model is designed to achieve measurable social impact with financial stability provided by sustainable sources of earned income. Students will also learn how to select and apply organizational strategies best aligned with relevant global conditions, ESG goals (environmental, social, and governance), and the United Nations Sustainable Development Goals (SDG).

**NFP 4410 Social Enterprise Experiential Learning (4 Credits)****NFP 4500 Social Innovation in Education (4 Credits)**

This course prepares leaders to build and lead social innovation in the changing education marketplace. Education-oriented social entrepreneurs must navigate the education sector and a funding landscape that involves private and public capital, philanthropic and foundation giving, and a growing nonprofit and education technology industry. Students will explore social innovation and enterprises in P-16 education, and how these innovations can support school- and sector-level change and impact for youth and families. Students will examine entrepreneurial principles, business models, performance metrics, customer experience, public-private partnerships, and building organizations to scale. Students will develop the philosophy and strategies of operating in an emergent education ecosystem.

**NFP 4701 Topics in Nonprofit Leadership (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**NFP 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, unconditional acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**NFP 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**NFP 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**NFP 4905 Graduate Social Research Methods (4 Credits)****NFP 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect on graduate studies work at University College, synthesize their learning, and focus on the future. Students in the Portfolio Capstone course produce deliverables which may include: (1) an annotation of the program's portfolio signature assignments with reflective, critical, and creative thinking about the educational experience, (2) an examination of competencies developed, and (3) a pinnacle project that identifies, analyzes, and elaborates a significant theme(s) in the program experience. Students will reflect on and evaluate accomplishments, connect coursework to professional goals, and assesses those goals in the context of the concentration or nonprofit focus. The capstone is an applied project that is a relevant contribution to the student's future and the nonprofit industry.

**NFP 4980 Internship (0-4 Credits)**

The Nonprofit Leadership Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all NFP students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**NFP 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## Courses

**NFP 4001 Nonprofit Leadership Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Nonprofit Leadership must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

**NFP 4010 Leading Nonprofit/Nongovernmental Organizations (4 Credits)**

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout the role changes we make within organizations. This course will examine and develop core self-competency with a focus on leading in an organization. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move operational and program missions forward. By identifying organizational structure, markers of healthy culture, and leadership for financial and fund-raising functions students will identify the leadership approach needed to accomplish their organization's mission.

**NFP 4011 Leadership Development in Action (4 Credits)**

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout our career journey. In this course, inclusive leaders will be examined, including core leadership competencies and practices that may vary due to the organizational culture and structure. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move an organization forward. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**NFP 4015 Healthy Nonprofit/Nongovernmental Organizations (4 Credits)**

Healthy nonprofit/nongovernmental organizations have effective leaders to ensure that their organization attains and maintains high standards of operational excellence. Best practices in executive leadership, strategic management, accountability, legal compliance, strategic planning, outcome measurement, finance, and funding models are key components that assist in assessing an organization's overall health. Students will analyze an actual nonprofit/nongovernmental organization and interview a senior executive to determine the quality and presence of these best practices. A final health assessment assignment will help students synthesize key organizational components.

**NFP 4020 Legacy and Trends of Nonprofit Organizations and Civil Society (4 Credits)**

A diverse historical legacy and philanthropic philosophy have laid the foundation of charity, volunteering, and community impact in the US and across the world. In a rapidly changing and technology-oriented world, philanthropy philosophy, donor motivations, and ways of giving have radically changed. Changing demographics, government policies, and wealth stratification are influencing trends in philanthropy. This course links history and future as it explores the genesis of American wealth creation, giving and voluntarism, as well as the diverse global philosophy and approaches to philanthropy. Nonprofits' collective impact, the rise of social enterprises and nonprofit innovation, and economic trends are examined to enable and inform how students, as developing leaders, will design their organizations' approach to meeting community needs and resource development.

**NFP 4100 Philanthropy Principles and Roles in Nonprofit Organizations (4 Credits)**

Great fundraisers are not born, they are made. These fundraisers, or development professionals, must learn principles and guidelines that inform their roles in organizations of different sizes. Students will differentiate philanthropy, development, and fundraising as well as donor cultivation basics, which is at the heart of all fundraising methods. This is the connection to a giver's passions and the nonprofit mission. Students will analyze and contrast a nonprofit's core fundraising approaches including finding prospects, using donor management technology, making the ask, and building a strong and flourishing fundraising network.

**NFP 4105 Applied Fundraising and Donor Relations (4 Credits)**

Nonprofit development encompasses all the practices of fundraising and structuring this important function within nonprofit/nongovernmental organizations. Students will learn about the development and financial strategy needed to balance diverse fundraising approaches. Considerations such as an organization's business model, strategic plan and growth, as well as strategic initiatives and future planning are central to organizing for development activities. Students will examine, using the four pillars of donor relations, different fundraising approaches such as individual solicitation, foundation and government grants, online donations, and future giving strategies to better understand their applications, scale, results potential and impact. Linking development to the financial functions of nonprofits is essential for every development director and staff.

**NFP 4110 Advanced Fundraising Strategies and Planned Giving (4 Credits)**

Established nonprofit/nongovernmental organizations develop a long-term mission-driven strategy that guides donor cultivation, stewardship efforts, and underpins financial success. Planning for success begins with legacy planning as a growth strategy to include long-term and planned giving fundraising tools. Cultivating donors means investing time, money and resources that an organization will need to weigh together to make good decisions for its future. Students will evaluate planning strategies that include prospecting for donors, offering events, cultivating bequests and endowments, accessing donor advised funds, or buying real estate as sustainable approaches. Additionally, students will evaluate grant cultivation and major gift-solicitation tactics that may help nonprofits strengthen their development portfolios.

**NFP 4115 Leading Nonprofit Financial Health (4 Credits)**

Nonprofit finance is a cornerstone to organizational health and sustainability. In this course students will learn the differences between nonprofit and for-profit accounting, as well as basic finance concepts including balance sheets, income statements, cash flow statements, and key accounting principles. Students will examine different budget models, conduct staff and salary planning and decision making for resource allocation. Students will identify Internal Revenue Service issues as well as current issues impacting the tax environment in the U.S.

**NFP 4120 Technology Strategy for Fundraising (4 Credits)**

Nonprofit development depends on technology. Developing a clear technology strategy allows a nonprofit/non-governmental organization to invest in the most appropriate tools to achieve fundraising success. The course addresses the application of technology categories such as Customer Relationship Management (CRM) products, communication tools, gift processing, social networking, and crowdfunding. Students learn to assess a nonprofit/non-governmental organization's technology needs for fundraising, develop criteria for technology selection, and develop a technology implementation plan. Students examine issues around donor privacy, data security, fundraising ethics related to technology, and legal and tax implications. Students critically think through applying assessment and decision-making principles discussed in this course to current and future technologies.

**NFP 4200 Executive and Board Roles, Responsibilities, and Leadership (4 Credits)**

This course will analyze the interdependent roles, responsibilities, and relationships of nonprofit/nongovernment executives and board of directors, and explore the exercise of leadership required in these differentiated roles. The critical distinctions between the management and governance functions within the nonprofit/nongovernmental sector will be examined. Students will also conduct focused reviews of governance models and best practices that optimize organizational performance and the mission-driven partnership between the executive and board.

**NFP 4205 Leading Strategically (4 Credits)**

Executive nonprofit/nongovernmental leaders must be strategic and insightful as they guide their organizations' direction and ensure community impact. Leaders must be skilled in strategic and systems thinking as they guide the organization's vision, communicate performance expectations, drive performance, align the organization's systems, cultivate partnerships, develop organizational culture, catalyze change and foster innovation. In this course students practice these skills and examine decision making tools and employee coaching practices.

**NFP 4210 Leading Policy and Advocacy (4 Credits)**

Nonprofit/nongovernmental organizations play an important role in the development and implementation of public policy and influence corporations and other private organizations. Advocacy encompasses a wide range of activities that influence decision makers who craft policies and laws that may impact nonprofit/nongovernmental organizations, communities, constituents, and stakeholders. Students will differentiate advocacy and lobbying, examine federal, state and local legislative structures, craft advocacy messages and design campaigns to develop advocacy strategy. Students will also assess the resources needed for an advocacy campaign and its impact.

**NFP 4230 Participatory Evaluation for Program and Community Impact (4 Credits)**

Evaluating the impact and progress of nonprofit programs is essential to confronting disparities and advancing equity. This course reviews qualitative, quantitative and participatory methods to recognize the value and constraints of various approaches to data collection and analysis. By contextualizing evaluation methods, students will learn to engage people most impacted by nonprofit programs in order to identify relevant indicators of change and measure program performance. Students examine relationships between people, groups and institutions to help explain collective impact. Students practice and compare methodologies to assess program effectiveness and community impact with an emphasis on racial equity.

**NFP 4300 Operational Strategy and Structures (4 Credits)**

Passionate people create nonprofit/nongovernmental organizations that lead with vision and drive. These leaders must build the systems, strategic activities, and supportive environments that enable the organizational mission to thrive. This course focuses on developing leaders and managers who build and grow an organizational plan that includes business planning, data-driven decision making, program evaluation, service enterprise, strategic planning and internal innovation to lead a thriving organizational culture of learning to guide the organization's evolution and relevance.

**NFP 4305 Nonprofit Program and People Management (4 Credits)**

Nonprofit/nongovernmental organizations of different sizes must develop effective human resource and program management systems to be well-managed and deliver mission impact. These foundational systems include relevant professional development for managers, staff and board members that support continuous improvement, engagement and cultivate a positive organizational culture. This course will examine effective program management practices including performance monitoring and improvement, relationship management, remote work, cross-generational work, minimizing churn, feedback systems, workflow analysis, appropriate resource allocation, and closure. Course content will tie together the program and people management systems and practices needed in diverse organizations to ensure leaders and managers have the tools to deliver mission impact.

**NFP 4310 Community Organizing, Voice and Empowerment (4 Credits)**

Leading meaningful community change to address social problems involves effective organization strategies and communication that include storytelling, social media, and community engagement. Students will examine power, privilege, and oppression in personal and community contexts to develop strategies that honor and engage community members. Developing impactful messages and crafting different delivery methods are key components to effective community organization and empowerment. Nonprofit/nongovernmental organization leaders need to develop their voice and empowerment strategies to meet community members in community contexts and to engage them through diverse strategies. Evaluating outreach efforts and community impact are also examined.

**NFP 4320 Leading Volunteer Programs with a DEI Lens (4 Credits)**

Change initiatives and improved services and programs designed to meet critical community needs have historically relied on the service of volunteers; comprehensive volunteer programming; and ethical, culturally responsive leadership. Nonprofit/nongovernmental leaders who develop and maintain diversity, equity, and inclusion lens are capable of attracting, engaging, partnering, and maintaining relationships with a much greater segment of the population that is culturally and economically diverse. Strategies volunteer program leaders employ to outreach, message, recruit, onboard, screen, place, supervise, award, recognize, develop and advance volunteers will all be analyzed for their level of inclusivity, cultural responsiveness, and ability to interrupt and remedy historic inequities and harmful narratives. Students will deepen their knowledge about the impact of volunteering in a global context and expand their toolbox of inclusive practices as they apply to volunteer programming.

**NFP 4400 Principles and Practices in Social Enterprise, Innovation and Entrepreneurship (4 Credits)**

To address increasingly complex developmental challenges with meaningful solutions, nonprofit leaders seek to foster innovation, strengthen strategy, and build agile organizations in the social sector to create a more sustainable and scalable impact. In this course, students explore the why, what, and how of social enterprise in the nonprofit and NGO sectors. Additionally, the course provides an overview of the shared characteristics of social enterprises and the frameworks and tools that help build and make them effective. All course content is examined through a global lens with insights into the benefits and risks of using social enterprise strategies for social impact in diverse organizations.

**NFP 4405 Social Enterprise Strategies (4 Credits)**

This course prepares students for social enterprise global leadership by guiding them through the process of designing, launching, or scaling a social enterprise adapted to region-specific global conditions. Students apply specific strategies and tools to select a social impact goal and design a viable business model that creates and delivers value for targeted beneficiaries and customers. The business model assignment can be for a new social enterprise or a growth strategy for an existing one. In either case, the model is designed to achieve measurable social impact with financial stability provided by sustainable sources of earned income. Students will also learn how to select and apply organizational strategies best aligned with relevant global conditions, ESG goals (environmental, social, and governance), and the United Nations Sustainable Development Goals (SDG).

**NFP 4410 Social Enterprise Experiential Learning (4 Credits)****NFP 4500 Social Innovation in Education (4 Credits)**

This course prepares leaders to build and lead social innovation in the changing education marketplace. Education-oriented social entrepreneurs must navigate the education sector and a funding landscape that involves private and public capital, philanthropic and foundation giving, and a growing nonprofit and education technology industry. Students will explore social innovation and enterprises in P-16 education, and how these innovations can support school- and sector-level change and impact for youth and families. Students will examine entrepreneurial principles, business models, performance metrics, customer experience, public-private partnerships, and building organizations to scale. Students will develop the philosophy and strategies of operating in an emergent education ecosystem.

**NFP 4701 Topics in Nonprofit Leadership (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**NFP 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, unconditional acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**NFP 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**NFP 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**NFP 4905 Graduate Social Research Methods (4 Credits)****NFP 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect on graduate studies work at University College, synthesize their learning, and focus on the future. Students in the Portfolio Capstone course produce deliverables which may include: (1) an annotation of the program's portfolio signature assignments with reflective, critical, and creative thinking about the educational experience, (2) an examination of competencies developed, and (3) a pinnacle project that identifies, analyzes, and elaborates a significant theme(s) in the program experience. Students will reflect on and evaluate accomplishments, connect coursework to professional goals, and assesses those goals in the context of the concentration or nonprofit focus. The capstone is an applied project that is a relevant contribution to the student's future and the nonprofit industry.



**NFP 4980 Internship (0-4 Credits)**

The Nonprofit Leadership Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all NFP students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**NFP 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## Organizational Leadership

Office: University College Student Support Center

Mail Code: 2211 S. Josephine St., Denver, CO 80208

Phone: 303-871-2291, 800-347-2042

Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)

Web Site: [www.universitycollege.du.edu](http://www.universitycollege.du.edu) (<http://www.universitycollege.du.edu>)

The Organizational Leadership Program exists to help students achieve their full potential as leaders as they learn to effectively manage change, people, and processes within dynamic environments across sectors. As students progress in their own leadership development, they will explore how to connect mission to values within organizations; investigate how organizational culture impacts ethics and conflict; learn how to integrate strategy and innovation to drive organizational effectiveness; and hone the skills required to transform organizations, industries, and the world.

The Organization Leadership program prepares students to:

- Analyze evidence of oral, written, and nonverbal communication techniques that display clear purpose and directly reflect principles of effective leadership.
- Apply relevant program theory and principles in order to formulate arguments that clearly and directly reflect the leadership principles upon which they are based.
- Articulate a vision for themselves as leaders by identifying gaps in current knowledge and practice.
- Generate a plan to align mission, vision, people, resources, and goals to maximize success and value over time for an organization.
- Justify appropriate change management and communication strategies to transition organizations, processes, and/or employment tasks from one stage to another using employee empowerment while minimizing disruption to business functions, organizational goals, and employee morale.
- Evaluate the characteristics of successful organizational partnerships among private, public, not-for-profit, and governmental organizations to determine how to implement them.
- Design strategies and implementation plan for successfully traversing key internal and external issues—such as new product offerings, organizational development, restructuring, and financial decisions—facing contemporary organizations, while meeting organizational scope and mission.

### Master of Science in Organizational Leadership with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this master's degree concentration, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

This degree prepares students to:

- Assess the influence of historical, social, cultural, and economic factors in shaping one's identity and conceptions of diversity, equity, and inclusion practices.
- Integrate an understanding of social and cultural difference, perspective-taking, and empathy to better inform interpersonal communication and problem-solving strategies.
- Develop practices that advance equity as an integrated component of organizational strategy.
- Design solutions that meaningfully leverage diversity to achieve organizational goals and cultivate a culture of belonging across different organizational settings.
- Apply change models, tools and techniques to successfully achieve a vision for change.

## Master of Science in Organizational Leadership with a Concentration in Human Capital in Organizations

The Human Capital in Organizations master's degree concentration is offered entirely online to meet the needs of busy adults.

The concentration in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations in which they work and lead. Strategic human capital can be a key element of a successful organization. Students will learn to innovate, maximize organizational and individual success, and master the process of developing and retaining employees to engage and achieve objectives.

Led by instructors who work in the fields in which they teach, classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Students will define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement.

This degree prepares students to:

- Analyze organizational partnerships both vertically and horizontally
- Create a strategy for leveraging the attributes, challenges, and advantages of human capital
- Critique the theories and processes used for integrating knowledge management and organizational learning as a concept for enhancing personal and organizational success
- Evaluate the opportunities, challenges and options to have employees participate in decision making through the use of various techniques
- Assess best practices in ethically developing and maintaining human capital

## Master of Science in Organizational Leadership with a Concentration in Organizational Development

The Organizational Development master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Successful organizations are dynamic entities that are constantly adjusting goals, organizational structures, and strategies in response to varying organizational needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes, resulting in the need for an organizational development (OD) intervention. In this concentration, students learn about organizations, organizational culture, and effective intervention strategies. Students also learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees.

This degree prepares students to:

- Articulate and define organizational development, history of OD, and challenges and possibilities using an intentional OD intervention.
- Develop and defend a personal philosophy of organizational change.
- Evaluate the impact of organizational culture and core values on OD interventions.
- Integrate the contract for a successful OD intervention with the organizational culture and determine the role of an OD practitioner in each stage of an OD intervention, distinguishing between an internal and external consultant.
- Assess, compare, and contrast different models of change and describe the impact of each model on an OD process.
- Define and organize OD strategies for different types of organizations (sectors, life cycle, size, industry, types of innovation, or other defining characteristics) for maximizing impacts of OD interventions.
- Summarize the importance and impact of the different organizational structures and design on OD strategy and interventions.
- Construct an organizational diagnosis plan by using interviewing, group facilitation, process observation, synthesis of data, and writing effective reports, with providing effective presentations of the findings.
- Analyze the human side of change and build strategies for successful implementation of an OD intervention that honor the loss, resistance and acceptance of changes.

## Master of Science in Organizational Leadership with a Concentration in Project Management

The Project Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Students will receive hands-on, practical instruction from professional practitioners, who work in the fields in which they teach, on the tools and techniques of effective project management. Students will learn how to develop a clear plan that places a project in the context of an organization's strategic plan, while considering budgetary, scheduling, and human capital implications in any given project.

The content for this concentration has been developed to align with the current edition of the Project Management Institute's (PMI)® A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Project Management Institute, Inc. The unique curriculum equips students with the information and skills needed for the PMI® Project Management Professional (PMP)® Certification Exam.

This degree prepares students to:

- Apply the basic principles of project management to become proficient in the use of project management software
- Demonstrate the use of agile concepts and techniques to deliver complex projects
- Design a comprehensive risk management plan for a project
- Create strategies to manage the complexity inherent in large-scale projects
- Relate project scope to cost, time, and resource requirements
- Develop procurement plans and assess project contracts

### **Master of Science in Organizational Leadership with a Concentration in Strategic Innovation and Change**

The Strategic Innovation and Change master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, classes provide professionals the skills to manage change, encourage innovation, manage projects, and develop effective strategic initiatives while fulfilling an organization's mission.

Students can expect to develop strategic planning skills to help them identify and evaluate external factors that affect an organization on a micro or macro level and prepare them to be solution-oriented leaders. While learning to take advantage of current realities and seize opportunities for an organization through strategy, degree-seekers explore principles of project management, as well as the change theories and concepts required for effective and ethical change leadership.

This degree prepares students to:

- Analyze the roles of mission, vision, values, and goals as a start of strategic planning.
- Summarize the advantages and limitations of the strategic planning process
- Create strategies to address organizational challenges when implementing innovation and change and assess how this plan relates to customers, competitors, suppliers, and technology.
- Evaluate the change theories, concepts, and skills required for effective and ethical change leadership and how the relationships within an organization are affected.
- Align financial management strategies and budget and planning requirements with the vision, values, and goals of an organization.
- Justify the use of various processes, tools, techniques, and personnel to produce project management deliverables across a variety of organizational contexts.

### **Master of Science in Organizational Leadership with a Concentration in Supply Chain Management**

The Supply Chain Management master's degree concentration is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, leadership classes provide professionals the skills to manage change, encourage innovation, and develop effective strategic initiatives while fulfilling an organization's mission.

In the Supply Chain Management concentration, students learn the six pillars of the field, and how to solve problems through the use of Six Sigma principles and the use of data analytics. Through hands-on projects with companies students gain real-world experience on the challenges facing global supply chains in the 21st-century while learning from current leaders in the field.

This degree prepares students to do the following:

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.

- Apply best practices to address an authentic supply chain problem in a work setting.

## **Graduate Certificate in Organizational Leadership with a Concentration in Human Capital in Organizations**

The graduate certificate in Human Capital in Organizations is offered entirely online to meet the needs of busy adults.

The certificate in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations in which they work and lead. Strategic human capital can be a key element of a successful organization. Students will learn to innovate, maximize organizational and individual success, and master the process of developing and retaining employees to engage and achieve objectives.

Led by instructors who work in the fields in which they teach, classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Students will define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement.

Students will also gain additional knowledge in organizational leadership through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Organizational Leadership.

## **Graduate Certificate in Organizational Leadership with a Concentration in Organizational Development**

The graduate certificate in Organizational Development is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Successful organizations are dynamic entities that are constantly adjusting goals, organizational structures, and strategies in response to varying organizational needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes, resulting in the need for an organizational development (OD) intervention. In this concentration, students learn about organizations, organizational culture, and effective intervention strategies. Students also learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees.

Students will also gain additional knowledge in organizational leadership through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Organizational Leadership.

## **Graduate Certificate in Organizational Leadership with a Concentration in Strategic Innovation and Change**

The graduate certificate in Strategic Innovation and Change is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, classes provide professionals the skills to manage change, encourage innovation, manage projects and develop effective strategic initiatives while fulfilling an organization's mission.

Students can expect to develop strategic planning skills to identify and evaluate external factors that affect an organization on a micro or macro level and prepare them to be solution-oriented leaders. While learning to take advantage of current realities and seize opportunities for an organization through strategy, degree-seekers explore principles of change management, as well as the change theories and concepts required for effective and ethical change leadership.

Students will also gain additional skills and knowledge in organizational leadership through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Organizational Leadership.

## **Specialized Graduate Certificate in Human Capital in Organizations**

The specialized graduate certificate in Human Capital in Organizations is offered entirely online to meet the needs of busy adults.

The specialized graduate certificate in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations in which they work and lead. Strategic human capital can be a key element of a successful organization. Students will learn to innovate, maximize organizational and individual success, and master the process of developing and retaining employees to engage and achieve objectives.

## **Specialized Graduate Certificate in Organizational Development**

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Successful organizations are dynamic entities that are constantly adjusting goals, organizational structures, and strategies in response to varying organizational needs and influences. Sometimes these adjustments are large, but quite often there are a series of small to mid-size changes that affect employees and processes, resulting in the need for an organizational development (OD) intervention. In this specialized graduate certificate, students learn about organizations, organizational culture, and effective intervention strategies.

Students also learn the history, challenges, and successes of OD and the different models and techniques to warrant a productive culture in a variety of organizational sizes, sectors, and types. An OD intervention strategy is created by defining the role of the practitioner as an internal or external consultant and constructing a diagnosis plan, synthesizing data from interviews and observations, and effectively communicating the findings in various applicable formats. Finally, a personal philosophy regarding change is developed and then examined through the context of analyzing organizational values and ethics, culture, and the human impact of change on employees.

## Specialized Graduate Certificate in Strategic Innovation and Change

The specialized graduate certificate in Strategic Innovation and Change is offered online or on campus at the University of Denver in the evenings, or in a combination of both, to meet the needs of busy adults.

Students learn tactical innovation and change management using vision, values, and mission as an overall guide. Led by professional practitioners who work in the fields in which they teach, classes provide professionals the skills to manage change, encourage innovation, manage projects and develop effective strategic initiatives while fulfilling an organization's mission.

Students can expect to develop strategic planning skills to identify and evaluate external factors that affect an organization on a micro or macro level and prepare them to be solution-oriented leaders. While learning to take advantage of current realities and seize opportunities for an organization through strategy, degree-seekers explore principles of change management, as well as the change theories and concepts required for effective and ethical change leadership.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Graduate Degree Programs

### Master of Science in Organizational Leadership with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
<b>Core coursework requirement</b>		
ORL 4500	Leadership Development	4
ORL 4510	Building the 21st-Century Organization	4
ORL 4520	Principles of Financing for Organizations	4
ORL 4910	Research Practices and Applications	4
ORL 4901	Capstone Project	4
or ORL 4902	Capstone Seminar	
or ORL 4904	Interdisciplinary Capstone Seminar	
<b>Concentration Requirement</b>		
GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4
HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4
<b>Elective requirement (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Master of Science in Organizational Leadership with a Concentration in Human Capital in Organizations

Code	Title	Credits
<b>Core coursework requirements</b>		
ORL 4500	Leadership Development	4
ORL 4510	Building the 21st-Century Organization	4
ORL 4520	Principles of Financing for Organizations	4
ORL 4910	Research Practices and Applications	4
ORL 4901	Capstone Project	4
or ORL 4902	Capstone Seminar	
or ORL 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
ORL 4160	Integrating Personal and Organizational Success	4
ORL 4170	Developing Human Capital in Organizations	4
ORL 4190	Values-Driven Decision Making	4
ORL 4550	Strategic Organizational Partnerships	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Master of Science in Organizational Leadership with a Concentration in Organizational Development**

Code	Title	Credits
<b>Core coursework requirements</b>		
ORL 4500	Leadership Development	4
ORL 4510	Building the 21st-Century Organization	4
ORL 4520	Principles of Financing for Organizations	4
ORL 4905	Graduate Social Research Methods	4
ORL 4901	Capstone Project	4
or ORL 4902	Capstone Seminar	
or ORL 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
ORL 4110	Fundamentals of Organization Development	4
ORL 4112	Organization Development Interventions	4
ORL 4115	Organizational Culture and Organizational Development Impacts	4
ORL 4125	Evaluate and Sustain Change	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Master of Science in Organizational Leadership with a Concentration in Project Management**

Code	Title	Credits
<b>Core coursework requirements</b>		
ORL 4500	Leadership Development	4
ORL 4510	Building the 21st-Century Organization	4
ORL 4520	Principles of Financing for Organizations	4
ORL 4905	Graduate Social Research Methods	4
ORL 4901	Capstone Project	4
or ORL 4902	Capstone Seminar	
or ORL 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
ICT 4100	Principles of Project Management	4
ICT 4105	Project Contracts and Procurement	4
ICT 4110	Project Risk and Quality Management	4
ICT 4170	Agile Techniques and Practices in Project Management	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Master of Science in Organizational Leadership with a Concentration in Supply Chain Management**

Code	Title	Credits
<b>Core coursework requirements</b>		
ORL 4510	Building the 21st-Century Organization	4
ORL 4500	Leadership Development	4

ORL 4520	Principles of Financing for Organizations	4
ORL 4910	Research Practices and Applications	4
ORL 4901	Capstone Project	4
or ORL 4902	Capstone Seminar	
or ORL 4904	Interdisciplinary Capstone Seminar	

**Concentration requirements**

TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4110	Fundamentals of Supply Chain Planning	4
TRAN 4120	Fundamentals of Supply Chain Execution	4
TRAN 4130	Structured Problem Solving in Supply Chain Management	4

<b>Elective requirements (Choose three courses)</b>	<b>12</b>
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<b>Total Credits</b>	<b>48</b>
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**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Organizational Leadership with a Concentration in Human Capital in Organizations

Code	Title	Credits
<b>Concentration requirements</b>		
ORL 4160	Integrating Personal and Organizational Success	4
ORL 4170	Developing Human Capital in Organizations	4
ORL 4190	Values-Driven Decision Making	4
ORL 4550	Strategic Organizational Partnerships	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Organizational Leadership with a Concentration in Organizational Development

Code	Title	Credits
<b>Concentration requirements</b>		
ORL 4110	Fundamentals of Organization Development	4
ORL 4112	Organization Development Interventions	4
ORL 4115	Organizational Culture and Organizational Development Impacts	4
ORL 4125	Evaluate and Sustain Change	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Organizational Leadership with a Concentration in Strategic Innovation and Change

Code	Title	Credits
<b>Concentration requirements</b>		
ORL 4400	Leading Strategic Planning in Organizations	4
ORL 4420	Leading Change for Transformation	4
ORL 4530	Leading a Culture of Organizational Innovation	4



ICT 4100	Principles of Project Management	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Human Capital in Organizations

Code	Title	Credits
ORL 4170	Developing Human Capital in Organizations	4
ORL 4160	Integrating Personal and Organizational Success	4
ORL 4190	Values-Driven Decision Making	4
ORL 4550	Strategic Organizational Partnerships	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Organizational Development

Code	Title	Credits
ORL 4110	Fundamentals of Organization Development	4
ORL 4112	Organization Development Interventions	4
ORL 4115	Organizational Culture and Organizational Development Impacts	4
ORL 4125	Evaluate and Sustain Change	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Strategic Innovation and Change

Code	Title	Credits
ORL 4400	Leading Strategic Planning in Organizations	4
ORL 4420	Leading Change for Transformation	4
ORL 4530	Leading a Culture of Organizational Innovation	4
ICT 4100	Principles of Project Management	4
<b>Total Credits</b>		<b>16</b>

#### ORL 4000 High Impact Leadership (4 Credits)

Leveraging learners' professional experience, this course delivers applied concepts and skills for professionals to effectively lead and manage individuals and teams. Course content is structured around three sequential themes. Early in this course, learners will focus on understanding and growing oneself as a leader including establishing an inclusive leadership mindset and forming effective communication and self-organization techniques. Next, learners will explore and apply effective techniques to develop individuals and high-performing teams, including approaches for feedback, accountability, coaching and motivation, and leading and managing change. Finally, learners will examine how to navigate organizational dynamics, including managing up and across the organization, and will cultivate their personal leadership and career growth using career design principles. Students use a leadership assessment tool to reflect on their leadership practice and inform the development of a personal leadership action plan. To further support learners in their leadership development, personalized, one-on-one leadership coaching is integrated throughout the course.

#### ORL 4110 Fundamentals of Organization Development (4 Credits)

This course explores the history of organizational development (OD), definitions, models, approaches, and how OD is and can be used in organizations today. An organizational development professional requires a multitude of skills to be effective. Students will assess their own skills and develop a plan to develop or increase required skills.

**ORL 4112 Organization Development Interventions (4 Credits)**

This course will equip students with a solid foundation in Organization Development interventions, enabling them to contribute effectively to organizational change efforts and improve organizational effectiveness for individuals, teams, and whole systems. Through critical analysis, practical application, and discussion of ethical considerations, students will gain the knowledge and skills necessary to navigate the complex landscape of contemporary organizations and drive positive change through OD interventions. In this course, students will explore how to set up interventions for success and examine a variety of intervention types in each of these categories that serve to support activities that change individuals, teams, and systems. Pre-requisites: ORL 4110 strongly recommended, or significant Organization Development experience.

**ORL 4115 Organizational Culture and Organizational Development Impacts (4 Credits)**

Organizational culture encompasses the organization's vision, mission, values, systems, symbols, structures, language, beliefs, and norms. This course proposes organizational development strategies that match, support, or are synergetic with organizational cultures.

**ORL 4120 Team Effectiveness and Interventions (4 Credits)**

To be successful, organizations of all types depend on teams of people who work together to complete tasks, achieve goals, and to help accomplish organizational change and strategy. As a result, focusing on the effectiveness of teams is a key value in organizational development. In this course, students learn how teams work and what makes them effective. Students investigate the tools and methods needed to conduct team assessments, diagnose the symptoms, and prescribe and evaluate targeted interventions that help teams achieve goals that impact organizational outcomes.

**ORL 4125 Evaluate and Sustain Change (4 Credits)**

This course explores organization impacts and change processes that are inherent in organizational development. Students will analyze various change models and assess how they explain the impact of change on organizations and their stakeholders. Students will also evaluate leadership and managerial practices that play a role in sustaining organizational change.

**ORL 4130 Individual Interventions (4 Credits)**

This course explores the theory and practice of an individual intervention as part of an organizational development process. Specifically, students will examine the roles of leadership and how it affects individual development strategy and interventions. A successful internal or external consultant needs to be well-versed in the intervention process and theory that supports it, as well as the different types of individual interventions. In this course, students will learn about the wide array of intervention tools, skills, and resources to successfully facilitate an individual intervention.

**ORL 4135 Large Scale Interventions (4 Credits)**

This course explores the theory and practice of a large-scale or organization-wide organizational development process—including entering the organization, assessing a strategy for a unique organizational culture, and presenting results—while understanding the human side of change. There are many organizational development strategies that can be used based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting organizational development strategy and large-scale interventions.

**ORL 4160 Integrating Personal and Organizational Success (4 Credits)**

This course explores the dynamic and ever-evolving relationship between individual and organizational success. Students will examine the profound impact of their mindset and the "interior condition" from which they lead on organizational performance and goals. They will also investigate how the application of awareness-based methodologies in systems thinking, innovation, and change management build organizational capacity and elevate performance. Additionally, students will build their own Personal Operating System and explore how it aligns with and contributes to organizational success, thereby strengthening their ability to achieve holistic success in their personal and professional lives.

**ORL 4170 Developing Human Capital in Organizations (4 Credits)**

Human capital represents the knowledge, skills, and abilities necessary to implement the strategy of any organization – public, private or nonprofit. Unlike other forms of capital such as financial and equipment, human capital resides within the individual. This course is designed to provide students with an understanding of the strategic role and typical responsibilities that organization leadership, along with human resources, play in unleashing the potential of employees. Developing Human Capital examines current challenges and trends in developing talent as new core competencies and ways to work emerge, technology enables collaboration, and demographics shift employee expectations. The Developing Human Capital in Organizations course provides a talent management and human capital development framework that demonstrates and supports integrated processes and systems that position and enhance employee and leadership development. Students explore the role of leaders and HR in unleashing talent, an organization's most important source of competitive advantage. Students will assess, analyze and apply concrete strategies that ensure talent development is strategic, relevant, culturally sustainable, and competency-driven.

**ORL 4190 Values-Driven Decision Making (4 Credits)**

This course explores both objective and subjective decision making models. Emphasis is placed on decision making for organizational effectiveness. The rational approach will be taught via maximization of expected outcomes and decision tree analysis. The course will also explore managers' preferred decision making styles. The irrational side of decision-making will be covered through demonstrations and discussion of decision bias and judgment heuristics. Decision making is a complex and challenging process. The need for an effective and efficient methodology that is simple, systematic, and logical is more important today than ever. This course is an answer to that problem by using examples from our text and up-to-date articles on decision making from experts in the field.

**ORL 4400 Leading Strategic Planning in Organizations (4 Credits)**

How does an organization translate its mission into specific activities? In this course, students will explore a variety of established frameworks and tools related to organizational strategy that drive long-term success. This course will provide students with the general skills necessary to understand and perform a strategic analysis of an organization. Students will learn techniques related to organizational development, project management, and strategy and will conclude this course by using those tools and techniques to conduct a strategic evaluation of an organization.

**ORL 4410 Principles of Environmental Scanning (4 Credits)**

Environmental scanning is the process of identifying and evaluating environments, both internal and external, that may affect an organization's ability to create and sustain competitive advantage in the pursuit of organizational effectiveness. Knowledge of environmental scanning models are critical to the role of leadership and management teams in organizations. This course provides students the opportunity to develop a process for making strategic decisions using environmental scanning models and tools.

**ORL 4420 Leading Change for Transformation (4 Credits)**

In the 21st Century, change is a constant in organizations that want to remain competitive. At the heart of organizational change are the people of the organization who must continuously adapt their ways of thinking/doing to help the organization adapt and transform. This course prepares students to become leaders of change in their organizations through an exploration of change theory as well as the tools, models, and techniques for facilitating organizational change. Students will also learn how to enable and inspire other individuals in organizations to create change.

**ORL 4500 Leadership Development (4 Credits)**

This course explores leadership as a dynamic relationship with the organizational environment, stakeholders, and followers. Leadership in context is an essential concept, as well as the research-based core leadership competencies that effective leaders exemplify. Leaders from the public, private, and non-profit sectors will be studied in an inclusive context to assess their core leadership competencies and those practices that may vary due to the organizational structure. Relevant contemporary leadership topics will be examined to gain a broad perspective on leadership and considering the diversity of human interrelationships. The importance of ethical, strategic, and system wide decision-making is examined from the standpoint that leadership opportunities exist at all levels of organizations, in the community as well as the workplace. Strategies used to influence culture, promote learning, and implement change to move organizations forward are addressed. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4501 Leadership Development in Action (4 Credits)**

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout our career journey. In this course, inclusive leaders will be examined, including core leadership competencies and practices that may vary due to the organizational culture and structure. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move an organization forward. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4510 Building the 21st-Century Organization (4 Credits)**

This course examines organizations in various sectors, and assesses the impact of internal and external factors on their designs and structures. Students will analyze group and individual behavior and organizational culture to understand their impact on organizational design, while also taking into account contemporary issues such as diversity and inclusion, unanticipated environmental events, and the role of stakeholders. Students will evaluate the appropriateness of current organizational designs, and provide recommendations for innovation and improvement.

**ORL 4520 Principles of Financing for Organizations (4 Credits)**

This course introduces basic financial concepts that lay the foundation for financial literacy. These financial concepts have varying relevance and different applications among public, private, and non-profit organizations. To understand these varying relationships, the course will focus on comparing and contrasting the use, non-use, and relevant application of financial concepts across sectors. Students will begin developing a skillset for applying these concepts appropriately to varying organizational types and structures. Additionally, the assessment of financial conditions will be combined with other indicators, such as an organization's strategy, to learn how to diagnose an organization's overall health.

**ORL 4530 Leading a Culture of Organizational Innovation (4 Credits)**

This course examines a proven process of innovation and how it applies to private, public, and non-profit organizations. Students will explore how leadership and organizational culture can impact innovation. They will develop skills to determine the most appropriate strategies and structures to encourage effective innovation within organizations. In particular, students will describe how to implement management systems to assess ongoing innovation, use metrics throughout the process, and determine how to incentivize innovation in work teams. Students will also assess an organization's current degree of innovation and propose an action plan for integrating innovation moving forward.

**ORL 4550 Strategic Organizational Partnerships (4 Credits)**

Partnerships extend the capability of the organization; public, private or nonprofit; and help to leverage available resources. Strategic partnerships also provide an alternative to vertical integration and a way to complement the organization's core competencies. This course defines and discusses the roles of various types of organizational partnerships, including internal and external, strategic partnerships, and joint ventures, and explores strategies for ethically managing these external and internal organizational relationships.

**ORL 4701 Topics in Organizational Leadership (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**ORL 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ORL 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**ORL 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**ORL 4980 Internship (0-4 Credits)**

The ORL internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ORL master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all ORL students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ORL degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ORL 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**ORL 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

**Courses****ORL 4000 High Impact Leadership (4 Credits)**

Leveraging learners' professional experience, this course delivers applied concepts and skills for professionals to effectively lead and manage individuals and teams. Course content is structured around three sequential themes. Early in this course, learners will focus on understanding and growing oneself as a leader including establishing an inclusive leadership mindset and forming effective communication and self-organization techniques. Next, learners will explore and apply effective techniques to develop individuals and high-performing teams, including approaches for feedback, accountability, coaching and motivation, and leading and managing change. Finally, learners will examine how to navigate organizational dynamics, including managing up and across the organization, and will cultivate their personal leadership and career growth using career design principles. Students use a leadership assessment tool to reflect on their leadership practice and inform the development of a personal leadership action plan. To further support learners in their leadership development, personalized, one-on-one leadership coaching is integrated throughout the course.

**ORL 4110 Fundamentals of Organization Development (4 Credits)**

This course explores the history of organizational development (OD), definitions, models, approaches, and how OD is and can be used in organizations today. An organizational development professional requires a multitude of skills to be effective. Students will assess their own skills and develop a plan to develop or increase required skills.

**ORL 4112 Organization Development Interventions (4 Credits)**

This course will equip students with a solid foundation in Organization Development interventions, enabling them to contribute effectively to organizational change efforts and improve organizational effectiveness for individuals, teams, and whole systems. Through critical analysis, practical application, and discussion of ethical considerations, students will gain the knowledge and skills necessary to navigate the complex landscape of contemporary organizations and drive positive change through OD interventions. In this course, students will explore how to set up interventions for success and examine a variety of intervention types in each of these categories that serve to support activities that change individuals, teams, and systems. Pre-requisites: ORL 4110 strongly recommended, or significant Organization Development experience.

**ORL 4115 Organizational Culture and Organizational Development Impacts (4 Credits)**

Organizational culture encompasses the organization's vision, mission, values, systems, symbols, structures, language, beliefs, and norms. This course proposes organizational development strategies that match, support, or are synergetic with organizational cultures.

**ORL 4120 Team Effectiveness and Interventions (4 Credits)**

To be successful, organizations of all types depend on teams of people who work together to complete tasks, achieve goals, and to help accomplish organizational change and strategy. As a result, focusing on the effectiveness of teams is a key value in organizational development. In this course, students learn how teams work and what makes them effective. Students investigate the tools and methods needed to conduct team assessments, diagnose the symptoms, and prescribe and evaluate targeted interventions that help teams achieve goals that impact organizational outcomes.

**ORL 4125 Evaluate and Sustain Change (4 Credits)**

This course explores organization impacts and change processes that are inherent in organizational development. Students will analyze various change models and assess how they explain the impact of change on organizations and their stakeholders. Students will also evaluate leadership and managerial practices that play a role in sustaining organizational change.

**ORL 4130 Individual Interventions (4 Credits)**

This course explores the theory and practice of an individual intervention as part of an organizational development process. Specifically, students will examine the roles of leadership and how it affects individual development strategy and interventions. A successful internal or external consultant needs to be well-versed in the intervention process and theory that supports it, as well as the different types of individual interventions. In this course, students will learn about the wide array of intervention tools, skills, and resources to successfully facilitate an individual intervention.

**ORL 4135 Large Scale Interventions (4 Credits)**

This course explores the theory and practice of a large-scale or organization-wide organizational development process—including entering the organization, assessing a strategy for a unique organizational culture, and presenting results—while understanding the human side of change. There are many organizational development strategies that can be used based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting organizational development strategy and large-scale interventions.

**ORL 4160 Integrating Personal and Organizational Success (4 Credits)**

This course explores the dynamic and ever-evolving relationship between individual and organizational success. Students will examine the profound impact of their mindset and the "interior condition" from which they lead on organizational performance and goals. They will also investigate how the application of awareness-based methodologies in systems thinking, innovation, and change management build organizational capacity and elevate performance. Additionally, students will build their own Personal Operating System and explore how it aligns with and contributes to organizational success, thereby strengthening their ability to achieve holistic success in their personal and professional lives.

**ORL 4170 Developing Human Capital in Organizations (4 Credits)**

Human capital represents the knowledge, skills, and abilities necessary to implement the strategy of any organization – public, private or nonprofit. Unlike other forms of capital such as financial and equipment, human capital resides within the individual. This course is designed to provide students with an understanding of the strategic role and typical responsibilities that organization leadership, along with human resources, play in unleashing the potential of employees. Developing Human Capital examines current challenges and trends in developing talent as new core competencies and ways to work emerge, technology enables collaboration, and demographics shift employee expectations. The Developing Human Capital in Organizations course provides a talent management and human capital development framework that demonstrates and supports integrated processes and systems that position and enhance employee and leadership development. Students explore the role of leaders and HR in unleashing talent, an organization's most important source of competitive advantage. Students will assess, analyze and apply concrete strategies that ensure talent development is strategic, relevant, culturally sustainable, and competency-driven.

**ORL 4190 Values-Driven Decision Making (4 Credits)**

This course explores both objective and subjective decision making models. Emphasis is placed on decision making for organizational effectiveness. The rational approach will be taught via maximization of expected outcomes and decision tree analysis. The course will also explore managers' preferred decision making styles. The irrational side of decision-making will be covered through demonstrations and discussion of decision bias and judgment heuristics. Decision making is a complex and challenging process. The need for an effective and efficient methodology that is simple, systematic, and logical is more important today than ever. This course is an answer to that problem by using examples from our text and up-to-date articles on decision making from experts in the field.

**ORL 4400 Leading Strategic Planning in Organizations (4 Credits)**

How does an organization translate its mission into specific activities? In this course, students will explore a variety of established frameworks and tools related to organizational strategy that drive long-term success. This course will provide students with the general skills necessary to understand and perform a strategic analysis of an organization. Students will learn techniques related to organizational development, project management, and strategy and will conclude this course by using those tools and techniques to conduct a strategic evaluation of an organization.

**ORL 4410 Principles of Environmental Scanning (4 Credits)**

Environmental scanning is the process of identifying and evaluating environments, both internal and external, that may affect an organization's ability to create and sustain competitive advantage in the pursuit of organizational effectiveness. Knowledge of environmental scanning models are critical to the role of leadership and management teams in organizations. This course provides students the opportunity to develop a process for making strategic decisions using environmental scanning models and tools.

**ORL 4420 Leading Change for Transformation (4 Credits)**

In the 21st Century, change is a constant in organizations that want to remain competitive. At the heart of organizational change are the people of the organization who must continuously adapt their ways of thinking/doing to help the organization adapt and transform. This course prepares students to become leaders of change in their organizations through an exploration of change theory as well as the tools, models, and techniques for facilitating organizational change. Students will also learn how to enable and inspire other individuals in organizations to create change.

**ORL 4500 Leadership Development (4 Credits)**

This course explores leadership as a dynamic relationship with the organizational environment, stakeholders, and followers. Leadership in context is an essential concept, as well as the research-based core leadership competencies that effective leaders exemplify. Leaders from the public, private, and non-profit sectors will be studied in an inclusive context to assess their core leadership competencies and those practices that may vary due to the organizational structure. Relevant contemporary leadership topics will be examined to gain a broad perspective on leadership and considering the diversity of human interrelationships. The importance of ethical, strategic, and system wide decision-making is examined from the standpoint that leadership opportunities exist at all levels of organizations, in the community as well as the workplace. Strategies used to influence culture, promote learning, and implement change to move organizations forward are addressed. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4501 Leadership Development in Action (4 Credits)**

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout our career journey. In this course, inclusive leaders will be examined, including core leadership competencies and practices that may vary due to the organizational culture and structure. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move an organization forward. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4510 Building the 21st-Century Organization (4 Credits)**

This course examines organizations in various sectors, and assesses the impact of internal and external factors on their designs and structures. Students will analyze group and individual behavior and organizational culture to understand their impact on organizational design, while also taking into account contemporary issues such as diversity and inclusion, unanticipated environmental events, and the role of stakeholders. Students will evaluate the appropriateness of current organizational designs, and provide recommendations for innovation and improvement.

**ORL 4520 Principles of Financing for Organizations (4 Credits)**

This course introduces basic financial concepts that lay the foundation for financial literacy. These financial concepts have varying relevance and different applications among public, private, and non-profit organizations. To understand these varying relationships, the course will focus on comparing and contrasting the use, non-use, and relevant application of financial concepts across sectors. Students will begin developing a skillset for applying these concepts appropriately to varying organizational types and structures. Additionally, the assessment of financial conditions will be combined with other indicators, such as an organization's strategy, to learn how to diagnose an organization's overall health.

**ORL 4530 Leading a Culture of Organizational Innovation (4 Credits)**

This course examines a proven process of innovation and how it applies to private, public, and non-profit organizations. Students will explore how leadership and organizational culture can impact innovation. They will develop skills to determine the most appropriate strategies and structures to encourage effective innovation within organizations. In particular, students will describe how to implement management systems to assess ongoing innovation, use metrics throughout the process, and determine how to incentivize innovation in work teams. Students will also assess an organization's current degree of innovation and propose an action plan for integrating innovation moving forward.

**ORL 4550 Strategic Organizational Partnerships (4 Credits)**

Partnerships extend the capability of the organization; public, private or nonprofit; and help to leverage available resources. Strategic partnerships also provide an alternative to vertical integration and a way to complement the organization's core competencies. This course defines and discusses the roles of various types of organizational partnerships, including internal and external, strategic partnerships, and joint ventures, and explores strategies for ethically managing these external and internal organizational relationships.

**ORL 4701 Topics in Organizational Leadership (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**ORL 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ORL 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**ORL 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**ORL 4980 Internship (0-4 Credits)**

The ORL internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ORL master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all ORL students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ORL degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ORL 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**ORL 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

## Professional Creative Writing

Office: University College Student Support Center  
Mail Code: 2211 S. Josephine St., Denver, CO 80208  
Phone: 303-871-2291, 800-347-2042  
Email: [ucolssupport@du.edu](mailto:ucolssupport@du.edu)  
Web Site: <http://www.universitycollege.du.edu>

This program empowers aspiring writers to become published authors and, through their work, influence our ongoing cultural conversation. We encourage students to read widely and with professional attention to mastering the craft of their chosen genre. While developing a clear understanding of the literary marketplace, students learn to cultivate their individual identities as writers, create personal brands that forcefully present their writing to the public, and establish connections with the broader community of working writers. Since imaginative writing testifies to truths that would otherwise pass through the world unnoticed or misunderstood, the authors who produce it expand awareness in their readers, and through those readers, enhance the awareness of countless other people. We find this process inspiring, and through this program seek to share that inspiration with all our students.

This program prepares students to:

- Craft writing with a keen awareness of the limits and opportunities of the writing's genre
- Cultivate writing routines and habits that support creative productivity
- Develop a sophisticated knowledge of literary structures and reader expectations
- Apply professional editing standards to evaluate both published writing and writing for their peers
- Assess their own writing and learn how to enhance its strengths and eliminate its weaknesses
- Define their audiences and write in ways that move and entertain them

### Master of Arts in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing

The Professional Creative Nonfiction Writing Concentration is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

- Identify and analyze the basic elements of creative nonfiction as found in the works of master creative nonfiction writers
- Apply their knowledge of creative nonfiction fundamentals and genres to their own creative work



- Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
- Create strategies for developing a professional writing presence designed to cultivate an audience for their work

### **Master of Arts in Professional Creative Writing with a Concentration in Professional Dramatic Writing**

The Professional Dramatic Writing Concentration is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

- Identify and analyze the basic elements of drama as found in the works of master playwrights, screenwriters, and spoken word artists
- Apply their knowledge of drama's fundamentals and genres to their own creative work
- Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
- Create strategies for developing a professional writing presence designed to cultivate an audience for their dramatic works

### **Master of Arts in Professional Creative Writing with a Concentration in Professional Fiction Writing**

The Professional Fiction Writing Concentration is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

- Identify and analyze the basic elements of fiction as found in the works of master fiction writers
- Apply their knowledge of fiction fundamentals and genres to their own creative work
- Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
- Create strategies for developing a professional writing presence designed to cultivate an audience for their work

### **Master of Arts in Professional Creative Writing with a Concentration in Professional Poetry Writing**

The Professional Poetry Writing Concentration is designed for aspiring poets whose ambition is to become published authors of individual poems and collections of poetry. The coursework helps poets progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

This degree prepares students to:

- Identify and analyze the basic elements of poetry as found in the works of master poets
- Apply their knowledge of poetry fundamentals and genres to their own creative work
- Discover and cultivate personal habits of thought and behavior that sustain their creative efforts
- Create strategies for developing a professional writing presence designed to cultivate an audience for their poetry

### **Graduate Certificate in Professional Creative Writing with a Concentration in Literary Genres in Book Publishing**

This graduate certificate concentrates on fiction and nonfiction—the core genres driving the U.S. publishing industry, valued at over \$20 billion. Designed for aspiring publishing professionals, this program combines two unique experiences at the University of Denver (DU) to equip students with comprehensive industry knowledge and skills.

First, students complete the Denver Publishing Institute's (DPI) four-week graduate-level coursework dedicated to helping book lovers launch their publishing careers anywhere in the country. Students are introduced to the process of book publishing—from editing, marketing, and production to the bigger picture of publishing in a constantly changing world. Students engage with leading figures across the publishing spectrum, including small independent trade houses and large global media companies. Students gain a market-focused understanding of publishing and learn to navigate potential internal biases in editorial, marketing, or sales roles.

Second, through DU's University College students explore the Professional Creative Writing (PWRI) program's graduate-level coursework. This component enriches students' understanding of literary genres by examining compelling works through a creative writing lens and enhancing the skills needed to excel in the publishing field of their choice.

### **Graduate Certificate in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing**

The Professional Creative Nonfiction Writing Certificate is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of

their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

### **Graduate Certificate in Professional Creative Writing with a Concentration in Professional Dramatic Writing**

The Professional Dramatic Writing Certificate is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

### **Graduate Certificate in Professional Creative Writing with a Concentration in Professional Fiction Writing**

The Professional Fiction Writing Certificate is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

### **Graduate Certificate in Professional Creative Writing with a Concentration in Professional Poetry Writing**

The Professional Poetry Writing Certificate is designed for aspiring poets whose ambition is to become published authors of individual poems and collections of poetry. The coursework helps poets progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work. Students will also gain additional skills and knowledge in professional creative writing through elective coursework.

### **Specialized Graduate Certificate in Professional Creative Nonfiction Writing**

The specialized graduate certificate in Professional Creative Nonfiction Writing is designed for aspiring writers whose ambition is to become published authors of memoirs, personal essays, travel writing, and other forms of creative nonfiction. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

### **Specialized Graduate Certificate in Professional Dramatic Writing**

The specialized graduate certificate in Professional Dramatic Writing is designed for aspiring playwrights, screenwriters, and spoken word artists whose ambition is to become published authors of plays, films, and other individual and collaborative forms of professional performance. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

### **Specialized Graduate Certificate in Professional Fiction Writing**

The specialized graduate certificate in Professional Fiction Writing is designed for aspiring writers whose ambition is to become published authors of short stories, novels, and collaborative works in particular genres. The coursework helps writers progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

### **Specialized Graduate Certificate in Professional Poetry Writing**

The specialized graduate certificate in Professional Poetry Writing is designed for aspiring poets whose ambition is to become published authors of individual poems and collections of poetry. The coursework helps poets progress toward mastering the fundamentals of their craft, understanding the rich tradition of genres and individual masterworks in which that craft is rooted, and creating a personal presence in the creative marketplace to support the largest possible audience for their work.

## **Master's Degree Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

### Certificate Admission

#### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Graduate Degree Programs

### Master of Arts in Professional Writing with a Concentration in Professional Dramatic Writing

Code	Title	Credits
<b>Core coursework requirements:</b>		
PWRI 4500	The Writing Life: Concepts, Practices, and Professionalism	4
PWRI 4510	Literary Genres for Writers	4
PWRI 4520	The Writers Workshop	4
PWRI 4917	Market Research for Writers	4
PWRI 4901 or PWRI 4920	Professional Creative Writing Capstone Project Portfolio Capstone	4
<b>Concentration requirements:</b>		
PWRI 4300	Masterworks: Drama	4
PWRI 4310	Playwriting: Foundational Concepts, Skills, and Practice	4
PWRI 4320	Writing the Screenplay	4
PWRI 4330	Writing for Personal Performance	4
<b>Electives (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Master of Arts in Professional Writing with a Concentration in Professional Fiction Writing

Code	Title	Credits
<b>Core coursework requirements:</b>		
PWRI 4500	The Writing Life: Concepts, Practices, and Professionalism	4
PWRI 4510	Literary Genres for Writers	4
PWRI 4520	The Writers Workshop	4
PWRI 4917	Market Research for Writers	4
PWRI 4901 or PWRI 4920	Professional Creative Writing Capstone Project Portfolio Capstone	4
<b>Concentration requirements:</b>		
PWRI 4000	Masterworks: Fiction	4
PWRI 4010	Writing Fiction: Foundational Concepts, Skills, and Practice	4
PWRI 4020	Writing the Short Story	4
PWRI 4030	Writing the Novella	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Professional Writing with a Concentration in Professional Creative Nonfiction Writing

Code	Title	Credits
<b>Core coursework requirements:</b>		
PWRI 4500	The Writing Life: Concepts, Practices, and Professionalism	4
PWRI 4510	Literary Genres for Writers	4
PWRI 4520	The Writers Workshop	4
PWRI 4917	Market Research for Writers	4
PWRI 4901 or PWRI 4920	Professional Creative Writing Capstone Project Portfolio Capstone	4
<b>Concentration requirements:</b>		
PWRI 4100	Masterworks: Creative Nonfiction	4
PWRI 4110	Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice	4
PWRI 4120	Writing the Personal Essay	4
PWRI 4130	Writing the Memoir	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Arts in Professional Writing with a Concentration in Professional Poetry Writing

Code	Title	Credits
<b>Core coursework requirements:</b>		
PWRI 4500	The Writing Life: Concepts, Practices, and Professionalism	4
PWRI 4510	Literary Genres for Writers	4
PWRI 4520	The Writers Workshop	4
PWRI 4917	Market Research for Writers	4
PWRI 4901 or PWRI 4920	Professional Creative Writing Capstone Project Portfolio Capstone	4

**Concentration requirements:**

PWRI 4200	Masterworks: Poetry	4
PWRI 4210	Writing Poetry: Foundational Concepts, Skills, and Practice	4
PWRI 4220	Writing Traditional Verse and Contemporary Song Lyrics	4
PWRI 4230	Writing Improvisational Verse and Prose Poetry	4

**Elective requirements (Choose three courses)** 12

**Total Credits** 48

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Professional Creative Writing with a Concentration in Literary Genres in Book Publishing

Code	Title	Credits
Concentration Requirements:		
ENGL 4851	Publishing Institute	6
PWRI 4000	Masterworks: Fiction	4
PWRI 4100	Masterworks: Creative Nonfiction	4
AND Select three courses:		12
PWRI 4200	Masterworks: Poetry	
PWRI 4410	Writing and Healing	
PWRI 4510	Literary Genres for Writers	
PWRI 4540	Children's Literature: From Picture Books to Books for Young Adults	
PWRI 4600	Breaking the Chains of Genre: An Exploration of Hybrid Literatures	
<b>Total Credits</b>		<b>26</b>

**Minimum number of credits required: 26**

### Graduate Certificate in Professional Creative Writing with a Concentration in Professional Dramatic Writing

Code	Title	Credits
Concentration requirements:		
PWRI 4300	Masterworks: Drama	4
PWRI 4310	Playwriting: Foundational Concepts, Skills, and Practice	4
PWRI 4320	Writing the Screenplay	4
PWRI 4330	Writing for Personal Performance	4
<b>Electives (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

### Graduate Certificate in Professional Creative Writing with a Concentration in Professional Fiction Writing

Code	Title	Credits
Concentration requirements:		
PWRI 4000	Masterworks: Fiction	4
PWRI 4010	Writing Fiction: Foundational Concepts, Skills, and Practice	4
PWRI 4020	Writing the Short Story	4
PWRI 4030	Writing the Novella	4

<b>Elective requirements (Choose two courses)</b>	<b>8</b>
<b>Total Credits</b>	<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate in Professional Creative Writing with a Concentration in Professional Creative Nonfiction Writing

Code	Title	Credits
<b>Concentration requirements:</b>		
PWRI 4100	Masterworks: Creative Nonfiction	4
PWRI 4110	Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice	4
PWRI 4120	Writing the Personal Essay	4
PWRI 4130	Writing the Memoir	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate in Professional Creative Writing with a Concentration in Professional Poetry Writing

Code	Title	Credits
<b>Concentration requirements:</b>		
PWRI 4200	Masterworks: Poetry	4
PWRI 4210	Writing Poetry: Foundational Concepts, Skills, and Practice	4
PWRI 4220	Writing Traditional Verse and Contemporary Song Lyrics	4
PWRI 4230	Writing Improvisational Verse and Prose Poetry	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

**Minimum number of credits required: 24**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Professional Dramatic Writing

Code	Title	Credits
PWRI 4300	Masterworks: Drama	4
PWRI 4310	Playwriting: Foundational Concepts, Skills, and Practice	4
PWRI 4320	Writing the Screenplay	4
PWRI 4330	Writing for Personal Performance	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Professional Fiction Writing

Code	Title	Credits
PWRI 4000	Masterworks: Fiction	4
PWRI 4010	Writing Fiction: Foundational Concepts, Skills, and Practice	4
PWRI 4020	Writing the Short Story	4

PWRI 4030	Writing the Novella	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Professional Creative Nonfiction Writing

Code	Title	Credits
PWRI 4100	Masterworks: Creative Nonfiction	4
PWRI 4110	Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice	4
PWRI 4120	Writing the Personal Essay	4
PWRI 4130	Writing the Memoir	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Professional Poetry Writing

Code	Title	Credits
PWRI 4200	Masterworks: Poetry	4
PWRI 4210	Writing Poetry: Foundational Concepts, Skills, and Practice	4
PWRI 4220	Writing Traditional Verse and Contemporary Song Lyrics	4
PWRI 4230	Writing Improvisational Verse and Prose Poetry	4
<b>Total Credits</b>		<b>16</b>

#### PWRI 4000 Masterworks: Fiction (4 Credits)

A "masterwork" of fiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

#### PWRI 4001 Portfolio Foundations (0 Credits)

Master's and certificate-seeking students in Professional Creative Writing must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

#### PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice (4 Credits)

This is a workshop-based course on the fundamentals of writing fiction. It touches on popular subgenres such as literary fiction, science fiction, fantasy, suspense, mystery, historical fiction, satire, romance, and more. Students will read, discuss, and create presentations on works by established fiction writers; experiment with craft concepts in their own stories; provide and receive constructive feedback in a supportive workshop environment; and maintain a consistent writing practice throughout the course.

#### PWRI 4020 Writing the Short Story (4 Credits)

The dramatic elements of the short story are distinct from any other form of fiction. This workshop is for writers who plan to seriously study the form of the contemporary short story, and to apply their learning to their own projects. Students focus equally on reading published works and writing/ revising an original short story, as well as discussing aspects of publishing. Weekly writing exercises, readings, and workshops of student stories will be combined to provide the most direct, effective training in this dynamic form. (It is strongly encouraged that students take PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice prior to this course.)

#### PWRI 4030 Writing the Novella (4 Credits)

This course concentrates on the craft of writing a form of fiction that combines the intense thematic focus of short stories and the complex character development typical of the novel. The novella offers writers the opportunity to create an extended story without juggling the complexities of multiple points of view, intricate plot lines, and difficult-to-manage back stories. Typically concerned with a character's emotional and personal development rather than the interaction of many characters in a complicated social context, the novella usually takes place in one location or in a larger but well-defined setting. Novellas are common in genres such as mystery and science fiction, and because of their strong focus and relative brevity, they are widely considered the perfect form for adaptation to the stage, film, and television.

**PWRI 4100 Masterworks: Creative Nonfiction (4 Credits)**

A “masterwork” of creative nonfiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer’s point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful works of modern creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Discussions and writing assignments will focus on how exposure to the creative nonfiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice (4 Credits)**

This course concentrates on the craft of writing nonfiction, which includes popular subgenres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Students will later apply these classic skills in courses devoted to various nonfiction sub-genres, such as memoir. Class discussions will emphasize essential writing skills and professional approaches to research, taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

**PWRI 4120 Writing the Personal Essay (4 Credits)**

The author Dinty Moore describes the personal essay as being for writers who want to capture a bit of life, producing a written record of their better thoughts. Like the short story in fiction, the personal essay is one of the original forms of creative nonfiction. It is a lively form that has tracked through the ages—from ancient archetypes to the school of Enlightenment essayists, 19th-century realists and romantics to robust 20th-century conventionalists, and on to Digital Age innovators where it deeply informs blogs, social media posts, and other contemporary writings. Conventions of the craft are covered in this course, but students will not be expected to embrace creativity-stifling rules. The work will be hands-on, with workshoping that pushed students to pursue new pathways and fresh approaches in their personal essay writing.

**PWRI 4130 Writing the Memoir (4 Credits)**

The memoir is as popular as ever – tales of persistence and overcoming odds grip us like no other. Students in this course will concentrate on the craft of writing the memoir, a work of creative nonfiction rooted in and focused on the writer’s memories. Unlike personal essays, memoirs foreground the writer’s past to illuminate the complex development of understanding that past. This aim results in works that are typically book-length, in which the writer applies the techniques of creative nonfiction to describe and make observations and draw conclusions from personal experience. Class discussions emphasize essential writing skills, techniques for exploring and recording memories, and professional approaches to the research required to make the past come to life for the reader. Taking advantage of a supportive workshop format, students will share their ideas about craft and content with a view toward book publication.

**PWRI 4140 Natural Science and Literature (4 Credits)**

This class will explore the practice – and art – of nonfiction writing about science and nature. Students will begin with an examination of influential historical works and move into contemporary writing on science and nature. The class will be a sort of journey, from ruminative essays on the individual in nature to impassioned (and science-heavy) explorations of ecosystem destruction to exuberant studies of love and sex in the animal kingdom. Students will seek to understand the narrative and linguistic machinery that make these pieces of writing “tick” through discussions, short writing exercises, brief reviews, and workshop participation. This course will also address the development of students’ own writing. Specifically, students will seek understanding of the writing techniques that can be used to make the complex fields of science and nature accessible subjects of writing intended for mainstream or literary publications. The key challenge will be to find a topic, a format (memoir, essay, narrative journalism), a structure, and a voice suitable for creating a single, sustained piece of writing that each student will devise, draft, workshop, and polish throughout the course.

**PWRI 4200 Masterworks: Poetry (4 Credits)**

Poetry is the most ancient of the written arts, so there are thousands of poetry masterworks—far too many to be usefully studied in a single course. That’s why this course focuses on the one resource that every poet must develop in order to write well: a personal “poetic lineage.” Students will learn how to explore the work of other poets and identify significant parts of their poetic lineages. They will also learn how to use that exploration to develop, expand, and refine their own poetic lineage, which will shape and nourish their poetry over a lifetime.

**PWRI 4210 Writing Poetry: Foundational Concepts, Skills, and Practice (4 Credits)**

This course is a combination of readings in poetry and poetics, brief lectures, and open discussions focused on the interplay of image, metaphor, rhythm, emotions and ideas in the expressive form of writing called poetry. Students will learn to tap the imaginative sources that all creative writing springs from and flow those energies into poetic form. The instructor will provide examples to illustrate successful uses of key poetic concepts and help students explore, through a range of open-ended exercises, various approaches to expressing themselves fully and clearly. Students will also develop practical critiquing skills with the aim of helping themselves and their classmates write with greater subtlety and power.

**PWRI 4220 Writing Traditional Verse and Contemporary Song Lyrics (4 Credits)**

This course focuses on the shared building blocks of traditional formal poetry and contemporary song lyrics: meter and rhyme, repetition, and verse/stanza structure. Beginning with simple constructions like limericks and nursery rhymes, and moving swiftly into more sophisticated verse organizations like the sonnet, the villanelle, the ballad, and the popular song, students will explore a variety of existing examples, then produce their own pieces that follow (or break) the established rules of each form. The course will take a workshop format, in which students will generate, share, and receive feedback on their formal experiments; the focus will be on developing a more finely tuned ear for form, and on deploying “traditional” poetic techniques in relevant, radical, and inventive ways. (NOTE: The ability to sing or play an instrument is NOT required for this course; when discussing and writing songs, students will focus on the texts only, not the harmonic/melodic elements of songwriting craft.)



**PWRI 4230 Writing Improvisational Verse and Prose Poetry (4 Credits)**

This course focuses on the writing of improvisational verse and prose poems, certainly the most popular forms of poetry today both in America and around the world. The course will explore a wide variety of approaches to non-metrical verse and examine how poetry sounds when it appears in prose form. Using a workshop format, students will generate, share, and receive feedback on their poetic experiments, with an emphasis on developing a more finely tuned ear for cadence and phrasing. Robert Frost famously wrote that writing what he called “free verse” was like “playing tennis with the net down.” This course aims to demonstrate why Frost was wrong.

**PWRI 4300 Masterworks: Drama (4 Credits)**

A “masterwork” of drama is a play or screenplay that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer’s point of view, drawing on them to develop a deeper understanding of the way structure, style, character, imagery, theme, and cultural values work together in some of the most powerful dramatic works of modern times. The course will also explore the impact of stagecraft, the needs of actors, and vision of directors on the way a play is developed. Discussions and writing assignments will focus on how exposure to the drama of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4310 Playwriting: Foundational Concepts, Skills, and Practice (4 Credits)**

In this course, students analyze short and full-length plays, compose experimental exercises, write drafts of short plays, evaluate each other’s writing, and revise a short play to develop the skills required to write for the stage. Students learn key theatrical skills and terms as they analyze varied plot structures, create vivid characters, and write realistic and stylized dialogue. Students examine theatre’s collaborative process, and model possible relationships between environment, stagecraft, and the ways playwrights shape their texts. Scripts read for class discussions illustrate uses of key dramatic techniques while suggesting various approaches to theme, genre, character, and structure. Students develop practical critiquing skills while incorporating colleagues’ feedback into script revision, with the aim of crafting compelling plays that appeal to both theater professionals and theatrical audiences.

**PWRI 4320 Writing the Screenplay (4 Credits)**

This course provides a comprehensive overview of the industry standard elements of screenwriting. Through readings, film viewings, written analyses, online discussions, and creative exercises, students will learn how to write original stories for a visual medium, use prescriptive filmic story structure (“screenplay formatting”), and identify key elements that make a script successful. With these tools in hand, students will create the first act of an original feature-length screenplay, develop an outline (“script treatment”) for the entire film, and finish the course prepared to complete the project and present it to the film-making industry.

**PWRI 4330 Writing for Personal Performance (4 Credits)**

This course focuses on writing texts that the authors aim to perform themselves, including spoken word poetry, storytelling, one-person plays, presentations in TED Talk and other formats, and even standup comedy. Using a variety of readings and recorded performances, brief lectures, and writing assignments, the course helps writers develop the skills required to shape their work for public performance. Students learn to distinguish between their “page voice” and their “performance voice” so that they can produce more effective texts for performance. Using a supportive workshop format and class discussions, students will apply practical critiquing skills with the aim of helping themselves and their classmates create compelling performance pieces that appeal to audiences of all kinds.

**PWRI 4340 Writing the Adapted Screenplay (4 Credits)**

Much of Hollywood’s source material in recent decades was not written originally for the big screen – it was first created and popularized in another medium, like a book, memoir, an article, a video game, or even an album. Clearly, the marketplace has a proven demand for adaptations. In this course, we examine the adaptation of literary and nonfiction works and the film interpretations of each work. This class will explore the principal development questions involved in a successful adaptation, look at the legalities of securing the rights to a property, and dive into the specifics behind pitching an adaptation. Students will study the main developmental issues of adaptation and write a range of short adaptations across multiple mediums, plus create a pitch and a first act for a feature project. The course also aims to enhance the critical skill of students as well as their craft abilities.

**PWRI 4410 Writing and Healing (4 Credits)**

In this course, students evaluate theoretical and practical aspects of written expression as it relates to healing. Students analyze foundational concepts of healing through the lens of contemporary creative literature. Students apply these concepts to their writing practice through journaling processes, written therapeutic strategies, and poetic techniques aimed at cultivating self-awareness and personal growth. Through a course-long inquiry into the concept of “healing,” students will learn to articulate how their writing processes enhance their writerly identities and develop a practical set of therapeutic, expressive techniques for everyday use.

**PWRI 4420 Writing as Translation (4 Credits)**

In its literary sense, translation is the closest reading possible, and learning its processes enables a deeper reading of our own work. Effective translation—of our own writing or that of others—depends on intimate attention to the many elements of literary writing. This course examines common translation practices and examples with emphasis on elements such as syntax, word choice, pacing, setting, and imagery, with the goal of enhancing the student’s knowledge of and skill with those elements. Once acquainted with translation processes, students apply them to their own work. Assignments are completed in English and no second language is required.

**PWRI 4430 Writing for Television (4 Credits)**

This course provides an overview of two important television writing skills: the creation of a pilot for an original series and the writing of a “spec,” which is writing an original idea for a television show that currently exists (a requirement in the pursuit of employment as a TV writer). Students will intensively study the structure, character build, template, theme, and franchise involved in the development of TV shows (both half hour and hour long), as well as learn about the current business of TV. Since this is an intensive writing and workshoping course, students will be required to submit their work to and to give constructive criticism to their fellow writers. Prerequisite: PWRI 4320 Writing the Screenplay.

**PWRI 4500 The Writing Life: Concepts, Practices, and Professionalism (4 Credits)**

This course aims to provide aspiring writers a basic knowledge of the creative and professional tools they will need to succeed, whatever their individual goals or life situation. This course tackles questions and challenges common to all writers at one time or another. Primary considerations include: What exactly does it mean to be a writer? What are my motivations for wanting to write? How can I identify and prioritize writing projects? How do I move my writing projects forward from concept to completion? These primary challenges require writers to narrow their creative focus and to cultivate habits of thought and behavior that sustain creative efforts in a world full of distractions, obligations, and competing claims on their time.

**PWRI 4510 Literary Genres for Writers (4 Credits)****PWRI 4520 The Writers Workshop (4 Credits)**

A writer writes” is the universal mantra of the writing life, but one of the critical steps in developing a work in progress is getting constructive feedback. Unfortunately, all too often, a writer ends up disappointed because the feedback received is superficial, too polite, or little more than proofreading. This course teaches students to workshop in a meaningful way, responding to content, focus, coherence, and organizational issues. Students learn to elicit more feedback from their workshop colleagues, demonstrating the relationship between reader and writer. The class will explore a variety of genres, and each student produces short exercises and longer projects that demonstrate a grasp of various aspects of the writing craft.

**PWRI 4540 Children's Literature: From Picture Books to Books for Young Adults (4 Credits)**

This course offers an introductory study of children's literature, from toddler board books and easy readers to chapter books and books for young adults. It is designed primarily for students interested in writing for children and those planning to teach children's literature, though new and soon-to-be parents would find it illuminating as well. Touching on all the major categories/levels and subgenres of children's literature, students will learn to identify the unique characteristics of each and apply definable quality standards to assess a wide range of particular texts from both creative and analytical points of view. Note that, though students may do some creative writing, this is not a course in writing children's literature.

**PWRI 4560 Writing Books for Children (4 Credits)**

This course concentrates on the craft of writing three distinct categories of children's fiction: the picture book, the early/easy/transitional reader and novels for older readers (chapter book, middle grade and young adult novel). Within each category, students have a unique opportunity to explore storytelling for a specific young audience whose members vary in age, reading interest and reading ability. Note that this course covers narrative fiction only; nonfiction, though a valuable genre of children's literature, is beyond the scope of this course. Prerequisite: PWRI 4540 Children's Literature.

**PWRI 4600 Breaking the Chains of Genre: An Exploration of Hybrid Literatures (4 Credits)**

Hybrid genre, cross-genre, multi-genre, or mixed genre literature is literature that combines writing from different genres to create one text. The text created might be fragmentary or unified; it might be coherent or disjointed. Cross-genre literature is not new, but contemporary authors are more frequently pushing on the boundaries between genres in their creative and scholarly writing to produce rich, open, polyphonic texts as a result. How has cross-genre literature been deployed in different literary and cultural traditions? What advantages does cross-genre literature provide for the writer and for the reader? This course will explore the ways in which authors have experimented with mixing genres in different cultural traditions and writing disciplines as well as how this genre-bending has enabled them to accomplish various creative, narrative, and rhetorical purposes. Required Prerequisite: PWRI 4510.

**PWRI 4701 Topics in Literature (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of established masterworks to examining the latest trends in developing genres or wrestling with several works by living masters.

**PWRI 4702 Topics in Writing (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of compositional techniques used in established masterworks to examining the development of new genre forms or wrestling with texts whose approaches are drawn from multiple genres.

**PWRI 4901 Professional Creative Writing Capstone Project (4 Credits)**

The Creative Capstone Project provides students the opportunity to apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student's coursework at University College and his or her writing goals for the future. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the project. Please see the Creative Capstone Project Guidelines for additional details. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. Prerequisites: a Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, and completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**PWRI 4917 Market Research for Writers (4 Credits)**

All writers of every medium considering a professional career path must not only learn their craft but learn to navigate the publishing and production worlds. This course discusses the relationships between agents, editors of books, journals and magazines, literary managers, artistic directors, publishing houses (both big and boutique), and booksellers, as well as production companies. Additionally, students determine ways to cultivate relationships with those industry professionals and find opportunities (such as contests and fellowships) with the goal of submission and acquisition. This course also covers the research required for target-rich submission campaigns, the process of manuscript submission and acquisition, as well as learning copyright and contractual basics. Students will learn how to generate marketing materials that aid in the submission process, across all mediums, and how to develop an author platform, using branding and social media opportunities, that cultivates a professional, public persona critical to connecting with their audience. Ultimately, students consider how to build a writing community that will provide the foundation for support, education, and networking, which is vital for success. Required Prerequisites: PWRI 4500, 4510, and 4520. Note that this course must be completed before enrolling in either the PWRI Portfolio Capstone or Creative Capstone Project.

**PWRI 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**PWRI 4980 Internship (0-4 Credits)**

The PWRI internship is designed to offer students a practical educational experience in an industry-related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the PWRI master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all PWRI students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the PWRI degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**PWRI 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

**Courses****PWRI 4000 Masterworks: Fiction (4 Credits)**

A "masterwork" of fiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4001 Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Professional Creative Writing must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

**PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice (4 Credits)**

This is a workshop-based course on the fundamentals of writing fiction. It touches on popular subgenres such as literary fiction, science fiction, fantasy, suspense, mystery, historical fiction, satire, romance, and more. Students will read, discuss, and create presentations on works by established fiction writers; experiment with craft concepts in their own stories; provide and receive constructive feedback in a supportive workshop environment; and maintain a consistent writing practice throughout the course.

**PWRI 4020 Writing the Short Story (4 Credits)**

The dramatic elements of the short story are distinct from any other form of fiction. This workshop is for writers who plan to seriously study the form of the contemporary short story, and to apply their learning to their own projects. Students focus equally on reading published works and writing/revising an original short story, as well as discussing aspects of publishing. Weekly writing exercises, readings, and workshops of student stories will be combined to provide the most direct, effective training in this dynamic form. (It is strongly encouraged that students take PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice prior to this course.).

**PWRI 4030 Writing the Novella (4 Credits)**

This course concentrates on the craft of writing a form of fiction that combines the intense thematic focus of short stories and the complex character development typical of the novel. The novella offers writers the opportunity to create an extended story without juggling the complexities of multiple points of view, intricate plot lines, and difficult-to-manage back stories. Typically concerned with a character's emotional and personal development rather than the interaction of many characters in a complicated social context, the novella usually takes place in one location or in a larger but well-defined setting. Novellas are common in genres such as mystery and science fiction, and because of their strong focus and relative brevity, they are widely considered the perfect form for adaptation to the stage, film, and television.

**PWRI 4100 Masterworks: Creative Nonfiction (4 Credits)**

A "masterwork" of creative nonfiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful works of modern creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Discussions and writing assignments will focus on how exposure to the creative nonfiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice (4 Credits)**

This course concentrates on the craft of writing nonfiction, which includes popular subgenres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Students will later apply these classic skills in courses devoted to various nonfiction sub-genres, such as memoir. Class discussions will emphasize essential writing skills and professional approaches to research, taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

**PWRI 4120 Writing the Personal Essay (4 Credits)**

The author Dinty Moore describes the personal essay as being for writers who want to capture a bit of life, producing a written record of their better thoughts. Like the short story in fiction, the personal essay is one of the original forms of creative nonfiction. It is a lively form that has tracked through the ages—from ancient archetypes to the school of Enlightenment essayists, 19th-century realists and romantics to robust 20th-century conventionalists, and on to Digital Age innovators where it deeply informs blogs, social media posts, and other contemporary writings. Conventions of the craft are covered in this course, but students will not be expected to embrace creativity-stifling rules. The work will be hands-on, with workshopping that pushed students to pursue new pathways and fresh approaches in their personal essay writing.

**PWRI 4130 Writing the Memoir (4 Credits)**

The memoir is as popular as ever – tales of persistence and overcoming odds grip us like no other. Students in this course will concentrate on the craft of writing the memoir, a work of creative nonfiction rooted in and focused on the writer's memories. Unlike personal essays, memoirs foreground the writer's past to illuminate the complex development of understanding that past. This aim results in works that are typically book-length, in which the writer applies the techniques of creative nonfiction to describe and make observations and draw conclusions from personal experience. Class discussions emphasize essential writing skills, techniques for exploring and recording memories, and professional approaches to the research required to make the past come to life for the reader. Taking advantage of a supportive workshop format, students will share their ideas about craft and content with a view toward book publication.

**PWRI 4140 Natural Science and Literature (4 Credits)**

This class will explore the practice – and art – of nonfiction writing about science and nature. Students will begin with an examination of influential historical works and move into contemporary writing on science and nature. The class will be a sort of journey, from ruminative essays on the individual in nature to impassioned (and science-heavy) explorations of ecosystem destruction to exuberant studies of love and sex in the animal kingdom. Students will seek to understand the narrative and linguistic machinery that make these pieces of writing "tick" through discussions, short writing exercises, brief reviews, and workshop participation. This course will also address the development of students' own writing. Specifically, students will seek understanding of the writing techniques that can be used to make the complex fields of science and nature accessible subjects of writing intended for mainstream or literary publications. The key challenge will be to find a topic, a format (memoir, essay, narrative journalism), a structure, and a voice suitable for creating a single, sustained piece of writing that each student will devise, draft, workshop, and polish throughout the course.

**PWRI 4200 Masterworks: Poetry (4 Credits)**

Poetry is the most ancient of the written arts, so there are thousands of poetry masterworks—far too many to be usefully studied in a single course. That's why this course focuses on the one resource that every poet must develop in order to write well: a personal "poetic lineage." Students will learn how to explore the work of other poets and identify significant parts of their poetic lineages. They will also learn how to use that exploration to develop, expand, and refine their own poetic lineage, which will shape and nourish their poetry over a lifetime.

**PWRI 4210 Writing Poetry: Foundational Concepts, Skills, and Practice (4 Credits)**

This course is a combination of readings in poetry and poetics, brief lectures, and open discussions focused on the interplay of image, metaphor, rhythm, emotions and ideas in the expressive form of writing called poetry. Students will learn to tap the imaginative sources that all creative writing springs from and flow those energies into poetic form. The instructor will provide examples to illustrate successful uses of key poetic concepts and help students explore, through a range of open-ended exercises, various approaches to expressing themselves fully and clearly. Students will also develop practical critiquing skills with the aim of helping themselves and their classmates write with greater subtlety and power.

**PWRI 4220 Writing Traditional Verse and Contemporary Song Lyrics (4 Credits)**

This course focuses on the shared building blocks of traditional formal poetry and contemporary song lyrics: meter and rhyme, repetition, and verse/stanza structure. Beginning with simple constructions like limericks and nursery rhymes, and moving swiftly into more sophisticated verse organizations like the sonnet, the villanelle, the ballad, and the popular song, students will explore a variety of existing examples, then produce their own pieces that follow (or break) the established rules of each form. The course will take a workshop format, in which students will generate, share, and receive feedback on their formal experiments; the focus will be on developing a more finely tuned ear for form, and on deploying "traditional" poetic techniques in relevant, radical, and inventive ways. (NOTE: The ability to sing or play an instrument is NOT required for this course; when discussing and writing songs, students will focus on the texts only, not the harmonic/melodic elements of songwriting craft.)

**PWRI 4230 Writing Improvisational Verse and Prose Poetry (4 Credits)**

This course focuses on the writing of improvisational verse and prose poems, certainly the most popular forms of poetry today both in America and around the world. The course will explore a wide variety of approaches to non-metrical verse and examine how poetry sounds when it appears in prose form. Using a workshop format, students will generate, share, and receive feedback on their poetic experiments, with an emphasis on developing a more finely tuned ear for cadence and phrasing. Robert Frost famously wrote that writing what he called "free verse" was like "playing tennis with the net down." This course aims to demonstrate why Frost was wrong.

**PWRI 4300 Masterworks: Drama (4 Credits)**

A "masterwork" of drama is a play or screenplay that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, imagery, theme, and cultural values work together in some of the most powerful dramatic works of modern times. The course will also explore the impact of stagecraft, the needs of actors, and vision of directors on the way a play is developed. Discussions and writing assignments will focus on how exposure to the drama of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4310 Playwriting: Foundational Concepts, Skills, and Practice (4 Credits)**

In this course, students analyze short and full-length plays, compose experimental exercises, write drafts of short plays, evaluate each other's writing, and revise a short play to develop the skills required to write for the stage. Students learn key theatrical skills and terms as they analyze varied plot structures, create vivid characters, and write realistic and stylized dialogue. Students examine theatre's collaborative process, and model possible relationships between environment, stagecraft, and the ways playwrights shape their texts. Scripts read for class discussions illustrate uses of key dramatic techniques while suggesting various approaches to theme, genre, character, and structure. Students develop practical critiquing skills while incorporating colleagues' feedback into script revision, with the aim of crafting compelling plays that appeal to both theater professionals and theatrical audiences.

**PWRI 4320 Writing the Screenplay (4 Credits)**

This course provides a comprehensive overview of the industry standard elements of screenwriting. Through readings, film viewings, written analyses, online discussions, and creative exercises, students will learn how to write original stories for a visual medium, use prescriptive filmic story structure ("screenplay formatting"), and identify key elements that make a script successful. With these tools in hand, students will create the first act of an original feature-length screenplay, develop an outline ("script treatment") for the entire film, and finish the course prepared to complete the project and present it to the film-making industry.

**PWRI 4330 Writing for Personal Performance (4 Credits)**

This course focuses on writing texts that the authors aim to perform themselves, including spoken word poetry, storytelling, one-person plays, presentations in TED Talk and other formats, and even standup comedy. Using a variety of readings and recorded performances, brief lectures, and writing assignments, the course helps writers develop the skills required to shape their work for public performance. Students learn to distinguish between their "page voice" and their "performance voice" so that they can produce more effective texts for performance. Using a supportive workshop format and class discussions, students will apply practical critiquing skills with the aim of helping themselves and their classmates create compelling performance pieces that appeal to audiences of all kinds.

**PWRI 4340 Writing the Adapted Screenplay (4 Credits)**

Much of Hollywood's source material in recent decades was not written originally for the big screen – it was first created and popularized in another medium, like a book, memoir, an article, a video game, or even an album. Clearly, the marketplace has a proven demand for adaptations. In this course, we examine the adaptation of literary and nonfiction works and the film interpretations of each work. This class will explore the principal development questions involved in a successful adaptation, look at the legalities of securing the rights to a property, and dive into the specifics behind pitching an adaptation. Students will study the main developmental issues of adaptation and write a range of short adaptations across multiple mediums, plus create a pitch and a first act for a feature project. The course also aims to enhance the critical skill of students as well as their craft abilities.

**PWRI 4410 Writing and Healing (4 Credits)**

In this course, students evaluate theoretical and practical aspects of written expression as it relates to healing. Students analyze foundational concepts of healing through the lens of contemporary creative literature. Students apply these concepts to their writing practice through journaling processes, written therapeutic strategies, and poetic techniques aimed at cultivating self-awareness and personal growth. Through a course-long inquiry into the concept of "healing," students will learn to articulate how their writing processes enhance their writerly identities and develop a practical set of therapeutic, expressive techniques for everyday use.

**PWRI 4420 Writing as Translation (4 Credits)**

In its literary sense, translation is the closest reading possible, and learning its processes enables a deeper reading of our own work. Effective translation—of our own writing or that of others—depends on intimate attention to the many elements of literary writing. This course examines common translation practices and examples with emphasis on elements such as syntax, word choice, pacing, setting, and imagery, with the goal of enhancing the student's knowledge of and skill with those elements. Once acquainted with translation processes, students apply them to their own work. Assignments are completed in English and no second language is required.

**PWRI 4430 Writing for Television (4 Credits)**

This course provides an overview of two important television writing skills: the creation of a pilot for an original series and the writing of a "spec," which is writing an original idea for a television show that currently exists (a requirement in the pursuit of employment as a TV writer). Students will intensively study the structure, character build, template, theme, and franchise involved in the development of TV shows (both half hour and hour long), as well as learn about the current business of TV. Since this is an intensive writing and workshoping course, students will be required to submit their work to and to give constructive criticism to their fellow writers. Prerequisite: PWRI 4320 Writing the Screenplay.

**PWRI 4500 The Writing Life: Concepts, Practices, and Professionalism (4 Credits)**

This course aims to provide aspiring writers a basic knowledge of the creative and professional tools they will need to succeed, whatever their individual goals or life situation. This course tackles questions and challenges common to all writers at one time or another. Primary considerations include: What exactly does it mean to be a writer? What are my motivations for wanting to write? How can I identify and prioritize writing projects? How do I move my writing projects forward from concept to completion? These primary challenges require writers to narrow their creative focus and to cultivate habits of thought and behavior that sustain creative efforts in a world full of distractions, obligations, and competing claims on their time.

**PWRI 4510 Literary Genres for Writers (4 Credits)****PWRI 4520 The Writers Workshop (4 Credits)**

"A writer writes" is the universal mantra of the writing life, but one of the critical steps in developing a work in progress is getting constructive feedback. Unfortunately, all too often, a writer ends up disappointed because the feedback received is superficial, too polite, or little more than proofreading. This course teaches students to workshop in a meaningful way, responding to content, focus, coherence, and organizational issues. Students learn to elicit more feedback from their workshop colleagues, demonstrating the relationship between reader and writer. The class will explore a variety of genres, and each student produces short exercises and longer projects that demonstrate a grasp of various aspects of the writing craft.

**PWRI 4540 Children's Literature: From Picture Books to Books for Young Adults (4 Credits)**

This course offers an introductory study of children's literature, from toddler board books and easy readers to chapter books and books for young adults. It is designed primarily for students interested in writing for children and those planning to teach children's literature, though new and soon-to-be parents would find it illuminating as well. Touching on all the major categories/levels and subgenres of children's literature, students will learn to identify the unique characteristics of each and apply definable quality standards to assess a wide range of particular texts from both creative and analytical points of view. Note that, though students may do some creative writing, this is not a course in writing children's literature.

**PWRI 4560 Writing Books for Children (4 Credits)**

This course concentrates on the craft of writing three distinct categories of children's fiction: the picture book, the early/easy/transitional reader and novels for older readers (chapter book, middle grade and young adult novel). Within each category, students have a unique opportunity to explore storytelling for a specific young audience whose members vary in age, reading interest and reading ability. Note that this course covers narrative fiction only; nonfiction, though a valuable genre of children's literature, is beyond the scope of this course. Prerequisite: PWRI 4540 Children's Literature.

**PWRI 4600 Breaking the Chains of Genre: An Exploration of Hybrid Literatures (4 Credits)**

Hybrid genre, cross-genre, multi-genre, or mixed genre literature is literature that combines writing from different genres to create one text. The text created might be fragmentary or unified; it might be coherent or disjointed. Cross-genre literature is not new, but contemporary authors are more frequently pushing on the boundaries between genres in their creative and scholarly writing to produce rich, open, polyphonic texts as a result. How has cross-genre literature been deployed in different literary and cultural traditions? What advantages does cross-genre literature provide for the writer and for the reader? This course will explore the ways in which authors have experimented with mixing genres in different cultural traditions and writing disciplines as well as how this genre-bending has enabled them to accomplish various creative, narrative, and rhetorical purposes. Required Prerequisite: PWRI 4510.

**PWRI 4701 Topics in Literature (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of established masterworks to examining the latest trends in developing genres or wrestling with several works by living masters.

**PWRI 4702 Topics in Writing (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of compositional techniques used in established masterworks to examining the development of new genre forms or wrestling with texts whose approaches are drawn from multiple genres.

**PWRI 4901 Professional Creative Writing Capstone Project (4 Credits)**

The Creative Capstone Project provides students the opportunity to apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student's coursework at University College and his or her writing goals for the future. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the project. Please see the Creative Capstone Project Guidelines for additional details. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. Prerequisites: a Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, and completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**PWRI 4917 Market Research for Writers (4 Credits)**

All writers of every medium considering a professional career path must not only learn their craft but learn to navigate the publishing and production worlds. This course discusses the relationships between agents, editors of books, journals and magazines, literary managers, artistic directors, publishing houses (both big and boutique), and booksellers, as well as production companies. Additionally, students determine ways to cultivate relationships with those industry professionals and find opportunities (such as contests and fellowships) with the goal of submission and acquisition. This course also covers the research required for target-rich submission campaigns, the process of manuscript submission and acquisition, as well as learning copyright and contractual basics. Students will learn how to generate marketing materials that aid in the submission process, across all mediums, and how to develop an author platform, using branding and social media opportunities, that cultivates a professional, public persona critical to connecting with their audience. Ultimately, students consider how to build a writing community that will provide the foundation for support, education, and networking, which is vital for success. Required Prerequisites: PWRI 4500, 4510, and 4520. Note that this course must be completed before enrolling in either the PWRI Portfolio Capstone or Creative Capstone Project.

**PWRI 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**PWRI 4980 Internship (0-4 Credits)**

The PWRI internship is designed to offer students a practical educational experience in an industry-related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the PWRI master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all PWRI students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the PWRI degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**PWRI 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Security Management

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Email: [ucolssupport@du.edu](mailto:ucolssupport@du.edu)

Web Site: [www.universitycollege.du.edu](http://www.universitycollege.du.edu) (<http://www.universitycollege.du.edu>)

### Master of Science in Security Management with a Concentration in Emergency Planning and Response

The Emergency Planning and Response master's degree concentration is offered to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans and responses. Graduates will learn to compare and contrast plans and responses to various events and disasters. Students will learn strategies for effective communication in all phases of emergency management (i.e., mitigation, preparedness, response, and recovery).

Whether an emergency is natural or human caused, emergency preparedness is vital to ensure minimize impacts on the welfare of those affected. The Emergency Planning and Response master's degree concentration covers emergency planning, mitigation of potential hazards, response, and recovery. Professional practitioners who work in the emergency planning and response field teach the Emergency Planning and Response master's

degree concentration. Classes focus on the integrated system at every stage of a disaster and define the roles of emergency response teams, government agencies, businesses, and private citizens.

This degree prepares students to:

- Develop emergency response plans to ensure that organizations or communities possess necessary resources (e.g., personnel, equipment, communications, etc.) to respond to emergency incidents;
- Identify the potential hazards within a community or organization that require mitigation to minimize the health, economic, and environmental consequences of potential emergency incidents;
- Develop critical incident management actions that will save lives, protect property and the environment, and meet the basic human needs during a critical incident;
- Construct Recovery Plans to repair damages and restore the health, economy, infrastructure, and environment of the affected community following a large-scale disaster.

## **Master of Science in Security Management with a Concentration in Information Security**

The Information Security master's degree concentration is offered entirely online at the University of Denver to meet the needs of busy adults. Pursue an Information Security master's degree concentration from University College and be prepared to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security master's degree students the hands-on experience they need using industry-current security tools, effectively training students to apply lessons to real-world challenges.

Graduates are prepared for the security challenges presented across a variety of sectors as they undergo rigorous instruction from professional practitioners who work in information security. Degree-seekers will learn to design secure applications, implement access controls, establish secure operations, and control physical security, all while using encryption, secure networks, and maintain business continuity. Become an indispensable expert in determining Return on Security Investment (ROSI) and develop security policies and procedures that protect your organization from internal and external threats.

This degree prepares students to:

- Design an information security plan for the strategic, planning, and management efforts of private and public sector organizations;
- Evaluate and analyze emerging information security issues, regulations, and threats;
- Analyze financial implications of information security programs and options;
- Protect vital information assets such as people, physical structures and equipment, intellectual property, and information, and maintain post-incident continuity of operations.

## **Master of Science in Security Management with a Concentration in Organizational Security**

Earned entirely online, the Organizational Security master's degree concentration examines emerging security issues, regulations, and threats. Current and aspiring security management professionals will benefit from the Organizational Security master's degree concentration offered by University College, as students learn the key strategic, planning, and management skills needed to thrive in the security management industry through an examination of emerging security issues, regulations, and threats.

Classes are led by instructors who work in the fields in which they teach, offering security management degree-seekers valuable insight to the industry. Students will learn to implement strategies to protect vital assets such as people, physical structures and equipment, intellectual property, and information, as well as analyze financial implications of security programs and options. Organizational security professionals are fundamental cogs in the business world, as well as in the government, as they may function as a chief security officer, director of loss prevention, director of security, security consultant, investigator, firefighter, or police officer.

This degree prepares students to:

- Lead the strategic, planning, and management efforts of private and public sector organizations;
- Evaluate and analyze emerging security issues, regulations, threats, and innovations;
- Analyze financial implications of security programs and options;
- Protect vital assets such as people, physical structures and equipment, intellectual property, and information, and maintain post-incident continuity of operations.

## **Graduate Certificate in Security Management with a Concentration in Emergency Planning and Response**

The Emergency Planning and Response certificate is offered online to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans and responses. Certificate students will learn to compare and



contrast plans and responses to various events and disasters. Students will learn strategies for effective communication in all phases of emergency management (i.e., mitigation, preparedness, response, and recovery).

Whether an emergency is natural or human caused, emergency preparedness is vital to ensure minimize impacts on the welfare of those affected. The Emergency Planning and Response certificate covers emergency planning, mitigation of potential hazards, response, and recovery. Professional practitioners who work in the emergency planning and response field teach the Emergency Planning and Response certificate courses. Classes focus on the integrated system at every stage of a disaster and define the roles of emergency response teams, government agencies, businesses, and private citizens. Credits earned through this graduate certificate may be applied towards a master's degree in Security Management.

### **Graduate Certificate in Security Management with a Concentration in Information Security**

The certificate in Information Security is offered entirely online to meet the needs of busy adults seeking to expand their current skillset in information security. An Information Security certificate prepares students to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Certificate students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security graduate certificate students the hands-on experience they need using industry-current tools geared for security. Students will also gain additional skills and knowledge in security management through elective coursework.

Certificate students will be prepared for real-world security challenges with a rigorous education from professional practitioners who work in information security. Certificate students will learn to design secure applications, implement access controls, establish secure operations, and control physical security, all while they use encryption, secure networks, and maintain business continuity. Become an indispensable expert in determining Return on Security Investment (ROSI) and develop security policies and procedures that protect your organization from internal and external threats. Credits earned through this graduate certificate may apply toward a master's degree in Security Management.

### **Graduate Certificate in Security Management with a Concentration in Organizational Security**

The certificate in Organizational Security is offered online at the University of Denver to meet the needs of busy adults. Current and aspiring security management professionals will benefit from the certificate in Security Management with a concentration in Organizational Security offered by University College, as students learn the key strategic, planning, and management skills needed to succeed in security management. The certificate program is designed for busy adults seeking to advance their skills in organizational-level security.

The certificate program is ideal for security professionals who currently work in the field, or aspire to, as they will examine emerging security issues, regulations, and threats in classes led by instructors who work in the fields in which they teach, offering security management students valuable insight to the security. Certificate graduates will learn to implement strategies to protect vital assets such as people, physical structures and equipment, intellectual property, and information, as well as analyze financial implications of security programs and options. Students will also gain additional skills and knowledge in security management through elective coursework. Credits earned through this graduate certificate may apply toward a master's degree in Security Management.

### **Specialized Graduate Certificate in Organizational Security**

The specialized certificate in Organizational Security is offered online at the University of Denver to meet the needs of busy adults. Current and aspiring security management professionals will benefit from the certificate in Security Management with a concentration in Organizational Security offered by University College, as students learn the key strategic, planning, and management skills needed to succeed in security management. The certificate program is designed for busy adults seeking to advance their skills in organizational-level security.

### **Specialized Graduate Certificate in Information Security**

The specialized certificate in Information Security is offered entirely online to meet the needs of busy adults seeking to expand their current skillset in information security. An Information Security certificate prepares students to analyze security needs, provide effective solutions, and fill a critical niche in organizations. Certificate students will examine practical issues such as setting up a secure network, securing servers, and handling information security incidents. The practical labs give Information Security graduate certificate students the hands-on experience they need using industry-current tools geared for security.

### **Specialized Graduate Certificate in Emergency Planning and Response**

The specialized certificate in Emergency Planning and Response is offered online at the University of Denver to meet the needs of busy adults and prepares current or aspiring emergency response professionals to effectively strategize and implement emergency plans and responses. Graduates will learn to compare and contrast plans and responses to various events and disasters, as well as analyze leadership competence as plans are executed. As communication is key to effective emergency preparedness, graduate certificate students will take away strategies for effective communication in all phases of emergency management (i.e., mitigation, preparedness, recovery, and emergency response).

## **Master's Degree Admission**

### **Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the

baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.

- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

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- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Graduate Degree Programs

### Master of Science in Security Management with a Concentration in Emergency Planning and Response

Code	Title	Credits
<b>Core coursework requirements</b>		
SMGT 4050	Security Concepts Overview	4
SMGT 4100	Business Function of Security	4
SMGT 4350	Business Assets Protection	4
SMGT 4910	Research Practices and Applications	4
SMGT 4901 or SMGT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
SMGT 4210	Critical Incident Management	4
SMGT 4230	Mitigation for Emergency Managers	4
SMGT 4240	Emergency Incident Recovery	4
SMGT 4400	Emergency Planning	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Master of Science in Security Management with a Concentration in Information Security**

Code	Title	Credits
<b>Core coursework requirements</b>		
SMGT 4050	Security Concepts Overview	4
SMGT 4100	Business Function of Security	4
SMGT 4350	Business Assets Protection	4
SMGT 4910	Research Practices and Applications	4
SMGT 4901 or SMGT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
SMGT 4200	Integrated Security Systems	4
SMGT 4250	Threats in Information Security	4
SMGT 4450	Legal & Ethical Issues in Security Management	4
SMGT 4500	Human Factors in Security	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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**Master of Science in Security Management with a Concentration in Organizational Security**

Code	Title	Credits
<b>Core coursework requirements</b>		
SMGT 4050	Security Concepts Overview	4
SMGT 4100	Business Function of Security	4
SMGT 4350	Business Assets Protection	4
SMGT 4910	Research Practices and Applications	4
SMGT 4901 or SMGT 4902	Capstone Project Capstone Seminar	4
<b>Concentration requirements</b>		
SMGT 4150	Risk Management	4
SMGT 4300	Security Administration	4
SMGT 4400	Emergency Planning	4
SMGT 4500	Human Factors in Security	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Security Management with a Concentration in Emergency Planning and Response

Code	Title	Credits
<b>Concentration requirements</b>		
SMGT 4210	Critical Incident Management	4
SMGT 4230	Mitigation for Emergency Managers	4
SMGT 4240	Emergency Incident Recovery	4
SMGT 4400	Emergency Planning	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Graduate Certificate in Security Management with a Concentration in Information Security

Code	Title	Credits
<b>Concentration requirements</b>		
SMGT 4200	Integrated Security Systems	4
SMGT 4250	Threats in Information Security	4
SMGT 4450	Legal & Ethical Issues in Security Management	4
SMGT 4500	Human Factors in Security	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Graduate Certificate in Security Management with a Concentration in Organizational Security

Code	Title	Credits
<b>Concentration requirements</b>		
SMGT 4150	Risk Management	4
SMGT 4300	Security Administration	4
SMGT 4400	Emergency Planning	4
SMGT 4500	Human Factors in Security	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Minimum number of credits required: 24

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Emergency Planning and Response

Code	Title	Credits
SMGT 4400	Emergency Planning	4
SMGT 4210	Critical Incident Management	4
SMGT 4230	Mitigation for Emergency Managers	4

SMGT 4240	Emergency Incident Recovery	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Information Security

Code	Title	Credits
SMGT 4200	Integrated Security Systems	4
SMGT 4250	Threats in Information Security	4
SMGT 4450	Legal & Ethical Issues in Security Management	4
SMGT 4500	Human Factors in Security	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Organizational Security

Code	Title	Credits
SMGT 4150	Risk Management	4
SMGT 4300	Security Administration	4
SMGT 4400	Emergency Planning	4
SMGT 4500	Human Factors in Security	4
<b>Total Credits</b>		<b>16</b>

#### SMGT 4050 Security Concepts Overview (4 Credits)

This course provides an introduction to the main principles and issues in business and organizational security management. Topics include protection of, and assessing the loss potential of, personnel, facilities, and information, and continuity of operations. The course makes extensive use of case studies and analyses, field exercises and research.

#### SMGT 4100 Business Function of Security (4 Credits)

This course will provide the student with an overview of security operations in a business environment. Students will be able to develop and integrate theory and principles common to the design and implementation of systems—broadly defined—for the protection of people and property in public, commercial and residential settings from loss associated with fire, casualty, disruption, and crime. Students will review the historical, theoretical, managerial, and technological bases for the fields associated with protection management: security management. Students will review security design issues and technologies applicable to structural and nonstructural environments. Students will examine alternative roles and structures for protection management in public, private, and independent sector organizations, and their relationships to law enforcement organizations.

#### SMGT 4150 Risk Management (4 Credits)

This course will examine the concept of enterprise risk management as it applies to the corporate security setting by analyzing and assessing multiple area of corporate and public sector risk. Students will address real-world risks through a variety of case studies.

#### SMGT 4200 Integrated Security Systems (4 Credits)

This course covers the integration of physical, personnel, and information security, including the use of information technology to enhance physical and personnel security. Students will learn the essential elements of system design, development of procedures, testing and maintenance of integrated security systems. This will be accomplished through case studies and practical exercises.

#### SMGT 4210 Critical Incident Management (4 Credits)

This course will discuss the management concepts of a critical incident, whether it is the government response to a hurricane like Katrina or a corporate response to an internal emergency. The course follows the basic accepted tenets and structures of emergency response that connect all government agencies as well as private business. This course diverges from other Critical Incident Management courses in that it not only introduces the fundamentals of critical incident management but also challenges the student to look beyond accepted protocols and develop specific alternatives for their organization.

#### SMGT 4220 Hazardous and Radiological Material Preparedness (4 Credits)

This course introduces the student to the hazards and dangers of Hazardous and Radiological substances. The course is designed to introduce the hazards and the techniques of planning for emergency incidents involving these substances. This course follows the accepted emergency response guidelines and principles of FEMA. Students will learn the use of software and how to develop a hazardous materials operations plan.

**SMGT 4230 Mitigation for Emergency Managers (4 Credits)**

This course prepares students to meet the growing demand for emergency and disaster management planning through the mitigation phase of Emergency Management. Current practices are the result of a growing recognition that all levels of government, service organizations, and the private sector must become involved in collaborative mitigation of existing hazards in order to lessen the impacts of a full range of natural and human-caused disasters and their consequences. In this course, students will analyze the key factors that shape the planning environment and process. They will apply current policies, laws, and guidance to the development of a mitigation plan for a community, organization, or business. Although the development of a completed emergency/disaster plan requires the involvement of many stakeholders and is beyond the scope of this course, the draft mitigation document students will develop will provide students with the skills needed to effectively lead a disaster planning team.

**SMGT 4240 Emergency Incident Recovery (4 Credits)**

Assuring resiliency for any community or organization is of equal importance to the other phases of emergency management. This course addresses the final phase of emergency management: recovery. The course will address the many planning aspects of establishing a recovery plan. Students will formulate policies to aid in returning operations and life to normal following a disaster.

**SMGT 4250 Threats in Information Security (4 Credits)**

This course investigates emerging protection concepts for the information age. Students identify threats to security systems, discover vulnerabilities, and suggest and design protection systems. Topics include management of information security and data processing facilities, data theft, misuses of information technologies, computer viruses, hacking, and network protection. The course also covers information technology laws, privacy issues, and information security planning.

**SMGT 4300 Security Administration (4 Credits)**

This course will provide the theory and practical application of the administration of the security function within a business. Students will examine and recommend strategies for managing the security staff, communicating security related information to different audiences, building and maintaining a security team, identifying business risks, developing key performance indicators including budget, and evaluating the need for security-related hardware and software. This class examines a broad range of topics from organizational design to HR issues. Students will learn that not only must they ask the right questions, but they must ask them in the way that is appropriate for the subject matter and the circumstances.

**SMGT 4350 Business Assets Protection (4 Credits)**

Students examine the application of security knowledge and techniques to the protection of business assets. The security planning process is examined by the study of risk analysis, security surveys, and financial planning and decision making for development of security programs and countermeasures.

**SMGT 4400 Emergency Planning (4 Credits)**

The process of Emergency Management contains four very distinct phases with overlapping intricacies within each of the four. Emergency Planning is the first process that must be addressed by any organization when protecting life, property, or business continuity in response to an emergency or disaster. This course addresses the Planning phase of Emergency Management through the establishment of planning teams, threat assessments, hazard identification, and implementation of an overall Emergency Operations Plan.

**SMGT 4450 Legal & Ethical Issues in Security Management (4 Credits)**

This course examines ethical challenges and legal issues which security professionals in business and organizational security face in our global environment. Students will examine critical issues such as ethical principles, organizational values, ethics law, how to maintain the integrity of internal investigations, ethical and legal compliance; training programs, and examine aspects of legal responsibility, accountability, and liability related to security professionals and their organizations.

**SMGT 4500 Human Factors in Security (4 Credits)**

This course examines the challenges security professionals face in dealing with human factors in the course of protecting people, organizations, and information in our global environment. Students will examine and discuss critical contemporary issues such as effective leadership characteristics, workplace violence, insider threat, fraud, stalking, terrorism and other relevant topics as well as how to perform a risk analysis and conduct a workplace violence assessment audit.

**SMGT 4550 Workplace Investigations (4 Credits)**

Too often the Security Department is called upon to conduct an independent investigation for another business unit within the organization. This can include Compliance, HR, Employee Relations, Audit, IT, and others. While many of these investigations will be allegations of misconduct against individuals, they can also be business process reviews to determine root causes of business process failures. The Security Team is often tapped for these assignments because they are not only viewed as independent, but also as the most experienced in conducting interviews, writing investigative reports, and dealing with evidence. This class examines investigative techniques, documentation, and common pitfalls.

**SMGT 4701 Topics in Security Management (1-6 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**SMGT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**SMGT 4902 Capstone Seminar (4 Credits)**

The purpose of the Capstone Seminar is to develop and apply transferable professional skills to persuade decision-makers. The course requires students to identify a Capstone subject matter, develop a premise, and argue for an applied solution. Students will conduct research to create a strong argument that supports their premise by considering purpose, need, and audience and will provide evidence that the premise can be implemented. Tasks include gathering and evaluating appropriate source information, writing a strong solution in support of the premise, and then defending the solution. Students will write a Capstone paper and prepare a presentation suitable for professional exposure through publication and/or presentation.

**SMGT 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**SMGT 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**SMGT 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

**Courses****SMGT 4050 Security Concepts Overview (4 Credits)**

This course provides an introduction to the main principles and issues in business and organizational security management. Topics include protection of, and assessing the loss potential of, personnel, facilities, and information, and continuity of operations. The course makes extensive use of case studies and analyses, field exercises and research.

**SMGT 4100 Business Function of Security (4 Credits)**

This course will provide the student with an overview of security operations in a business environment. Students will be able to develop and integrate theory and principles common to the design and implementation of systems—broadly defined—for the protection of people and property in public, commercial and residential settings from loss associated with fire, casualty, disruption, and crime. Students will review the historical, theoretical, managerial, and technological bases for the fields associated with protection management: security management. Students will review security design issues and technologies applicable to structural and nonstructural environments. Students will examine alternative roles and structures for protection management in public, private, and independent sector organizations, and their relationships to law enforcement organizations.

**SMGT 4150 Risk Management (4 Credits)**

This course will examine the concept of enterprise risk management as it applies to the corporate security setting by analyzing and assessing multiple area of corporate and public sector risk. Students will address real-world risks through a variety of case studies.

**SMGT 4200 Integrated Security Systems (4 Credits)**

This course covers the integration of physical, personnel, and information security, including the use of information technology to enhance physical and personnel security. Students will learn the essential elements of system design, development of procedures, testing and maintenance of integrated security systems. This will be accomplished through case studies and practical exercises.

**SMGT 4210 Critical Incident Management (4 Credits)**

This course will discuss the management concepts of a critical incident, whether it is the government response to a hurricane like Katrina or a corporate response to an internal emergency. The course follows the basic accepted tenets and structures of emergency response that connect all government agencies as well as private business. This course diverges from other Critical Incident Management courses in that it not only introduces the fundamentals of critical incident management but also challenges the student to look beyond accepted protocols and develop specific alternatives for their organization.

**SMGT 4220 Hazardous and Radiological Material Preparedness (4 Credits)**

This course introduces the student to the hazards and dangers of Hazardous and Radiological substances. The course is designed to introduce the hazards and the techniques of planning for emergency incidents involving these substances. This course follows the accepted emergency response guidelines and principles of FEMA. Students will learn the use of software and how to develop a hazardous materials operations plan.

**SMGT 4230 Mitigation for Emergency Managers (4 Credits)**

This course prepares students to meet the growing demand for emergency and disaster management planning through the mitigation phase of Emergency Management. Current practices are the result of a growing recognition that all levels of government, service organizations, and the private sector must become involved in collaborative mitigation of existing hazards in order to lessen the impacts of a full range of natural and human-caused disasters and their consequences. In this course, students will analyze the key factors that shape the planning environment and process. They will apply current policies, laws, and guidance to the development of a mitigation plan for a community, organization, or business. Although the development of a completed emergency/disaster plan requires the involvement of many stakeholders and is beyond the scope of this course, the draft mitigation document students will develop will provide students with the skills needed to effectively lead a disaster planning team.

**SMGT 4240 Emergency Incident Recovery (4 Credits)**

Assuring resiliency for any community or organization is of equal importance to the other phases of emergency management. This course addresses the final phase of emergency management: recovery. The course will address the many planning aspects of establishing a recovery plan. Students will formulate policies to aid in returning operations and life to normal following a disaster.

**SMGT 4250 Threats in Information Security (4 Credits)**

This course investigates emerging protection concepts for the information age. Students identify threats to security systems, discover vulnerabilities, and suggest and design protection systems. Topics include management of information security and data processing facilities, data theft, misuses of information technologies, computer viruses, hacking, and network protection. The course also covers information technology laws, privacy issues, and information security planning.

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The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

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## Strategic Human Resources

Office: University College Student Support Center

Mail Code: 2211 S. Josephine St., Denver, CO 80208

Phone: 303-871-2291, 800-347-2042

Email: [ucol-support@du.edu](mailto:ucol-support@du.edu)

Web Site: [www.universitycollege.du.edu](http://www.universitycollege.du.edu) (<http://www.universitycollege.du.edu>)

Students in the Strategic Human Resources Program develop skills in operations and employment relations to align the aspirations and talents of employees with the needs of the organization. The program positions HR management in the context of organizational strategy and policy and defines the core competencies of HR professionals including recruitment, selection and placement; compensation and total rewards; talent management; supervision; crisis management; and employment law. Students will explore various theories and issues in the HR field and learn how HR practitioners function as change agents and strategic partners during the various stages of an organization's life cycle.

The Strategic Human Resources program prepares students to:

- Evaluate the roles and responsibilities of HR professionals to meet organizational needs during various stages of an organization's life cycle.
- Analyze the financial and budget implications of the HR function within organizations to position HR professionals as strategic organizational partners.
- Create strategies in which HR policies, procedures, and communication align with strategic organizational priorities to equip HR professionals to function as effective change agents.
- Evaluate HR policies and practices based on current legal and ethical issues in HR and the organization's domestic and global goals.

### Master of Science in Strategic Human Resources with a Concentration in Human Resources Employment Relations

The Human Resource Employment Relations master's degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Human Resources plays an important role in encouraging respectful employee-employer relationships, which lead to organizational success. Human Resources can also improve employee retention with ethical treatment of employees in terms of compensation, total benefits, achievement of organizational goals, and realistic expectations of performance. All of these functions must operate under laws and regulations that are interpreted and applied appropriately to both employee and organization.

The Strategic Human Resources program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn; HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master's degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

This degree prepares students to do the following:

- Analyze the typical phases of an employee experience while employed by an organization.
- Evaluate the compensation considerations for employees based on productivity, current legal and ethical issues in HR and the organization's domestic and global strategic goals.
- Analyze total benefits as a function of organizational goals, employee performance and retention, and budgeting.
- Identify, locate, and interpret laws and regulations relevant to the organization and the situation.

## **Master of Science in Strategic Human Resources with a Concentration in Human Resources Management and Development**

The Human Resource Management and Development master's degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations experience various challenges related to overseeing employees, dealing with change, and reacting to various organizational needs. In the Management and Development concentration, students will explore strategies and create plans that examine HR roles and responsibilities at different stages of change. Students will also learn to manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process, consulting methods can be used to ensure organizational objectives are met. Additionally, students learn to apply business strategy through the development of talent management programs.

The Strategic Human Resources program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st century HR marketplace. Human resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn; HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master's degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

This degree prepares students to do the following:

- Create an organizational change plan that encompasses HR strategies including leadership, teams, managing change and communication.
- Analyze consulting methods used by human resource departments to influence achievement of organizational objectives.
- Examine the business life cycle phases and provide analysis on interventions, compensation, and benefits within an organization.
- Compare and contrast stages of change in an organization to provide HR strategies for managing each of these stages.
- Differentiate strategies comparing HR-led initiatives to organization-led initiatives that include HR as a key team member.

## **Master of Science in Strategic Human Resources with a Concentration in Human Resources Operations**

The Human Resources Operations master's degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. The Human Resources Operations master's degree concentration explores the impact of HR Analytics as they relate to effective HR strategy. Students use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education.

The Strategic Human Resources program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn; HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master's degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

This degree prepares students to do the following:

- Evaluate the essential principles for developing, utilizing and retaining human resources.
- Analyze the ethical, diversity, and global implications for how information is selected, vetted and presented.
- Evaluate various organizational functions using descriptive and predictive analysis including risk analysis, compensation evaluations and cost, employee turnover and hiring needs.
- Compare and contrast organizational types and provide options supporting a variety of human capital investments to enhance the organization.

### **Master of Science in Strategic Human Resources with a Concentration in Learning and Development**

The Human Resource Learning and Development master's degree concentration is offered entirely online to meet the needs of busy adults.

The Learning and Development concentration is designed for early and mid-career learning and development professionals looking to excel as internal or external consultants in a variety of organizational settings and across platforms. This program prepares students in three complementary areas: 1) a strong foundation in the distinct ways adults learn; 2) exposure to and utilization of diverse instructional technologies and strategies; and, 3) advanced facilitation and communication skills. Students acquire advanced knowledge of how adults process information and the specific skills required to meet adult learning needs. Blending traditional training strategies with the latest multi media technologies and guided by practitioner-faculty, students learn through application by designing and executing projects from start to finish, including needs assessment, design, delivery, implementation, and evaluation. Additionally, students develop advanced communication skills to work with individuals and teams in increasingly global workplaces using multiple modalities.

The Strategic Human Resources program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed teach the students how to learn; HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master's degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

This degree prepares students to do the following:

- Design and execute projects from needs assessment through design, delivery, implementation, and evaluation.
- Analyze adult learning theories, including their key components, contributions, challenges, limits, and new directions in order to assess how to meet organizational needs.
- Identify, analyze, choose, and defend best instructional strategies and techniques to achieve learning objectives.
- Develop advanced facilitation and communication skills to demonstrate the ability to respond appropriately to varied audiences with diverse needs and across platforms.
- Evaluate and communicate impact of projects using most relevant metrics and analytics.

### **Master of Science in Strategic Human Resources with a Concentration in Human Capital in Organizations**

The Human Capital in Organizations master's degree concentration is offered entirely online to meet the needs of busy adults.

The concentration in Human Capital in Organizations prepares students to ethically develop and maintain human capital while learning the best practices to do so. Students will learn to determine, cultivate, and maintain the symbiotic relationship between individuals and the organizations in which they work and lead. Strategic human capital can be a key element of a successful organization. Students will learn to innovate, maximize organizational and individual success, and master the process of developing and retaining employees to engage and achieve objectives.

Led by instructors who work in the fields in which they teach, classes introduce students to innovative and creative approaches to structuring and sustaining the development of human capital. Students explore knowledge and information management, communication tactics, vertical and horizontal partnerships, and organizational learning to promote the successful development of capital. Students will define the attributes, challenges, and advantages of human capital and strategies for leveraging each while integrating personal and organizational achievement.

This degree prepares students to do the following:

- Analyze organizational partnerships both vertically and horizontally.
- Create a strategy for leveraging the attributes, challenges, and advantages of human capital.
- Critique the theories and processes used for integrating knowledge management and organizational learning as a concept for enhancing personal and organizational success.
- Evaluate the opportunities, challenges and options to have employees participate in decision making through the use of various techniques.
- Assess best practices in ethically developing and maintaining human capital.

## Master of Science in Strategic Human Resources with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

The Advancing Diversity, Equity and Inclusion in Organizations master's degree concentration is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Advancing diversity, equity, and inclusion is critical to achieving organizational goals, positioning organizations for success in today's world, and creating environments where everyone has the opportunity to thrive. In this master's degree concentration, you will gain skills that are crucial for advancing equity as an integrated part of organizational strategy while developing solutions that meaningfully leverage diversity to create a culture of belonging. Learn about the historical, cultural, and economic factors that shape identity and apply appropriate tools and techniques to help organizations achieve their vision for change as it relates to diversity, equity, and inclusion practices.

The Strategic Human Resources program provides strategic skills in development, operations, and employment relations, and the integral skills needed to succeed in a 21st-century HR marketplace. Human resources professionals have a unique role and responsibility in organizations to align aspirations and talents of employees with the needs of the organization, in the important contexts of the organizational business strategy, organizational culture, and within the life cycle of the organization. This program provides courses that provide the students tools for this alignment while including human resources practices, ethical consideration, and global implications. Last, this program is designed to teach the students how to learn; HR professionals are required to be lifelong learners due to the constantly changing nature of HR. The Strategic Human Resources master's degree program provides a comprehensive analysis of the HR profession and positions students for career advancement.

This degree prepares students to:

- Assess the influence of historical, social, cultural, and economic factors in shaping one's identity and conceptions of diversity, equity, and inclusion practices.
- Integrate an understanding of social and cultural difference, perspective-taking, and empathy to better inform interpersonal communication and problem-solving strategies.
- Develop practices that advance equity as an integrated component of organizational strategy.
- Design solutions that meaningfully leverage diversity to achieve organizational goals and cultivate a culture of belonging across different organizational settings.
- Apply change models, tools and techniques to successfully achieve a vision for change.

## Graduate Certificate in Strategic Human Resources with a Concentration in Human Resources Employment Relations

The graduate certificate in Human Resource Employment Relations is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Human Resources plays an important role in encouraging respectful employee-employer relationships, which lead to organizational success. Human resources can also improve employee retention with ethical treatment of employees in terms of compensation, total benefits, achievement of organizational goals, and realistic expectations of performance. All of these functions must operate under laws and regulations that are interpreted and applied appropriately to both employee and organization. The Certificate in Strategic Human Resources with a concentration in Human Resources Employment Relations will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Students will also gain additional knowledge in strategic human resources through elective coursework.

The Strategic Human Resources program offers innovative, career relevant graduate certificate courses from compensation to information systems, decision-making to ethics as they each relate to HR. Certificate students can expect a challenging program of study, as they learn to implement strategy for organizational success.

Credits earned through this graduate certificate may apply toward a master's degree in Strategic Human Resources.

## Graduate Certificate in Strategic Human Resources with a Concentration in Human Resources Management and Development

The graduate certificate in Human Resource Management and Development is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults and will help HR professionals expand their skill set and provide transferable knowledge they can apply today. Certificate students learn to apply business strategy through the development of talent management programs, in addition to how to evaluate, diagnose, and solve organizational change and issues in HR. Students will also gain additional knowledge in strategic human resources through elective coursework.

Organizations experience various challenges related to overseeing employees, dealing with change, and reacting to various organizational needs. In the Management and Development certificate, students will explore strategies and create plans that examine HR roles and responsibilities at different stages of change. Students will also learn to manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process, consulting methods can be used to ensure organizational objectives are met. Additionally, students learn to apply business strategy through the development of talent management programs. This certificate will help HR professionals expand their skill set and learn to how

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Credits earned through this graduate certificate may apply toward a master's degree in Strategic Human Resources.

### **Graduate Certificate in Strategic Human Resources with a Concentration in Human Resources Operations**

The graduate certificate in Human Resources Operations is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. The Human Resources Operations certificate explores the impact of HR Analytics as they relate to effective HR strategy. Students use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education. Students will also gain additional knowledge in strategic human resources through elective coursework.

Certificate students are effectively prepared to face the advanced challenges of human resources with implementing descriptive and predictive analytics, while at the global level from a strategic, competent perspective with each election, world event, and restructuring. Human resources professionals with several years of experience who are looking to challenge themselves and become more marketable by learning about the international marketplace will benefit from this graduate certificate. Human resources analytics and the ability to assess return on investment of new programs is emerging in importance, and certificate students will learn about how all these relate to organizational and HR strategy.

Credits earned through this graduate certificate may apply toward a master's degree in Strategic Human Resources.

### **Specialized Graduate Certificate in Human Resources Employment Relations**

The specialized graduate certificate in Human Resource Employment Relations is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

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### **Specialized Graduate Certificate in Human Resources Management and Development**

The specialized graduate certificate in Human Resource Management and Development is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations experience various challenges related to overseeing employees, dealing with change, and reacting to various organizational needs. In the Management and Development specialized graduate certificate, students will explore strategies and create plans that examine HR roles and responsibilities at different stages of change. Students will also learn to manage the interventions, compensation, and benefits issues that accompany that change. Throughout the HR change process, consulting methods can be used to ensure organizational objectives are met. Additionally, students learn to apply business strategy through the development of talent management programs. This certificate will help HR professionals expand their skill set and learn how to evaluate, diagnose, and solve organizational change and issues in HR.

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The specialized graduate certificate in Human Resources Operations is offered on campus at the University of Denver in the evenings, online, or in a combination of both, to meet the needs of busy adults.

Organizations operate differently depending on size, scope, mission, and sector. One common denominator, however, is the need for an organization to recruit, develop, utilize, and retain talented employees. In the Human Resources Operations specialized graduate certificate, students will explore the impact of HR Analytics as they relate to effective HR strategy. Students use a variety of models and tools including descriptive and predictive analysis, hiring needs, and compensation structures to inform human capital investments and organizational strategies. Local, national, and global implications and ethics are considered when determining the measures to develop employees with respect to diversity, inclusiveness, and accessibility for training and education.

Certificate students are effectively prepared to face the advanced challenges of human resources with implementing descriptive and predictive analytics, while at the global level from a strategic, competent perspective with each election, world event, and restructuring. Human resources professionals with several years of experience who are looking to challenge themselves and become more marketable by learning about the international marketplace will benefit from this graduate certificate. Human resources analytics and the ability to assess return on investment of new programs is emerging in importance, and certificate students will learn about how all these relate to organizational and HR strategy.

## Master's Degree Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Programs

### Master of Science in Strategic Human Resources with a Concentration in Advancing Diversity, Equity, and Inclusion in Organizations

Code	Title	Credits
<b>Core coursework requirement</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	

**Concentration requirement**

GS 4020	Culture, Identity, and Power	4
GS 4050	Diversity and Organizational Structure	4
HRA 4170	The Inclusive Organization	4
ORL 4420	Leading Change for Transformation	4

**Elective requirement (Choose three courses)** 12

**Total Credits** 48

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

**Master of Science in Strategic Human Resources with a Concentration in Human Capital in Organizations**

Code	Title	Credits
<b>Core coursework requirements</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	

**Concentration requirements**

ORL 4160	Integrating Personal and Organizational Success	4
ORL 4170	Developing Human Capital in Organizations	4
ORL 4190	Values-Driven Decision Making	4
ORL 4550	Strategic Organizational Partnerships	4

**Elective requirements (Choose three courses)** 12

**Total Credits** 48

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

**Master of Science in Strategic Human Resources with a Concentration in Human Resources Employment Relations**

Code	Title	Credits
<b>Core coursework requirements</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	

**Concentration requirements**

HRA 4600	Human Relations in Organizations	4
HRA 4610	Employee Compensation	4
HRA 4620	Employment Total Benefits	4
HRA 4630	Employment Law	4

<b>Elective requirements (Choose three courses)</b>	<b>12</b>
<b>Total Credits</b>	<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Strategic Human Resources with a Concentration in Human Resource Management and Development

Code	Title	Credits
<b>Core coursework requirements</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
HRA 4230	Consulting and Human Resource Applications	4
HRA 4500	Organizational Leadership, Team Effectiveness, and Communications	4
HRA 4510	Organizational Lifecycles and HR Implications	4
ORL 4170	Developing Human Capital in Organizations	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Master of Science in Strategic Human Resources with a Concentration in Human Resource Operations

Code	Title	Credits
<b>Core coursework requirements</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
HRA 4240	Human Resources Technology Solutions	4
HRA 4250	Integrated Talent Management	4
HRA 4260	HR Analytics and Research	4
HRA 4270	Value and Impact of HR Interventions	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

**Minimum number of credits required: 48**

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.



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## Master of Science in Strategic Human Resources with a Concentration in Learning and Development

Code	Title	Credits
<b>Core coursework requirements</b>		
HRA 4130	Finance for HR Professionals	4
HRA 4140	HR as a Strategic Partner	4
HRA 4520	HR Change Management	4
HRA 4910	Research Practices and Applications	4
HRA 4901	Capstone Project	4
or HRA 4902	Capstone Seminar	
or HRA 4904	Interdisciplinary Capstone Seminar	
<b>Concentration requirements</b>		
COMM 4030	Managing Learning in Organizations	4
COMM 4200	Instructional Design	4
COMM 4203	Adult Learning Strategies and Theories	4
COMM 4235	Integrating Learning and Development Technologies	4
<b>Elective requirements (Choose three courses)</b>		<b>12</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Programs

### Graduate Certificate in Strategic Human Resources with a Concentration in Human Resources Employment Relations

Code	Title	Credits
<b>Concentration requirements</b>		
HRA 4600	Human Relations in Organizations	4
HRA 4610	Employee Compensation	4
HRA 4620	Employment Total Benefits	4
HRA 4630	Employment Law	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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### Graduate Certificate in Strategic Human Resources with a Concentration in Human Resource Management and Development

Code	Title	Credits
<b>Concentration requirements</b>		
HRA 4230	Consulting and Human Resource Applications	4
HRA 4500	Organizational Leadership, Team Effectiveness, and Communications	4
HRA 4510	Organizational Lifecycles and HR Implications	4
ORL 4170	Developing Human Capital in Organizations	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

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## Graduate Certificate in Strategic Human Resources with a Concentration in Human Resource Operations

Code	Title	Credits
<b>Concentration requirements</b>		
HRA 4240	Human Resources Technology Solutions	4
HRA 4250	Integrated Talent Management	4
HRA 4260	HR Analytics and Research	4
HRA 4270	Value and Impact of HR Interventions	4
<b>Elective requirements (Choose two courses)</b>		<b>8</b>
<b>Total Credits</b>		<b>24</b>

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Specialized Graduate Certificate Programs

### Specialized Graduate Certificate in Human Resources Employment Relations

Code	Title	Credits
HRA 4600	Human Relations in Organizations	4
HRA 4610	Employee Compensation	4
HRA 4620	Employment Total Benefits	4
HRA 4630	Employment Law	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Human Resource Management and Development

Code	Title	Credits
HRA 4230	Consulting and Human Resource Applications	4
HRA 4500	Organizational Leadership, Team Effectiveness, and Communications	4
HRA 4510	Organizational Lifecycles and HR Implications	4
ORL 4170	Developing Human Capital in Organizations	4
<b>Total Credits</b>		<b>16</b>

### Specialized Graduate Certificate in Human Resource Operations

Code	Title	Credits
HRA 4240	Human Resources Technology Solutions	4
HRA 4250	Integrated Talent Management	4
HRA 4260	HR Analytics and Research	4
HRA 4270	Value and Impact of HR Interventions	4
<b>Total Credits</b>		<b>16</b>

#### HRA 4130 Finance for HR Professionals (4 Credits)

It is essential for Human Resource professionals to have business acumen as a competency in order to be perceived as valuable business partners.

This course addresses financial oversight and budget skills and aims to increase students' knowledge of financial statements, cash flow, operating budget, cost-benefit analysis, and capital budgeting. The course will address financial reports, financial ratios, analysis and measurement tools, and ethical situations as a means to increase the student's business acumen. In addition, the course focuses on understanding how those financial reports influence human capital decisions.

#### HRA 4140 HR as a Strategic Partner (4 Credits)

This course offers an introduction to HR as a professional field of study, discusses how HR fits into the workplace, as well as possible career trajectories. Additionally, students will explore some of the differences in the HR function across the public, private and non-profit sectors. The course presents theories and issues in the HR field, and it defines the HR practitioner as a strategic partner and change agent. The course places HR functional management in the context of organizational strategy and policy while defining the core competencies of HR professionals including recruitment, retention, talent development, benefits design, and employee relations. All coursework is done through an equity and inclusion lens.

**HRA 4150 Human Resources Across Organizations (4 Credits)**

This course prepares HR professionals to work in a number of organizational settings and sectors during their careers. Students will explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits. Students will also assess how HR practices integrate with organizational strategy and mission to ensure a clear linkage to stated goals and objectives.

**HRA 4160 Human Resources in a Global Economy (4 Credits)**

In this course, students will explore the various challenges, strategies, and frameworks that apply to operating HR at the global level, focusing in on how talent, total reward, employee relations, culture, organizational design, culture and diversity, equity, and inclusion are approached within international organizations. Ultimately, students will understand, identify, analyze, and create strategies related to various HR challenges in the global context.

**HRA 4170 The Inclusive Organization (4 Credits)**

Employees are coming into organizations with differences in race, ethnicity, gender, age, religion, sexual orientation, ability, and other aspects of diversity. How can employees, regardless of level or function, contribute to a more inclusive environment that creates space and psychological safety for everyone? In this class, students will come to a nuanced and comprehensive understanding of what inclusion is, what inclusive practices look like, and what it takes to implement them at the personal, group, and organizational levels.

**HRA 4180 Organizational Politics and the HR Professional (4 Credits)**

Description: Organizational politics may impact programs developed by HR professionals when decisions are made to further individual interest over the interests of others. Despite the inclusion of best practices in recommendations from HR, political reasons, agendas, or actions may drive decision-making, rather than the benefit of employees. This course examines why and how politics may enter HR decision-making, assesses the merits of strategies to navigate organizational politics, and identifies links between motivation and leadership.

**HRA 4230 Consulting and Human Resource Applications (4 Credits)**

HR professionals often serve in a consulting role, both as internal and external consultants. This course includes models, tools, and concepts to build effective relationships with key stakeholders; identify, analyze, and diagnose organizational issues; develop and implement value-added solutions; effectively manage the change process; and measure/monitor outcomes. Students utilize a consulting model approach to turn strategy into action.

**HRA 4240 Human Resources Technology Solutions (4 Credits)**

Technological advances have had a major impact on the use of information for managing human resource functions within both large and small organizations. Understanding how information is utilized in the functional areas of human resources is a critical piece of supporting organizations' decision-making and strategic planning. In this course, students will explore the specifications, development, implementation and maintenance of human resources technology and how the collection, storage, and analysis of human resources data is an important element of all human resources systems. Students will also explore the fundamentals of a human resources information system (HRIS) and best practices for implementing HRIS. Ultimately, students will apply needs analysis to recommend an HRIS to an organization. Other topics covered in this course include international usage and security and privacy issues, including big data, gamification, and artificial intelligence within the realm of HRIS.

**HRA 4250 Integrated Talent Management (4 Credits)**

Organizational value depends on developing, utilizing, and retaining human resources. This course examines the importance of demonstrating that value along with what is needed to acquire, hire, and retain talented human resources. This includes workforce planning and forecasting, competency modeling, talent acquisition, onboarding and career development, succession planning, and developing models. Students will examine how political, economic, and social systems can lead to new policies and practices that affect talent management strategies, along with ethical considerations and inclusivity.

**HRA 4260 HR Analytics and Research (4 Credits)**

This course provides historical context for employee benefits and explores its motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options, which include the overall compensation and benefits an employee receives. Students will gain a solid grasp of the legal and budget implications of employee benefits offerings and will become familiar with the details of specific types of benefits, such as pension plans, health insurance, and flex spending. At the end of this course, students will be able to comprehensively understand, analyze, and strategically design total reward frameworks for organizations. The course aims to equip students with the knowledge, skills, and critical thinking abilities necessary to navigate the complex landscape of employee compensation and benefits, ensuring they can contribute effectively to organizational success and employee satisfaction.

**HRA 4270 Value and Impact of HR Interventions (4 Credits)**

In this course, students will determine the long-term and short-term impact of interventions, especially looking at a cost-benefit analysis. The object is to have a practical strategy to provide decision makers the data for human capital investments support.

**HRA 4500 Organizational Leadership, Team Effectiveness, and Communications (4 Credits)**

In the 21st Century, HR professionals are organizational leaders who are often tasked with building teams, leading change and ensuring strong internal communications. This survey course explores a variety of topics including how to champion organizational change, manage organizational crisis, build effective teams, and develop strategic communications. A critical tool also introduced in this course, supporting the role of HR as a strategic partner, is the balanced scorecard. This enables HR leaders to align deliverables in finance, internal processes, customer and learning and growth measures. This broad overview prepares HR professionals to actively engage in the business dialogue.

**HRA 4510 Organizational Lifecycles and HR Implications (4 Credits)**

This course examines the role of HR at various phases of an organization's lifecycle taking into account mission, vision, and values. Moving from start-up to mature organizations, the course addresses HR responses to compensation, benefits, and HR structure, and addresses how HR can support and facilitate transitions from one lifecycle phase to the next. Students will explore short and long-term strategies that match HR structures and programs to needs of organizations in transition, including change management, crisis management, talent management, total rewards, and organizational communication strategies.

**HRA 4520 HR Change Management (4 Credits)**

Human Resources play an essential role in planning, implementing, and sustaining organizational change. This course examines the role of HR professionals in leading and advising on organizational change, including how to apply HR management practices to change management plans, and aligning total compensation and performance management practices to support the goals of change initiatives.

**HRA 4600 Human Relations in Organizations (4 Credits)**

The goal of this course is to examine how human relations are integral to creating systems and communication channels that support healthy employee relations and create positive workplace cultures. This course will equip human resources professionals to integrate positive human relations as a foundational element of human resources management responsibilities such as recruitment and staffing, legal and ethical considerations, onboarding, training, professional development, compensation and benefits, employee well-being, and employee relations. This course also examines the integration of and differences between human resources management, organizational development, and human relations.

**HRA 4610 Employee Compensation (4 Credits)**

This course explores how to develop and manage employee compensation systems with emphasis on motivational theory, individual and group performance, key elements of compensation-system design, external competitiveness, internal equity, compliance, and innovative reward strategies. Students will explore the practical and strategic purpose of compensation systems from a historical perspective as well as in the context of the social and business issues of today's world economy.

**HRA 4620 Employment Total Benefits (4 Credits)**

This course develops historical context for employee benefits and the motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options. The course examines pension plans, social security, ERISA, major benefits legislation, health insurance, flex spending, and budget implications.

**HRA 4630 Employment Law (4 Credits)**

This course explores employment law issues that affect the HR function in organizations. It provides an in-depth examination of the complex and dynamic intersection between legal principles and HR functions within organizations. Topics include equal employment opportunity laws, sexual harassment, risk management, discrimination, wage and hour laws, unionization, workplace safety, at-will employment, and other relevant legal concepts. The course will also address issues related to international employment laws. The primary focus is to prepare students with the knowledge and skills necessary to navigate the landscape of employment law and effectively manage HR practices in compliance with legal requirements.

**HRA 4701 Topics in Human Resources (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues in the field of strategic human resource management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**HRA 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HRA 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HRA 4980 Internship (0-4 Credits)**

The Strategic Human Resource Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SHRM students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences.

**HRA 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**HRA 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only may be used by degree candidates. Prerequisite: Admitted degree candidate.

**Courses****HRA 4130 Finance for HR Professionals (4 Credits)**

It is essential for Human Resource professionals to have business acumen as a competency in order to be perceived as valuable business partners. This course addresses financial oversight and budget skills and aims to increase students' knowledge of financial statements, cash flow, operating budget, cost-benefit analysis, and capital budgeting. The course will address financial reports, financial ratios, analysis and measurement tools, and ethical situations as a means to increase the student's business acumen. In addition, the course focuses on understanding how those financial reports influence human capital decisions.

**HRA 4140 HR as a Strategic Partner (4 Credits)**

This course offers an introduction to HR as a professional field of study, discusses how HR fits into the workplace, as well as possible career trajectories. Additionally, students will explore some of the differences in the HR function across the public, private and non-profit sectors. The course presents theories and issues in the HR field, and it defines the HR practitioner as a strategic partner and change agent. The course places HR functional management in the context of organizational strategy and policy while defining the core competencies of HR professionals including recruitment, retention, talent development, benefits design, and employee relations. All coursework is done through an equity and inclusion lens.

**HRA 4150 Human Resources Across Organizations (4 Credits)**

This course prepares HR professionals to work in a number of organizational settings and sectors during their careers. Students will explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits. Students will also assess how HR practices integrate with organizational strategy and mission to ensure a clear linkage to stated goals and objectives.

**HRA 4160 Human Resources in a Global Economy (4 Credits)**

In this course, students will explore the various challenges, strategies, and frameworks that apply to operating HR at the global level, focusing in on how talent, total reward, employee relations, culture, organizational design, culture and diversity, equity, and inclusion are approached within international organizations. Ultimately, students will understand, identify, analyze, and create strategies related to various HR challenges in the global context.

**HRA 4170 The Inclusive Organization (4 Credits)**

Employees are coming into organizations with differences in race, ethnicity, gender, age, religion, sexual orientation, ability, and other aspects of diversity. How can employees, regardless of level or function, contribute to a more inclusive environment that creates space and psychological safety for everyone? In this class, students will come to a nuanced and comprehensive understanding of what inclusion is, what inclusive practices look like, and what it takes to implement them at the personal, group, and organizational levels.

**HRA 4180 Organizational Politics and the HR Professional (4 Credits)**

Description: Organizational politics may impact programs developed by HR professionals when decisions are made to further individual interest over the interests of others. Despite the inclusion of best practices in recommendations from HR, political reasons, agendas, or actions may drive decision-making, rather than the benefit of employees. This course examines why and how politics may enter HR decision-making, assesses the merits of strategies to navigate organizational politics, and identifies links between motivation and leadership.

**HRA 4230 Consulting and Human Resource Applications (4 Credits)**

HR professionals often serve in a consulting role, both as internal and external consultants. This course includes models, tools, and concepts to build effective relationships with key stakeholders; identify, analyze, and diagnose organizational issues; develop and implement value-added solutions; effectively manage the change process; and measure/monitor outcomes. Students utilize a consulting model approach to turn strategy into action.

**HRA 4240 Human Resources Technology Solutions (4 Credits)**

Technological advances have had a major impact on the use of information for managing human resource functions within both large and small organizations. Understanding how information is utilized in the functional areas of human resources is a critical piece of supporting organizations' decision-making and strategic planning. In this course, students will explore the specifications, development, implementation and maintenance of human resources technology and how the collection, storage, and analysis of human resources data is an important element of all human resources systems. Students will also explore the fundamentals of a human resources information system (HRIS) and best practices for implementing HRIS. Ultimately, students will apply needs analysis to recommend an HRIS to an organization. Other topics covered in this course include international usage and security and privacy issues, including big data, gamification, and artificial intelligence within the realm of HRIS.

**HRA 4250 Integrated Talent Management (4 Credits)**

Organizational value depends on developing, utilizing, and retaining human resources. This course examines the importance of demonstrating that value along with what is needed to acquire, hire, and retain talented human resources. This includes workforce planning and forecasting, competency modeling, talent acquisition, onboarding and career development, succession planning, and developing models. Students will examine how political, economic, and social systems can lead to new policies and practices that affect talent management strategies, along with ethical considerations and inclusivity.

**HRA 4260 HR Analytics and Research (4 Credits)**

This course provides historical context for employee benefits and explores its motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options, which include the overall compensation and benefits an employee receives. Students will gain a solid grasp of the legal and budget implications of employee benefits offerings and will become familiar with the details of specific types of benefits, such as pension plans, health insurance, and flex spending. At the end of this course, students will be able to comprehensively understand, analyze, and strategically design total reward frameworks for organizations. The course aims to equip students with the knowledge, skills, and critical thinking abilities necessary to navigate the complex landscape of employee compensation and benefits, ensuring they can contribute effectively to organizational success and employee satisfaction.

**HRA 4270 Value and Impact of HR Interventions (4 Credits)**

In this course, students will determine the long-term and short-term impact of interventions, especially looking at a cost-benefit analysis. The object is to have a practical strategy to provide decision makers the data for human capital investments support.

**HRA 4500 Organizational Leadership, Team Effectiveness, and Communications (4 Credits)**

In the 21st Century, HR professionals are organizational leaders who are often tasked with building teams, leading change and ensuring strong internal communications. This survey course explores a variety of topics including how to champion organizational change, manage organizational crisis, build effective teams, and develop strategic communications. A critical tool also introduced in this course, supporting the role of HR as a strategic partner, is the balanced scorecard. This enables HR leaders to align deliverables in finance, internal processes, customer and learning and growth measures. This broad overview prepares HR professionals to actively engage in the business dialogue.

**HRA 4510 Organizational Lifecycles and HR Implications (4 Credits)**

This course examines the role of HR at various phases of an organization's lifecycle taking into account mission, vision, and values. Moving from start-up to mature organizations, the course addresses HR responses to compensation, benefits, and HR structure, and addresses how HR can support and facilitate transitions from one lifecycle phase to the next. Students will explore short and long-term strategies that match HR structures and programs to needs of organizations in transition, including change management, crisis management, talent management, total rewards, and organizational communication strategies.

**HRA 4520 HR Change Management (4 Credits)**

Human Resources play an essential role in planning, implementing, and sustaining organizational change. This course examines the role of HR professionals in leading and advising on organizational change, including how to apply HR management practices to change management plans, and aligning total compensation and performance management practices to support the goals of change initiatives.

**HRA 4600 Human Relations in Organizations (4 Credits)**

The goal of this course is to examine how human relations are integral to creating systems and communication channels that support healthy employee relations and create positive workplace cultures. This course will equip human resources professionals to integrate positive human relations as a foundational element of human resources management responsibilities such as recruitment and staffing, legal and ethical considerations, onboarding, training, professional development, compensation and benefits, employee well-being, and employee relations. This course also examines the integration of and differences between human resources management, organizational development, and human relations.

**HRA 4610 Employee Compensation (4 Credits)**

This course explores how to develop and manage employee compensation systems with emphasis on motivational theory, individual and group performance, key elements of compensation-system design, external competitiveness, internal equity, compliance, and innovative reward strategies. Students will explore the practical and strategic purpose of compensation systems from a historical perspective as well as in the context of the social and business issues of today's world economy.

**HRA 4620 Employment Total Benefits (4 Credits)**

This course develops historical context for employee benefits and the motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options. The course examines pension plans, social security, ERISA, major benefits legislation, health insurance, flex spending, and budget implications.

**HRA 4630 Employment Law (4 Credits)**

This course explores employment law issues that affect the HR function in organizations. It provides an in-depth examination of the complex and dynamic intersection between legal principles and HR functions within organizations. Topics include equal employment opportunity laws, sexual harassment, risk management, discrimination, wage and hour laws, unionization, workplace safety, at-will employment, and other relevant legal concepts. The course will also address issues related to international employment laws. The primary focus is to prepare students with the knowledge and skills necessary to navigate the landscape of employment law and effectively manage HR practices in compliance with legal requirements.

**HRA 4701 Topics in Human Resources (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues in the field of strategic human resource management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**HRA 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HRA 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HRA 4980 Internship (0-4 Credits)**

The Strategic Human Resource Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SHRM students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences.

**HRA 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**HRA 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only may be used by degree candidates. Prerequisite: Admitted degree candidate.

## Supply Chain Management

Office: University College Student Support Center  
Mail Code: 2211 S. Josephine St., Denver, CO 80208  
Phone: 303-871-2291, 800-347-2042  
Email: [ucolssupport@du.edu](mailto:ucolssupport@du.edu)  
Web Site: <http://www.universitycollege.du.edu> (<http://www.universitycollege.du.edu/>)

### Master of Science in Supply Chain Management

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets.

Supply Chains are more than trucks and warehouses, but also includes product design, sourcing, forecasting, planning, manufacturing, distribution, logistics, retailing, and material disposal and reuse. Demand for supply chain professionals is growing at the highest levels of corporations across the world due to their role as a problem solver for consumer and business products and services. The most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning in markets as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be most important to a company's success to solve problems and create opportunities.

The Master of Science in Supply Chain Management at the University of Denver is based on principles of industrial engineering, structured problem-solving techniques and analytics tools that are the skills that today's employers are seeking in various types of supply chain management, management consulting, international business and other occupational categories at the mid to senior levels of an organization. The Master's Program is a 48-credit-hour program that focuses on a foundation of industrial engineering, supply chain analytics, and general business skills to create professionals to succeed in a global operating environment. Upon completion of the degree, students will have these skills needed for the 21<sup>st</sup> century and will have worked on live projects within industry that will take the concepts to practice. Students in supply chain management also develop strong structured problem-solving skills that are essential in any occupational setting.

This degree prepares students to do the following:

- Appraise their role in the market system through articulating the six pillars of supply chain management and diagramming the fundamental processes of Supply Chain Management.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Analyze supply chains using a multi-dimensional perspective of people, processes and technology, including the use of cutting edge analytics tools.
- Solve supply chain problems using nonlinear processes that addresses connections among supply chain pillars, market trends, and business best practices.



- Apply best and emerging 21<sup>st</sup> century practices to address an authentic supply chain problem in a work setting.
- Exhibit a managerial/executive level combination of abilities in critical thinking, quantitative and qualitative, innovation and structured problem solving, and emotional intelligence and international culture knowledge.
- Achieve differentiation in balance between functional/technical and leadership/entrepreneurship skills as a leader.

## Graduate Certificate in Supply Chain Management

The graduate certificate in Supply Chain Management was developed in partnership with the Transportation Institute at the University of Denver and Daniels College of Business. The purpose of a Supply Chain Management certificate is to provide a student with a baseline of knowledge, skills, and abilities to succeed in various types of supply chain management roles at the entry levels of an organization. It is designed as a four-course program, starting with the basics of an end-to-end supply chain system, and then diving deeper into the planning and execution aspects of a supply chain, with a practicum to focus on specific area relating to a student's interest. Students will also gain additional skills and knowledge in supply chain management through elective coursework.

This degree prepares students to do the following:

- Articulate the six pillars of supply chain management to diagram the process to appraise their role in the market system.
- Apply the six pillars of supply chain management to realistic problem scenarios to develop strategies to diagnose and address future supply chain problems.
- Assess supply chains using a multidimensional perspective that includes connections between supply chain processes and fundamental business topics such as financial management and technology.
- Solve supply chain problems using a nonlinear process that addresses connections between supply chain pillars, market trends, and business best practices.
- Apply best practices to address an authentic supply chain problem in a work setting.

## Specialized Graduate Certificate in Supply Chain Management

The specialized graduate certificate in Supply Chain Management provides a student with a baseline of knowledge, skills, and abilities to succeed in various types of supply chain management roles at the entry levels of an organization. The certificate is designed as a four-course program, starting with the basics of an end-to-end supply chain system, and then diving deeper into the planning and execution aspects of a supply chain, with a practicum to focus on a specific area relating to a student's interest. At the end, the student will be able to successfully move forward in his/her career in a chosen field based on theoretical, strategic, and practical knowledge, and applied research.

## Master of Science in Supply Chain Management

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each subscore
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

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## Certificate Admission

### Degree and GPA Requirements

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

### English Language Proficiency Test Score Requirements

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each sub-score
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master's Degree Program

### Master of Science in Supply Chain Management

Code	Title	Credits
<b>Required Courses</b>		
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4110	Fundamentals of Supply Chain Planning	4
TRAN 4120	Fundamentals of Supply Chain Execution	4
TRAN 4130	Structured Problem Solving in Supply Chain Management	4
TRAN 4140	Supply Chain Technology and Systems	4
TRAN 4150	Supply Chain Cost Management	4
TRAN 4160	Analytic Methods for Supply Chain Management	4
TRAN 4170	Industrial Engineering and Operations Management	4
TRAN 4180	Sustainability and Supply Chain Management	4
TRAN 4190	Import/Export Supply Chain Management	4
TRAN 4901 or TRAN 4902	Capstone Project Capstone Seminar	4
<b>Electives (Choose one course)</b>		<b>4</b>
<b>Total Credits</b>		<b>48</b>

Minimum number of credits required: 48

Students will work with their Academic Advisor to determine the best set of courses to choose for their electives.

## Graduate Certificate Program

### Graduate Certificate in Supply Chain Management

Code	Title	Credits
<b>Required Courses</b>		
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4110	Fundamentals of Supply Chain Planning	4
TRAN 4120	Fundamentals of Supply Chain Execution	4
TRAN 4130	Structured Problem Solving in Supply Chain Management	4
TRAN 4140	Supply Chain Technology and Systems	4

TRAN 4150	Supply Chain Cost Management	4
<b>Total Credits</b>		<b>24</b>

## Specialized Graduate Certificate Program

### Specialized Graduate Certificate in Supply Chain Management

Code	Title	Credits
<b>Required Courses</b>		
TRAN 4100	Fundamentals of Supply Chain Management	4
TRAN 4110	Fundamentals of Supply Chain Planning	4
TRAN 4120	Fundamentals of Supply Chain Execution	4
TRAN 4130	Structured Problem Solving in Supply Chain Management	4
<b>Total Credits</b>		<b>16</b>

#### TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)

This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the six core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply-chain management, including applicable global trends will be covered.

#### TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)

According to the Six Pillars of Supply Chain program design at the University of Denver, the system can only succeed if it acts as an integrated system. This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how front-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in product and supply chain design, strategic sourcing, forecasting, demand planning, and supplier management. Prerequisite: TRAN 4100.

#### TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)

This course focuses on the last three pillars of the supply chain management system: make, deliver, and sustain. Make, or manufacturing, is the production process of the product based on the planning steps in the supply chain. Distribution focuses on what happens between the product being made, and purchased by the consumer. Sustain, the last step, is focused on how these materials can be reused in the supply chain rather than wasted. In this course, students will be able to build upon their knowledge of the front-end of the supply chain to evaluate what makes supply chain strategies successful in the marketplace. Real-life examples will be applied related to global supply chains and the changing nature of retailing, including the impact of e-commerce, to demonstrate how successful execution must follow supply chain strategies and plans for success. Prerequisite: TRAN 4100.

#### TRAN 4130 Structured Problem Solving in Supply Chain Management (4 Credits)

This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

#### TRAN 4140 Supply Chain Technology and Systems (4 Credits)

This course provides a fundamental definition of the role of technology and systems in supply chain management, demonstrating how "people and processes" intersect with these increasingly important tools. Students will learn how system and technology strategy can become key differentiators in the field across the six pillars of the supply chain and are required to integrate disparate suppliers and partners. Specific current and future trends will be explored, including the implications across local, national, and global systems. The focus will be related to the strategic, operational, and tactical design and execution of technology and systems related to how supply chains operate. TRAN 4100, 4110, 4120, 4130.

#### TRAN 4150 Supply Chain Cost Management (4 Credits)

A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Prerequisite: TRAN 4130.

**TRAN 4160 Analytic Methods for Supply Chain Management (4 Credits)**

Because Supply Chain Management is built off of structured problem-solving techniques across suppliers and partners requiring rapid and precise decision making, analytical methods are a requirement for success. In this course, the student will be presented with advanced techniques in quantitative analytics that are critical for today's largest companies and innovators. Upon completion of the course, the student will be familiar with how to apply these techniques under various situations across the supply chain and within the firm. Prerequisite: TRAN 4130.

**TRAN 4170 Industrial Engineering and Operations Management (4 Credits)**

Industrial Engineering and Operations Management is the application of engineering, logistics, finance and analytics, and structured problem-solving techniques to achieve the goals of today's global supply chains. In this course, the student will be introduced to the concept of Industrial Engineering, including critical methodologies such as Six Sigma, Lean, and the Toyota Production System. Upon completion of the course, the student will be able to apply these structured problem-solving techniques to an advanced level across the six pillars of supply chain management. Prerequisite: TRAN 4100 & Advisor approval.

**TRAN 4180 Sustainability and Supply Chain Management (4 Credits)**

Sustainability in Supply Chain Management is founded upon the principles of Six Sigma and Lean to not only reduce waste within the system, but also to solve some of the world's greatest challenges in relation to the environment. Through an understanding of the supply chain across the six pillars and through the use of finance, industrial engineering, logistics, and analytics, the student will be capable of defining, measuring, analyzing and solving the balance required between industry and the environment. Prerequisite: TRAN 4100 or MKTG 4380.

**TRAN 4190 Import/Export Supply Chain Management (4 Credits)**

Today's supply chain is global, and this means that companies must understand how to buy and sell goods across national boundaries. In this course, the strategic, operational, and tactical requirements of importing and exporting will be presented to the student in order to understand how the global supply chain operates. A specific focus will be on freight forwarding and customs requirements into and out of the U.S. territory through various ports and entry and egress. Prerequisites: TRAN 4130.

**TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)**

This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategic use of technologies in the enterprise-wide system.

**TRAN 4400 Excellence in Leadership (2 Credits)**

This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

**TRAN 4410 Executive Management Practices in Organizations (1 Credit)**

This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

**TRAN 4420 Leading with Integrity (1 Credit)**

This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

**TRAN 4430 Applied Micro Economics & Pricing (4 Credits)**

The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

**TRAN 4440 Marketing, Sales, Procurement & Customer Management Strategies (4 Credits)**

Within the context of Transportation and Supply Chain, this course will explore the strategies related to the Sales and Marketing process and strategies from the seller perspective and the related perspective of Procurement from the buyer perspective. Additionally, the strategies and measures used for Customer Management will be explored including customer setup, advancing customer excellence practices, customer valuation and segmentation, and other related concepts. Further, the concepts of establishing, building, and maintaining trust will be explored as a key strategy and practice, which appears throughout each of the four main components of the course.

**TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)**

This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

**TRAN 4460 Financial & Managerial Accounting (2 Credits)**

This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

**TRAN 4470 Financial Analysis & Capital Structures (2 Credits)**

Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.

**TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)**

This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

**TRAN 4490 Global Trade & Economics (4 Credits)**

This course will examine the World Trade F15 Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their N20; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

**TRAN 4701 Topics in Supply Chain (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Supply Chain Management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4702 Topics in Transportation Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Transportation Management, new courses being piloted, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4710 Transportation Finance (4 Credits)**

This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

**TRAN 4800 Advanced Concepts of Transportation & Supply Chain (2 Credits)**

This course is a program-wide survey course in which each of the primary learning outcomes of the Executive Masters' program are reviewed: Leadership, Economics & Finance, Technology & Optimization, Supply Chain, Trade & Legal concerns, and more, are all explored within the context of current trends in Transportation and Supply Chain space.

**TRAN 4810 Innovation and Technology in Global Transportation and Supply Chain (4 Credits)**

Innovation and change are prevalent in the global supply chain and transportation industrial structure. This course exposes students to an array of technology trends and innovative ideas for boosting competitive advantage, predicting disruptions, and preparing for new forces emerging from GIS, the Internet of Things, artificial intelligence and machine learning, and cloud-based products. The advantages and security issues related to big data and analytics are investigated as they relate to compliance and decision-making for managers and leaders. Understanding analytics helps managers and leaders identify and implement new technology in real-world applications. Students will explore what it means to have an innovation mindset and how it is applied while making decisions that maximize asset utilization and control wastage and/or redundancy and how to successfully apply emerging technologies to their careers and organizations.

**TRAN 4820 Principles of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, as well as current trends in supply chain technology and global value chains. Students will learn the six core pillars of supply chain processes and how suppliers, customers and other stakeholders are linked in these processes. The course will examine the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management, apply the problem solving framework known as DMAIC (Define, Measure, Assess, Innovate, Control) to a real-world supply chain problem.

**TRAN 4830 Advanced Supply Chain Management (4 Credits)**

Building on foundation of Supply Chain Management from TRANS 4820, this course enables the business leader to gain a customer centric system view of supply chain management that is achieved by today's top companies. A more advanced view of the six pillars of supply chain management will be studied as it relates to a stakeholder model of both customers and suppliers. In this course, the goal is to understand how a stakeholder's (customer, supplier, partner, etc.) supply chain operates across three flows (physical, logical/system, and financial) related to a transportation provider. The goal of this course is to provide the student a process and functional understanding of supply chain management in order to achieve success from a process, financial and strategic standpoint. The course will offer particular emphasis on industrial engineering skills related to supply chain operations.

**TRAN 4840 Policy and Regulatory Effects in Transportation & Supply Chain (2 Credits)**

The purpose of this course is to explore how public policy and regulation manifest in transportation and supply chain systems and how companies can effectively navigate that process. Students will learn about the history of transportation and supply chain regulation and how it has changed over time. They will review how infrastructure and systems are planned, operated, and financed and what roles the public and private sectors play. Additionally, the course explores safety, security, and trade concerns, Environmental Social & Governance (ESG), and how to develop strategies for their companies to engage in the policymaking process in ways that maximize value for their enterprises.

**TRAN 4850 Transportation & Supply Chain Strategies for the 21st Century (4 Credits)**

Today's supply chain and transportation markets are rapidly evolving across localities and the definition of what global means. In the 21st century, supply chains will become exponentially more fluid, and transportation providers will need to understand and incorporate these changes. In this course, the 21st century supply chain expectations will be discussed from a people, process, and technology standpoint. Students will determine how transportation providers will need to respond to these changes, and how emerging technologies will be incorporated in emerging supply chain strategies and supplier/provider processes. Supply chains will become more local and global concurrently - and this course will evaluate what is required to respond successfully to these trends.

**TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)**

Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

**TRAN 4870 Individual Leadership Development Project (4 Credits)**

This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

**TRAN 4880 Business Planning Thesis (4 Credits)**

This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

**TRAN 4890 Global Transportation & Supply Chain Seminar (2 Credits)**

This international travel seminar will build from learning objectives encountered throughout the Executive Masters program. Students will examine the management and operation of transportation and supply chain operations in other countries, and compare them to their own home county-based operations. During the travel event, students will meet with executives, government leaders, and local managers of these systems to learn directly about the challenges of serving the global economy, and will learn how to recognize and navigate international cultural differences in a business setting.

**TRAN 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**TRAN 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon the quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**TRAN 4980 Internship (0-4 Credits)**

The Supply Chain Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SCM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**TRAN 4991 Independent Study (1-10 Credits)**

## Transportation and Supply Chain Institute

Office: Transportation and Supply Chain Institute at the University of Denver

Mail Code: University Hall, 2197 S. University Blvd. Suite 359, Denver, CO 80208

Phone: 303-871-7449

Email: [du-dti@du.edu](mailto:du-dti@du.edu) ([du-iti@du.edu](mailto:du-iti@du.edu))

Web Site: <http://www.du.edu/transportation/> (<http://www.du.edu/transportation/>)

### Master of Science in Transportation and Supply Chain Management

The University of Denver's Transportation and Supply Chain Institute offers an MS in Transportation and Supply Chain Management designed to prepare transportation and supply chain professionals for leadership roles in the transportation, supply chain, and logistics industries.

This professionally oriented degree combines a rigorous academic program one might find in an MBA program, delivered by highly qualified industry practitioners and faculty with insight from a board of directors composed of transportation and supply chain industry leaders, thereby ensuring that course content remains relevant and current. Throughout the program, students learn to effectively address the wide-ranging management and business challenges facing the global transportation industry while gaining an understanding of the broad range of transportation modes, supply chain, and leadership competencies needed to meet these challenges.

The program's unique format—a week-long residency held each quarter for five consecutive quarters and a week-long domestic or international trip—allows students to continue working full-time while earning their graduate degree. It also affords students professional networking opportunities that offer significant professional advantages for the future. Upon earning a Master of Science in Transportation and Supply Chain Management from the Transportation and Supply Chain Institute at the University of Denver, program participants join a group of distinguished alumni who have gone on to play pivotal roles in industry.

**This degree prepares students to:**

- Develop strategies to enhance professional and personal management skills in career settings.
- Compare transportation and supply chain operational and managerial processes to make informed process-related decisions.
- Solve real-world problems by applying principles from core management disciplines of transportation and supply chain contexts; analyzing, evaluating, and responding to global supply chain and logistics challenges within and between modes; and measuring, theorizing, and assessing financial and operational management problems using quantitative methods.
- Create strategies to build and actively contribute to professional networks consisting of executive cohort members, board, and alumni.

### Master of Science in Transportation and Supply Chain Management

**Degree and GPA Requirements**

- Bachelor's degree: All graduate applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- Grade point average: The minimum undergraduate GPA for admission consideration for graduate study at the University of Denver is a cumulative 2.5 on a 4.0 scale or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work) for the baccalaureate degree. An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. For applicants with graduate coursework but who have not earned a master's degree or higher, the GPA from the graduate work may be used to meet the requirement. The minimum GPA is a cumulative 3.0 on a 4.0 scale for all graduate coursework undertaken.
- Program GPA requirement: The minimum undergraduate GPA for admission consideration for this program is a cumulative 2.5 on a 4.0 scale.

**Other Required Materials**

Applicants may be contacted by a Transportation and Supply Chain Institute representative to schedule an admission interview.

**English Language Proficiency Test Score Requirements**

The minimum TOEFL/IELTS/C1 Advanced/Duolingo English Test score requirements for this degree program are:

- Minimum TOEFL Score (Internet-based test): 80 with minimum of 20 on each subscore
- Minimum IELTS Score: 6.5 with minimum of 6.0 on each band score
- Minimum C1 Advanced Score: 176
- Minimum Duolingo English Test Score: 115 with individual subscore minimum of 105 for Literacy, Comprehension, and Conversation and minimum subscore of 95 for Production.

English Conditional Admission: No, this program does not offer English Conditional Admission.

## Master of Science in Transportation and Supply Chain Management

### Degree Requirements

Students must complete 55 quarter hours of coursework credit.

Code	Title	Credits
<b>Leadership and Organizational Excellence</b>		
TRAN 4400	Excellence in Leadership	2
TRAN 4410	Executive Management Practices in Organizations	1
TRAN 4420	Leading with Integrity	1
TRAN 4870	Individual Leadership Development Project	4
<b>Finance Accounting and Economics</b>		
TRAN 4430	Applied Micro Economics & Pricing	4
TRAN 4460	Financial & Managerial Accounting	2
TRAN 4470	Financial Analysis & Capital Structures	2
TRAN 4480	Capital Decision Making and Capital Markets	2
TRAN 4490	Global Trade & Economics	4
<b>Marketing and Sales</b>		
TRAN 4440	Marketing, Sales, Procurement & Customer Management Strategies	4
<b>Legal and Compliance</b>		
TRAN 4450	Legal Studies: Contracts & Regulation	2
TRAN 4840	Policy and Regulatory Effects in Transportation & Supply Chain	2
<b>Advanced Global Transportation &amp; Supply Chain Management</b>		
TRAN 4800	Advanced Concepts of Transportation & Supply Chain	2
TRAN 4810	Innovation and Technology in Global Transportation and Supply Chain	4
TRAN 4415	Data Laboratory	1
TRAN 4820	Principles of Supply Chain Management	4
TRAN 4830	Advanced Supply Chain Management	4
<b>Capstone: Applied Business Planning and Value Creation</b>		
TRAN 4860	Senior Management: Executives & Issues Seminar	4
TRAN 4880	Business Planning Thesis	4
TRAN 4890	Global Transportation & Supply Chain Seminar	2
<b>Total Credits</b>		<b>55</b>

### TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)

This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the six core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply-chain management, including applicable global trends will be covered.



**TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)**

According to the Six Pillars of Supply Chain program design at the University of Denver, the system can only succeed if it acts as an integrated system. This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how front-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in product and supply chain design, strategic sourcing, forecasting, demand planning, and supplier management. Prerequisite: TRAN 4100.

**TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)**

This course focuses on the last three pillars of the supply chain management system: make, deliver, and sustain. Make, or manufacturing, is the production process of the product based on the planning steps in the supply chain. Distribution focuses on what happens between the product being made, and purchased by the consumer. Sustain, the last step, is focused on how these materials can be reused in the supply chain rather than wasted. In this course, students will be able to build upon their knowledge of the front-end of the supply chain to evaluate what makes supply chain strategies successful in the marketplace. Real-life examples will be applied related to global supply chains and the changing nature of retailing, including the impact of e-commerce, to demonstrate how successful execution must follow supply chain strategies and plans for success. Prerequisite: TRAN 4100.

**TRAN 4130 Structured Problem Solving in Supply Chain Management (4 Credits)**

This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

**TRAN 4140 Supply Chain Technology and Systems (4 Credits)**

This course provides a fundamental definition of the role of technology and systems in supply chain management, demonstrating how "people and processes" intersect with these increasingly important tools. Students will learn how system and technology strategy can become key differentiators in the field across the six pillars of the supply chain and are required to integrate disparate suppliers and partners. Specific current and future trends will be explored, including the implications across local, national, and global systems. The focus will be related to the strategic, operational, and tactical design and execution of technology and systems related to how supply chains operate. TRAN 4100, 4110, 4120, 4130.

**TRAN 4150 Supply Chain Cost Management (4 Credits)**

A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Prerequisite: TRAN 4130.

**TRAN 4160 Analytic Methods for Supply Chain Management (4 Credits)**

Because Supply Chain Management is built off of structured problem-solving techniques across suppliers and partners requiring rapid and precise decision making, analytical methods are a requirement for success. In this course, the student will be presented with advanced techniques in quantitative analytics that are critical for today's largest companies and innovators. Upon completion of the course, the student will be familiar with how to apply these techniques under various situations across the supply chain and within the firm. Prerequisite: TRAN 4130.

**TRAN 4170 Industrial Engineering and Operations Management (4 Credits)**

Industrial Engineering and Operations Management is the application of engineering, logistics, finance and analytics, and structured problem-solving techniques to achieve the goals of today's global supply chains. In this course, the student will be introduced to the concept of Industrial Engineering, including critical methodologies such as Six Sigma, Lean, and the Toyota Production System. Upon completion of the course, the student will be able to apply these structured problem-solving techniques to an advanced level across the six pillars of supply chain management. Prerequisite: TRAN 4100 & Advisor approval.

**TRAN 4180 Sustainability and Supply Chain Management (4 Credits)**

Sustainability in Supply Chain Management is founded upon the principles of Six Sigma and Lean to not only reduce waste within the system, but also to solve some of the world's greatest challenges in relation to the environment. Through an understanding of the supply chain across the six pillars and through the use of finance, industrial engineering, logistics, and analytics, the student will be capable of defining, measuring, analyzing and solving the balance required between industry and the environment. Prerequisite: TRAN 4100 or MKTG 4380.

**TRAN 4190 Import/Export Supply Chain Management (4 Credits)**

Today's supply chain is global, and this means that companies must understand how to buy and sell goods across national boundaries. In this course, the strategic, operational, and tactical requirements of importing and exporting will be presented to the student in order to understand how the global supply chain operates. A specific focus will be on freight forwarding and customs requirements into and out of the U.S. territory through various ports and entry and egress. Prerequisites: TRAN 4130.

**TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)**

This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategic use of technologies in the enterprise-wide system.

**TRAN 4400 Excellence in Leadership (2 Credits)**

This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

**TRAN 4410 Executive Management Practices in Organizations (1 Credit)**

This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

**TRAN 4420 Leading with Integrity (1 Credit)**

This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

**TRAN 4430 Applied Micro Economics & Pricing (4 Credits)**

The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

**TRAN 4440 Marketing, Sales, Procurement & Customer Management Strategies (4 Credits)**

Within the context of Transportation and Supply Chain, this course will explore the strategies related to the Sales and Marketing process and strategies from the seller perspective and the related perspective of Procurement from the buyer perspective. Additionally, the strategies and measures used for Customer Management will be explored including customer setup, advancing customer excellence practices, customer valuation and segmentation, and other related concepts. Further, the concepts of establishing, building, and maintaining trust will be explored as a key strategy and practice, which appears throughout each of the four main components of the course.

**TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)**

This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

**TRAN 4460 Financial & Managerial Accounting (2 Credits)**

This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

**TRAN 4470 Financial Analysis & Capital Structures (2 Credits)**

Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.

**TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)**

This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

**TRAN 4490 Global Trade & Economics (4 Credits)**

This course will examine the World Trade F15 Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their N20; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

**TRAN 4701 Topics in Supply Chain (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Supply Chain Management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4702 Topics in Transportation Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Transportation Management, new courses being piloted, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4710 Transportation Finance (4 Credits)**

This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

**TRAN 4800 Advanced Concepts of Transportation & Supply Chain (2 Credits)**

This course is a program-wide survey course in which each of the primary learning outcomes of the Executive Masters' program are reviewed: Leadership, Economics & Finance, Technology & Optimization, Supply Chain, Trade & Legal concerns, and more, are all explored within the context of current trends in Transportation and Supply Chain space.

**TRAN 4810 Innovation and Technology in Global Transportation and Supply Chain (4 Credits)**

Innovation and change are prevalent in the global supply chain and transportation industrial structure. This course exposes students to an array of technology trends and innovative ideas for boosting competitive advantage, predicting disruptions, and preparing for new forces emerging from GIS, the Internet of Things, artificial intelligence and machine learning, and cloud-based products. The advantages and security issues related to big data and analytics are investigated as they relate to compliance and decision-making for managers and leaders. Understanding analytics helps managers and leaders identify and implement new technology in real-world applications. Students will explore what it means to have an innovation mindset and how it is applied while making decisions that maximize asset utilization and control wastage and/or redundancy and how to successfully apply emerging technologies to their careers and organizations.

**TRAN 4820 Principles of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, as well as current trends in supply chain technology and global value chains. Students will learn the six core pillars of supply chain processes and how suppliers, customers and other stakeholders are linked in these processes. The course will examine the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management, apply the problem solving framework known as DMAIC (Define, Measure, Assess, Innovate, Control) to a real-world supply chain problem.

**TRAN 4830 Advanced Supply Chain Management (4 Credits)**

Building on foundation of Supply Chain Management from TRANS 4820, this course enables the business leader to gain a customer centric system view of supply chain management that is achieved by today's top companies. A more advanced view of the six pillars of supply chain management will be studied as it relates to a stakeholder model of both customers and suppliers. In this course, the goal is to understand how a stakeholder's (customer, supplier, partner, etc.) supply chain operates across three flows (physical, logical/system, and financial) related to a transportation provider. The goal of this course is to provide the student a process and functional understanding of supply chain management in order to achieve success from a process, financial and strategic standpoint. The course will offer particular emphasis on industrial engineering skills related to supply chain operations.

**TRAN 4840 Policy and Regulatory Effects in Transportation & Supply Chain (2 Credits)**

The purpose of this course is to explore how public policy and regulation manifest in transportation and supply chain systems and how companies can effectively navigate that process. Students will learn about the history of transportation and supply chain regulation and how it has changed over time. They will review how infrastructure and systems are planned, operated, and financed and what roles the public and private sectors play. Additionally, the course explores safety, security, and trade concerns, Environmental Social & Governance (ESG), and how to develop strategies for their companies to engage in the policymaking process in ways that maximize value for their enterprises.

**TRAN 4850 Transportation & Supply Chain Strategies for the 21st Century (4 Credits)**

Today's supply chain and transportation markets are rapidly evolving across localities and the definition of what global means. In the 21st century, supply chains will become exponentially more fluid, and transportation providers will need to understand and incorporate these changes. In this course, the 21st century supply chain expectations will be discussed from a people, process, and technology standpoint. Students will determine how transportation providers will need to respond to these changes, and how emerging technologies will be incorporated in emerging supply chain strategies and supplier/provider processes. Supply chains will become more local and global concurrently - and this course will evaluate what is required to respond successfully to these trends.

**TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)**

Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

**TRAN 4870 Individual Leadership Development Project (4 Credits)**

This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

**TRAN 4880 Business Planning Thesis (4 Credits)**

This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

**TRAN 4890 Global Transportation & Supply Chain Seminar (2 Credits)**

This international travel seminar will build from learning objectives encountered throughout the Executive Masters program. Students will examine the management and operation of transportation and supply chain operations in other countries, and compare them to their own home county-based operations. During the travel event, students will meet with executives, government leaders, and local managers of these systems to learn directly about the challenges of serving the global economy, and will learn how to recognize and navigate international cultural differences in a business setting.

**TRAN 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**TRAN 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon the quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**TRAN 4980 Internship (0-4 Credits)**

The Supply Chain Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SCM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**TRAN 4991 Independent Study (1-10 Credits)****Courses****TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the six core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply-chain management, including applicable global trends will be covered.

**TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)**

According to the Six Pillars of Supply Chain program design at the University of Denver, the system can only succeed if it acts as an integrated system. This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how front-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in product and supply chain design, strategic sourcing, forecasting, demand planning, and supplier management. Prerequisite: TRAN 4100.

**TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)**

This course focuses on the last three pillars of the supply chain management system: make, deliver, and sustain. Make, or manufacturing, is the production process of the product based on the planning steps in the supply chain. Distribution focuses on what happens between the product being made, and purchased by the consumer. Sustain, the last step, is focused on how these materials can be reused in the supply chain rather than wasted. In this course, students will be able to build upon their knowledge of the front-end of the supply chain to evaluate what makes supply chain strategies successful in the marketplace. Real-life examples will be applied related to global supply chains and the changing nature of retailing, including the impact of e-commerce, to demonstrate how successful execution must follow supply chain strategies and plans for success. Prerequisite: TRAN 4100.

**TRAN 4130 Structured Problem Solving in Supply Chain Management (4 Credits)**

This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

**TRAN 4140 Supply Chain Technology and Systems (4 Credits)**

This course provides a fundamental definition of the role of technology and systems in supply chain management, demonstrating how "people and processes" intersect with these increasingly important tools. Students will learn how system and technology strategy can become key differentiators in the field across the six pillars of the supply chain and are required to integrate disparate suppliers and partners. Specific current and future trends will be explored, including the implications across local, national, and global systems. The focus will be related to the strategic, operational, and tactical design and execution of technology and systems related to how supply chains operate. TRAN 4100, 4110, 4120, 4130.

**TRAN 4150 Supply Chain Cost Management (4 Credits)**

A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Prerequisite: TRAN 4130.

**TRAN 4160 Analytic Methods for Supply Chain Management (4 Credits)**

Because Supply Chain Management is built off of structured problem-solving techniques across suppliers and partners requiring rapid and precise decision making, analytical methods are a requirement for success. In this course, the student will be presented with advanced techniques in quantitative analytics that are critical for today's largest companies and innovators. Upon completion of the course, the student will be familiar with how to apply these techniques under various situations across the supply chain and within the firm. Prerequisite: TRAN 4130.

**TRAN 4170 Industrial Engineering and Operations Management (4 Credits)**

Industrial Engineering and Operations Management is the application of engineering, logistics, finance and analytics, and structured problem-solving techniques to achieve the goals of today's global supply chains. In this course, the student will be introduced to the concept of Industrial Engineering, including critical methodologies such as Six Sigma, Lean, and the Toyota Production System. Upon completion of the course, the student will be able to apply these structured problem-solving techniques to an advanced level across the six pillars of supply chain management. Prerequisite: TRAN 4100 & Advisor approval.

**TRAN 4180 Sustainability and Supply Chain Management (4 Credits)**

Sustainability in Supply Chain Management is founded upon the principles of Six Sigma and Lean to not only reduce waste within the system, but also to solve some of the world's greatest challenges in relation to the environment. Through an understanding of the supply chain across the six pillars and through the use of finance, industrial engineering, logistics, and analytics, the student will be capable of defining, measuring, analyzing and solving the balance required between industry and the environment. Prerequisite: TRAN 4100 or MKTG 4380.

**TRAN 4190 Import/Export Supply Chain Management (4 Credits)**

Today's supply chain is global, and this means that companies must understand how to buy and sell goods across national boundaries. In this course, the strategic, operational, and tactical requirements of importing and exporting will be presented to the student in order to understand how the global supply chain operates. A specific focus will be on freight forwarding and customs requirements into and out of the U.S. territory through various ports and entry and egress. Prerequisites: TRAN 4130.

**TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)**

This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategic use of technologies in the enterprise-wide system.

**TRAN 4400 Excellence in Leadership (2 Credits)**

This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

**TRAN 4410 Executive Management Practices in Organizations (1 Credit)**

This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

**TRAN 4420 Leading with Integrity (1 Credit)**

This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

**TRAN 4430 Applied Micro Economics & Pricing (4 Credits)**

The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

**TRAN 4440 Marketing, Sales, Procurement & Customer Management Strategies (4 Credits)**

Within the context of Transportation and Supply Chain, this course will explore the strategies related to the Sales and Marketing process and strategies from the seller perspective and the related perspective of Procurement from the buyer perspective. Additionally, the strategies and measures used for Customer Management will be explored including customer setup, advancing customer excellence practices, customer valuation and segmentation, and other related concepts. Further, the concepts of establishing, building, and maintaining trust will be explored as a key strategy and practice, which appears throughout each of the four main components of the course.

**TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)**

This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

**TRAN 4460 Financial & Managerial Accounting (2 Credits)**

This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

**TRAN 4470 Financial Analysis & Capital Structures (2 Credits)**

Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.

**TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)**

This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

**TRAN 4490 Global Trade & Economics (4 Credits)**

This course will examine the World Trade F15 Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their N20; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

**TRAN 4701 Topics in Supply Chain (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Supply Chain Management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4702 Topics in Transportation Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Transportation Management, new courses being piloted, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4710 Transportation Finance (4 Credits)**

This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

**TRAN 4800 Advanced Concepts of Transportation & Supply Chain (2 Credits)**

This course is a program-wide survey course in which each of the primary learning outcomes of the Executive Masters' program are reviewed: Leadership, Economics & Finance, Technology & Optimization, Supply Chain, Trade & Legal concerns, and more, are all explored within the context of current trends in Transportation and Supply Chain space.

**TRAN 4810 Innovation and Technology in Global Transportation and Supply Chain (4 Credits)**

Innovation and change are prevalent in the global supply chain and transportation industrial structure. This course exposes students to an array of technology trends and innovative ideas for boosting competitive advantage, predicting disruptions, and preparing for new forces emerging from GIS, the Internet of Things, artificial intelligence and machine learning, and cloud-based products. The advantages and security issues related to big data and analytics are investigated as they relate to compliance and decision-making for managers and leaders. Understanding analytics helps managers and leaders identify and implement new technology in real-world applications. Students will explore what it means to have an innovation mindset and how it is applied while making decisions that maximize asset utilization and control wastage and/or redundancy and how to successfully apply emerging technologies to their careers and organizations.

**TRAN 4820 Principles of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, as well as current trends in supply chain technology and global value chains. Students will learn the six core pillars of supply chain processes and how suppliers, customers and other stakeholders are linked in these processes. The course will examine the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management, apply the problem solving framework known as DMAIC (Define, Measure, Assess, Innovate, Control) to a real-world supply chain problem.

**TRAN 4830 Advanced Supply Chain Management (4 Credits)**

Building on foundation of Supply Chain Management from TRANS 4820, this course enables the business leader to gain a customer centric system view of supply chain management that is achieved by today's top companies. A more advanced view of the six pillars of supply chain management will be studied as it relates to a stakeholder model of both customers and suppliers. In this course, the goal is to understand how a stakeholder's (customer, supplier, partner, etc.) supply chain operates across three flows (physical, logical/system, and financial) related to a transportation provider. The goal of this course is to provide the student a process and functional understanding of supply chain management in order to achieve success from a process, financial and strategic standpoint. The course will offer particular emphasis on industrial engineering skills related to supply chain operations.

**TRAN 4840 Policy and Regulatory Effects in Transportation & Supply Chain (2 Credits)**

The purpose of this course is to explore how public policy and regulation manifest in transportation and supply chain systems and how companies can effectively navigate that process. Students will learn about the history of transportation and supply chain regulation and how it has changed over time. They will review how infrastructure and systems are planned, operated, and financed and what roles the public and private sectors play. Additionally, the course explores safety, security, and trade concerns, Environmental Social & Governance (ESG), and how to develop strategies for their companies to engage in the policymaking process in ways that maximize value for their enterprises.

**TRAN 4850 Transportation & Supply Chain Strategies for the 21st Century (4 Credits)**

Today's supply chain and transportation markets are rapidly evolving across localities and the definition of what global means. In the 21st century, supply chains will become exponentially more fluid, and transportation providers will need to understand and incorporate these changes. In this course, the 21st century supply chain expectations will be discussed from a people, process, and technology standpoint. Students will determine how transportation providers will need to respond to these changes, and how emerging technologies will be incorporated in emerging supply chain strategies and supplier/provider processes. Supply chains will become more local and global concurrently - and this course will evaluate what is required to respond successfully to these trends.

**TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)**

Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

**TRAN 4870 Individual Leadership Development Project (4 Credits)**

This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

**TRAN 4880 Business Planning Thesis (4 Credits)**

This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

**TRAN 4890 Global Transportation & Supply Chain Seminar (2 Credits)**

This international travel seminar will build from learning objectives encountered throughout the Executive Masters program. Students will examine the management and operation of transportation and supply chain operations in other countries, and compare them to their own home county-based operations. During the travel event, students will meet with executives, government leaders, and local managers of these systems to learn directly about the challenges of serving the global economy, and will learn how to recognize and navigate international cultural differences in a business setting.

**TRAN 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**TRAN 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon the quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**TRAN 4980 Internship (0-4 Credits)**

The Supply Chain Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SCM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**TRAN 4991 Independent Study (1-10 Credits)**

## General Information

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## Calendar and Term Definitions

### Quarter Calendar

The academic calendar is divided into fall, winter and spring quarters and a summer session. Each quarter is approximately ten weeks long and summer session is nine weeks. There are four interterm sessions. Students may complete degree requirements through continuous enrollment, including summers, or may arrange the normal work of a three-quarter academic year in any desirable sequence of quarters and summer session.

### Semester Calendar

The Sturm College of Law academic calendar is divided into autumn, spring and summer session. Each semester is approximately 15 weeks long. Students may complete requirements including summers, or may arrange the normal work of a two-semester academic year in any desirable sequence of semesters.



## University College Calendar

University College considers summer to be part of the academic year. The summer quarter is ten weeks long.

### Summer Session

Summer session is an avenue for graduate students to accelerate their programs or complete necessary coursework. Elective and required courses are offered in a variety of time frames. Travel and other unique courses, including short, intensive workshops, are part of the summer program.

Visiting students, professionals and individuals from the community are admitted under an open enrollment policy.

**Note:** *University College considers summer to be part of the academic year. The Summer Quarter is ten weeks long.*

### Interterm

Interterm is the time period prior to each academic quarter, during which short, on-campus and travel courses are offered. Hours completed in interterm are applied as credit toward graduation requirements. Students register for interterm classes through the Special Community Programs office.

**Note:** *Some units may have specific requirements about the maximum number of interterm hours which may be applied toward the degree. Contact the unit for details.*

## Critical Notification System

### Registration Instructions

The University can send voice or text messages to students in the event of an urgent situation. The system will call every contact number provided and leave a voicemail if the call is unanswered. Text messages are optional and sent to only one number. The owner assumes any costs associated with receiving text messages.

You may designate one number to receive text messages. If you have elected to receive a text message, you will receive a text message from the CINS vendor to confirm that you wish to opt in to receive future emergency text messages. You will be responsible for any costs associated with your text messages. Remember this is how we reach you in an emergency.

Students must provide valid contact information in order to receive a text message or voice mail alert. To update contact information, log into MyDU (<https://my.du.edu/dashboard/>) and navigate to Student Tools, Records and Requests, Update your notification preferences.

### Emergency Contacts

You may provide the University with contact information for individuals you wish us to contact in the event of an emergency. You may update emergency contact information in Personal Information, which is found in myWeb in the MyDU (<https://my.du.edu/>) portal.

## Graduate Policy Scope, Adherence and Modifications

The policy development mission of the Office of Graduate Education (OGE) is to provide an authoritative, accessible and current repository for University and campus policies that impact the members of the University community across all graduate schools and programs. University policies have broad application throughout the University to help ensure coordinated compliance with applicable laws and regulations, promote operational efficiency, or reduce institutional risk. Individual schools and departments reserve the right to maintain policies particular to their units. However, unit-specific policies do not override university-wide policies. Policies duplicated on other websites or in print may not be the most current version. OGE recommends that graduate programs share content from the Graduate Bulletin rather than creating their own pages with University policies. This will help ensure that everyone is referencing the most current versions of University policies.

- Student Responsibility for Bulletin Information (p. 1216)
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## Student Responsibility for Bulletin Information

### Student Responsibility for Bulletin Information

Applicants to the University of Denver as well as admitted and enrolled students are held to the standards and procedures set forth in the University bulletin. Students are responsible for staying informed of the University's policies and procedures.

## Modifications to the Policy in the Bulletin

The University of Denver reserves the right to make changes in the regulations, rules, fees or other aspects of this University bulletin without advance notice.

Changes within academic units, the University, or applicable law (or other factors) may require modifications to this Graduate Policies and Procedures. Additionally, any unit or member of the Graduate Council may propose a change in policy by submitting a petition to the Vice Provost for Research and Graduate Education.

## Graduate Academic Unit-level Adherence to and Implementation of University Policy

Each graduate unit must examine the Graduate Policies and Procedures and identify unit-specific policies or practices that conflict with the University policies and procedures. Units shall adjust their practices to conform to University policy. If a unit believes it is necessary to maintain policies or practices that diverge from University policy, it shall petition the Senior Vice Provost for Research and Graduate Education for an exception to policy.

## Graduate Program Definitions

The University of Denver offers a range of graduate degree and certificate programs:

- Graduate Degree Program (p. 1217)
- Formal Dual Degree Programs (p. 1217)
- Flexible Dual Degree Programs (p. 1218)
- Dual Undergraduate-Graduate Degree Programs (p. 1219)
- DU-Iliff Joint PhD Program (p. 1220)
- Certificate Programs (p. 1220)
- Concurrent Candidacies (p. 1221)

## Graduate Degree Program

A graduate degree program is a combination of courses and related activities organized under the authority of a dean, the Senior Vice Provost for Research and Graduate Education, Graduate Council, the Provost and the Board of Trustees for the attainment of broad educational objectives leading toward a post-baccalaureate degree.

In general, with the exception of students in the dual undergraduate-graduate program, graduate students must have earned a bachelor's degree from a regionally accredited college or university before matriculation in a graduate program. However, with approval from the Senior Vice Provost for Research and Graduate Education, students who have already earned a master's degree, but not a bachelor's degree, may in rare cases, matriculate without a bachelor's degree.

## Formal Dual Degree Program

### Formal Dual Degree Programs

A formal dual degree program links two master's degrees or a master's program with a JD program and leads to two degrees. The Graduate Council and the Senior Vice Provost for Research and Graduate Education must approve all proposals for formal dual degree programs.

There are two types of formal dual degree programs. Type one incorporates two distinct disciplines where students complete two separate sets of core courses and reduce electives. Type two incorporates two areas of study within one discipline where students can cross-count a common set of core courses and take separate sets of electives.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

With fully developed and approved curricula, these programs are available to graduate students who are admitted to both schools and submit the Graduate Formal Dual Degree Verification Form (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) during the program's first term. For program details, please contact the school, college or department.

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the formal dual degree. Students must complete all the original requirements for the remaining degree in order to graduate.

# Flexible Dual Degree Program

## Flexible Dual Degree Programs

Students may propose a flexible dual degree program that links two master's degrees or a master's degree and a JD degree.

Students must submit the proposal for the flexible dual degree no later than one term prior to matriculation into the second degree.

Dual degrees must be pursued concurrently, not consecutively. In order to meet this requirement, students interested in pursuing a dual degree must be matriculated in both programs for one full academic year (three quarters or two semesters). Students in a one year program must matriculate into the second program no later than the first admission term following fifty percent (50%) coursework completion of the first program.

Students are required to complete both degree programs within five years of matriculation in to the first program. Students must apply for graduation for both programs and both degrees will be awarded at the same time.

Any significant changes to the approved program require the student to resubmit a revised proposal packet to the deans/chairs/directors and advisors of both programs and the Office of Graduate Education.

## Proposing a Flexible Dual Degree

To propose a flexible dual degree, the student must first apply to and be admitted by both programs, pay application fees and admissions deposits for both programs, and seek the counsel of an advisor in each program. Admission into each program does not take the place of filing a Flexible Dual Degree proposal (found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) nor guarantee approval of the proposal.

The dean, chair, or director of each degree program and both program advisors must carefully compare the requirements for each program and approve the proposed curriculum. The student must then submit a copy of the original requirements for each degree (printout from the unit website or copy from the student handbook is acceptable), a detailed course plan showing all proposed courses, the credit hours, and non-coursework requirements; a one to two- page statement of the educational/career objectives stating the reasons for the specific course selection and which courses most clearly serve the educational and career goals of the student; and current official/unofficial transcript(s) showing any work already completed towards the proposed program and degrees.

The student then submits the documents listed above to the Office of Graduate Education, which reviews and decides on the proposals. Proposals with errors or course/program inconsistencies will be returned for revision.

Once the proposal is approved, the student will be entered into the University computer system as a flexible dual degree student.

## Curriculum Structure

Students may propose any flexible dual degree program that seems reasonable to them and their advisors for academic and career objectives. Only elective courses may be counted among the hours used for reduction.

All the core requirements of each program must be preserved and cannot be overlapped or waived. Credit reduction of elective courses will be limited to the following for each program as determined by the original number of credit hours required for each degree.

Required credit hours for degrees and flexible dual degree reduction allowed:

- 45-60 quarter hour degree program: Reduce a maximum of 10 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 11-15 quarter hours. A reduction of 15 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.
- 61-75 quarter hour degree program: Reduce a maximum of 12 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 15-19 quarter hours. A reduction of 25 quarter hours from the original degree will be the maximum allowed when combining outside transfer hours and the reduction of degree hours.
- 76-90 quarter hour degree program: Reduce or cross-count a maximum of 15 quarter hours for the one degree without outside transfer credit. The traditional maximum outside transfer credit allowed in this case would be 19-22.5 quarter hours. A reduction of 35 quarter hours will be the maximum allowed from the original degree when combining outside transfer hours and the reduction of degree hours.

Note: Credits at the Sturm College of Law for a JD degree are calculated using semester hours: 1 semester hour equals 1.5 quarter hours. A 90 semester hour JD degree may only be reduced by a maximum of 10 semester hours for a total of 80 semester hours completed for the JD (10 semester hours equals 15 quarter hours).

## Non-Course Requirements

All non-course requirements must be fulfilled for both programs. If one of the non-course requirements of both intended programs is the writing and defense of a thesis, then (with prior approval from both departments) a combined thesis may be written as long as both departments are equally represented (from original proposal to completion) and so long as the most rigorous requirements are adhered to for completion and oral defense.

Students who decide to only complete one degree must inform the units, program advisors and the Office of Graduate Education in writing of their intention to nullify the flexible dual degree proposal. Students must complete all the original requirements for the remaining degree in order to graduate.

## Dual Undergraduate-Graduate Degree Program

### Dual Undergraduate-Graduate Degree Programs

A Dual Undergraduate-Graduate Degree Program is an institutionally approved program in which a DU undergraduate student begins taking classes toward a graduate degree program prior to earning a baccalaureate degree. Both degrees must be earned within five years of matriculation into the undergraduate degree program. Students pursuing a dual degree with a Juris Doctorate must earn both degrees within six years.

The programs may reduce a limited number of both undergraduate and graduate credit hours toward both degrees.

The amount of the credit hour reduction is variable across programs. To be admitted, a student's academic progress must demonstrate that the requirements of the program can be completed within the set time-frame.

Undergraduates still need to meet all normal core, major, minor and total credit hour requirements of their respective majors and minors before receiving the undergraduate degree. Graduate coursework is usually taken during the undergraduate "senior" year. Students should be admitted to the dual undergraduate-graduate program *before* taking graduate courses since undergraduate students generally may not take graduate courses. Usually, no more than 30 hours of electives may be used in the senior year to begin the graduate/professional program. Only graduate credit may be counted for the graduate degree. The total number of credit hours required varies by department. All requirements of the graduate or professional program need to be completed before receiving the advanced degree.

- For students enrolled in a dual degree program, the University will award the undergraduate degree at the time it is earned.
- A student who chooses not to continue on for the graduate degree may count the graduate courses, if approved as relevant by the advisor, toward the undergraduate degree (Students should visit the appropriate college or school for opt-out options and requirements).
- Students enrolled in the dual undergraduate-graduate program who have been awarded the BA/BS degree, completed all required coursework and are working on a thesis may be eligible to enroll in graduate continuous enrollment.

## Dual Undergraduate-Graduate Financial Aid

Eligibility for financial aid differs for undergraduate and graduate students and it differs for institutional aid and federal aid. Students enrolled in dual degree programs are considered graduate students for federal financial aid purposes after attaining 198 credit hours even if the student has not met the undergraduate degree requirements. Federal regulations do not allow students in dual degree programs who have completed four academic years (defined as 198 credit hours) to continue to receive undergraduate aid. Students in the law school dual degree program are aided as graduate students after three undergraduate academic years (149 hours for federal aid purposes). While undergraduate merit or need-based institutional grant aid are not available for fifth-year dual-degree students, each graduate department may offer graduate students grant or scholarship funds at their discretion. Students should contact their graduate program for details on available funding for the fifth year.

### Institutional Aid Eligibility Differs From Federal Aid Eligibility

#### *Institutional Aid*

The Financial Aid office expects first-time, first-year undergraduate students to be eligible for consideration for institutional merit or need-based undergraduate financial aid for a maximum of four academic years from the point of initial enrollment (excluding summer and interterm periods), or until the student earns the bachelor's degree, whichever comes first. For institutional aid eligibility for dual degree students the university defines four academic years as up to 12 quarters of fall, winter, spring enrollment. Students who receive any amount of credit in a quarter are considered to be enrolled. If a student is not receiving aid in one or more of those enrolled quarters, the timeline for 12 quarters of aid eligibility continues. For example, a student may not continue to receive undergraduate aid into a 13<sup>th</sup> quarter of enrollment due to not receiving aid or not accepting aid in one or more of the prior 12 quarters of enrollment. It is not the intent of this policy to cut off students from twelve quarters of fall, winter, spring institutional aid consideration, but it also is not the intent to allow students who are enrolled in dual degree programs to continue into their fifth year of enrollment as undergraduate students. Any student who has taken the undergraduate degree is no longer eligible for undergraduate institutional aid regardless of the number of quarters of aid already received.

### Federal Aid

For federal aid purposes dual degree students automatically become graduate students in the next enrollment period after attaining 198 hours of earned or accepted credit. Any dual degree student who has completed their undergraduate degree requirements is considered a graduate student regardless of the number of quarters of prior enrollment. For example, a student who has accelerated their program with outside credits or additional credits during prior academic years (overload enrollment, interterms, summer, AP or IB) and completes their baccalaureate degree or reaches the credit threshold stated above is automatically treated as a graduate student for federal aid purposes regardless of the number of quarters of prior enrollment or prior aid consideration.

## Dual Undergraduate-Graduate Admission and Records Procedures

The following must be followed consistently and accurately:

- Students are admitted to dual undergraduate-graduate degree programs by the graduate admission unit. The graduate unit follows all normal admission procedures and the student must meet all admission criteria for the graduate program other than receipt of the baccalaureate degree. Students should be admitted to the dual undergraduate-graduate program as early as practical for financial aid and other reasons. They must be admitted to the dual undergraduate-graduate program by the start of the first term that the student reaches senior standing (135 earned credits).
- The effective term for admission should be the term in which the student is permitted to take graduate courses. For example, if the student's senior year begins in the fall and the student meets admission criteria and may begin taking graduate courses in the subsequent spring term, the admission term should be that spring.
- Graduate units are responsible for assuring that the student information is accurate.

**Note:** A student who receives a bachelor's degree and was not previously enrolled in a dual undergraduate-graduate program is **not** eligible to return and enroll in a graduate program and reduce the number of credit hours for the graduate degree.

## DU-Iliff Joint PhD Program

The University of Denver and the Iliff School of Theology jointly administer a program leading to the doctor of philosophy in the study of religion.

Joint PhD students maintain student status and have access to resources in both co-sponsoring institutions. Students in the Joint PhD program should be referred to as "DU/Iliff Joint PhD Students" and not primarily as either Iliff or DU students.

Students in the Joint PhD program are expected to know the specific policies, procedures, and requirements for both the University of Denver and the Iliff School of Theology.

## Certificate Program

A certificate program provides a set of learning experiences concentrated in a specific set of educational goals. Academic credit earned in certificate programs may be awarded at the graduate or undergraduate levels. Such programs may include certificates, diplomas or other non-degree awards. Certificate programs may grant academic credit, continuing education units (CEUs), or they may include non-credit offerings..

**Certificates of completion/participation** (non-credit) may be awarded for completion of workshops, short courses and shorter sequences of credit courses. The certificate issued at the completion of the program does not indicate certification of attainment of any specific level of knowledge or competence. Admission requirements vary by program. Certificates of completion/participation do not indicate credit completion. Certificates of participation do not appear on transcripts. Certificates of participation may be produced by individual units and should not bear the University seal. Certificates of completion/participation are approved through departmental curriculum approval procedures with no further institutional review. Examples include the Publishing Institute Certificate.

**Specialized Certificates** (academic credit) may be awarded for completion of shorter sequences of credit courses (12-23 quarter hours or 8-15 semester hours). Specialized certificates issued at the completion of the program indicate certification of attainment specific skills, knowledge, or competencies in a well-defined area of study. While admission requirements and standards vary by program, applicants must meet minimum requirements for admission to the University. Specialized Certificates appear on transcripts and are approved through the institutional curriculum approval procedures. Credits applied to specialized certificates may be applied to Academic Certificates or degrees at the same level (i.e., graduate or undergraduate). Credits may not be applied to multiple specialized certificates. Transfer credit toward a certificate is limited to 25% of the minimum number of credits required for the certificate. Course substitutions and/or waivers are not accepted for a Specialized Graduate Certificate. Institutional time limits for completion apply. Digital and paper certificates are produced institutionally.

**Certificates of specialization/concentrations** (academic credit) provide substantial education in an academic discipline and represent the achievement of competence in a well-defined area of study and are embedded within the major and degree programs. The number of credits in the specialization/concentration may vary by unit. Units are encouraged to use "concentrations" to officially denote a specialization within a student's primary area of study. Admission requires acceptance and enrollment into the degree program. Certificates of specialization appear on transcripts associated with an awarded degree. Certificates of participation may be produced by individual units and should not bear the University seal. They are approved through the institutional curriculum approval procedures.

**Academic certificate programs** provide substantial education in a specific academic discipline or in interdisciplinary areas, but center on a coherent and specific body of knowledge. Academic certificate programs represent the achievement of competence in a well-defined area of study. Academic certificates require a minimum of 24 quarter hours or 16 semester hours of credit. While admission requirements and standards vary by program, applicants must meet minimum requirements for admission to the University. Academic certificates appear on transcripts and are approved through the institutional curriculum approval procedures. Credits applied to shorter certificate programs (e.g., specialized certificates) may be applied to academic certificates, but may not be applied to multiple academic certificates. Credits applied to Academic certificates may be applied to degrees at the same level (i.e., graduate or undergraduate). Transfer credit toward a certificate is limited to 25% of the minimum number of credits required for the certificate. Institutional time limits for completion apply. Digital and paper certificates are produced institutionally.

### Noncredit Certificates

**Continuing Education Unit (CEU) certificates** (non-credit) may be awarded for education programs. A CEU is a standard unit for measuring continuing education and training activities. CEUs generally are calculated based on contact hours. 1 CEU = 10 contact hours. Continuing education units should be awarded based on standards developed by the International Association for Continuing Education and Training (IACET) or other recognized organization governing professional continuing education. Admission requirements vary by program. CEU courses appear on a distinct institutional CEU transcript. CEUs are not equivalent to academic credits and do not count toward academic degrees. CEU certificates may be produced by individual units but should be distinct in appearance from that of any academic certificate or institutional diploma.

**Micro-credentials and badges.** A micro-credential may be awarded for completion of a shorter class, workshop, or program to gain specified skills or competencies. A digital badge is the visual representation of having earned a micro-credential and can be shared on various online platforms as evidence of the earner's achievement. Micro-credentials are approved through the institutional curriculum approval procedures.

## Time Limit for Completion of the Program

Certificate program candidates are expected to complete program requirements within three years of beginning their programs, as measured by the matriculation into the degree program.

Failure to complete the program within the established time limits will result in termination unless the student successfully petitions for an extension to the Vice Provost for Research and Graduate Education. The college, school, or department and the student's advisor must recommend this extension. If it is not approved, the student will be terminated from the program. Students may petition for an extension of time for a minimum of one quarter and up to a maximum of one year per request. For more information, see Exceptions (p. 1278) regarding extensions of time.

## Concurrent Candidacies

Concurrent candidacies occur when students are enrolled in two programs concurrently.

Admission and program requirements must be fulfilled for each program. There will be no reduction in the number of credit hours required for either degree.

At the time of admission, the student submits written approval from each unit allowing enrollment in two programs simultaneously.

## University Grading System

### University Grading System

Instructors are required to assign a final grade for each student registered in a course. The following grades are used to report the quality of a student's work at the University of Denver:

Grade Symbols	Grade Points	Interpretation
A	4	excellent
A-	3.7	
B+	3.3	
B	3	good
B-	2.7	
C+	2.3	
C	2	satisfactory
C-	1.7	
D+	1.3	
D	1.0	
D-	0.7	minimum passing
F	0	failure

If a student ceases attending classes or submitting assignments (and has not earned a passing grade) and if the student has not made arrangements for an incomplete (I), a failing (F) grade must be assigned.

Failing ("F") grades may also be assigned under the following circumstances:

- A student drops a course without permission and/or official notice to the Office of the Registrar.
- A student's academic work is judged failing as a result of a finding of academic dishonesty.

If a student registers for a class but never attends any sessions, then a grade of Never-Attend ("NA") should be assigned instead of a failing (F) grade. A never-attend (NA) grade is treated like a failing (F) grade and will show up as an NA on the student's transcript.

An incomplete ("I") is a temporary grade that may be given to a student at the instructor's discretion when illness, necessary absence or other reasons beyond the control of the student prevent completion of course requirements by the end of the academic term. Incomplete grades may only be given in the following circumstances:

- The student's work to date is passing.
- Attendance has been satisfactory through at least 60 percent of the term.
- An illness or other extenuating circumstance legitimately prevents completion of required work by the due date.
- Required work may reasonably be completed in an agreed upon time frame.
- The incomplete is not given as a substitute for a failing grade.
- The incomplete is not based solely on a student's failure to complete work or as a means of raising his or her grade by doing additional work after the grade report time.
- The student initiates the request for an incomplete grade before the end of the academic term.

Appropriate grades must be assigned in other circumstances. A failing grade and last date of attendance should be recorded for students who cease attending class without authorization. Students who are unable to complete a course and who do not meet these circumstances should consider dropping the course.

The following provisions for incomplete grades apply:

- Instructors are to record the incomplete initially in MyDU under the Grade Entry page. When the student's work has been completed, the instructor then submits the final grade using the Change of Grade Process through M (<https://my.du.edu/dashboard/>)yDU (<https://my.du.edu/dashboard/>). Steps for this process can be found at <http://www.du.edu/registrar/records/changinggrades.html>.
- It is in the student's best interest that incomplete grades be made up by the end of the following academic term. Incomplete grades must be made up and final grades submitted within one calendar year from the date the incomplete was recorded.
- The course work may be completed while the student is not enrolled.
- Incomplete grades appear on the transcript for one year. Incomplete grades do not affect the grade point average. After one year, or at the time of graduation, incomplete grades will change to "F" and affect GPA. This policy affects incomplete grades given in fall 1995 and thereafter. Prior to 1995, unchanged incompletes remained on the permanent record as part of hours attempted and were calculated as a failing ("F") grade in the GPA.
- An incomplete grade may not be considered passing for purposes of determining academic standing, federal financial aid eligibility, athletic eligibility or other purposes.
- Notation of the original incomplete status of the grade remains on the student's transcript along with the final grade.
- An incomplete should not be assigned when it is necessary for the student to attend additional class meetings to complete the course requirements. Students who receive an incomplete grade in a course must not register again for the course in order to remove the "I."
- An incomplete is not to be assigned where the normal practice requires extension of course requirements beyond the close of a term (e.g., thesis or project type courses).

NC: registered for no credit

W: a notation that the course is withdrawn without prejudice; zero grade points per quarter hour; no hours credited

Use of intermediate grades (plus and minus) is at the discretion of the instructor.

See Grade Appeals (<http://bulletin.du.edu/undergraduate/academicpoliciesandprocedures/procedureforgradeappeals/>) for more information.

## Grade Point Average (GPA)

The GPA is determined by multiplying the credit points (for example, "B+" = 3.3) by the number of credit hours for each course. Total the credit hours attempted, total the credit points and divide the latter by the former. Grades of NC, I, P+, P, NP and W are not included in the GPA. Incompletes that are not completed within one year are calculated as an "F" in the GPA. All grades for repeated courses are included in determining GPA. Undergraduate, graduate and specific program GPAs may be calculated separately.

## Pass/Fail

In general, undergraduates may not take a course for pass/fail credit.

## Change of Grade

Grades submitted by instructors at the end of the quarter are final and not subject to change by reason of revision of judgment on the part of the instructor. Grades cannot be changed on the basis of second trial, such as a new examination or additional work undertaken or completed after the grade report has been submitted to the Office of the Registrar. Grades may only be changed due to one of the following:

1. Correction of Error in Grading
2. Grade Appeal
3. Completion of an Incomplete Grade

An instructor of a course is the only individual who can change a grade. In the event of error, the faculty member should initiate the Change of Grade Process through M (<https://my.du.edu/dashboard/>)yDU (<https://my.du.edu/dashboard/>). Steps for this process can be found at <https://www.du.edu/registrar/faculty-staff-resources/grading-guide>. Any correction or appeal of a grade must take place in the quarter following the one in which the grade was given.

Reporting Grades (p. 1223)

Never Attended (p. 1223)

Failing Grades (p. 1223)

Withdrawal (W) (p. 1223)

IP, NR and Incomplete Marks (p. 1223)

Last Date of Attendance (p. 1223)

Non-Passing Grades (p. 1224)

Grade Reports (p. 1224)

Incomplete Grades (p. 1224)

## Reporting Grades

Grades must be reported for all registered students by the grade submission deadline. For federal financial aid purposes, non-reported grades may be considered as failing. This can result in financial obligations for the student.

## Never Attended

A Never Attended (NA) grade should be assigned to students who registered for a class (and appear on the roster) but never attended the class. While the grade of NA is counted as an F, it is a means of marking the course so that any possible registration problems can be reconciled for the student.

## Failing Grades

If a student ceases attending class or submitting assignments (and has not earned a passing grade) and has not made arrangements for an incomplete (I), a failing (F) grade must be assigned.

## Withdrawal (W)

For colleges, schools, and departments on the quarter system, official withdrawal during the second to sixth weeks of the term will automatically result in the recording of grades of Withdrawal (W) for all courses. In weeks six through eight W's will be given with the instructor's permission. If a student fails to complete a course and does not withdraw, a grade of (F) will be recorded on the transcript.

## Non-Final Grades

Any non-final grade (i.e., incomplete or non-reported grade) must be changed to a final grade prior to graduation.

## Last Date of Attendance

Federal financial aid rules require institutions to record a student's last date of attendance if the student ceases attending a class.



Last date of attendance appears on web and paper grade rosters. It is very important the university know that a student received a failing (F) grade because the student ceased attending class. In cases where faculty do not have an exact date, an estimate should be provided (e.g., last assignment date).

## Non-Passing Grades

Students who receive non-passing grades often have all non-passing grades for a term. By federal financial aid rules, the University must consider those students to have withdrawn from the University. If DU does not have accurate records, the University and the student may face financial obligations for federal financial aid.

## Grade Reports

Students may view their final official grades for courses on MyDU (<https://my.du.edu/dashboard/>). Grades are available on the web as soon as they are rolled and validated by the Office of the Registrar. Privacy regulations prohibit the University from releasing grades or GPA information over the telephone. It is the student's responsibility to check their transcript to ensure that grades are recorded appropriately for completed courses.

Please note that grades posted in a supplementary academic support program, such as Canvas or Blackboard, do not necessarily represent the final grade as reported to the Office of the Registrar, and only the grade reported to the Office of the Registrar will be present on the student's official record.

It is the instructor's responsibility to ensure that any grades posted to a separate program match with those being reported to the Office of the Registrar. If a student finds a discrepancy, the student should reach out to the instructor.

For most programs at the University of Denver, grade reports are mailed upon request only. *Grade Report Mailer* forms are available in the Office of the Registrar.

**Notes:** *Some units may have more specific grading guidelines and grade reporting procedures. Contact the unit for details.*

*Graduate School of Social Work does not award grades of D+, D, or D-.*

*Sturm College of Law: Faculty have 30 days after the date an exam is given to turn their grades in to the Sturm College of Law Registrar's office. Once grades are turned in, they must be processed. Required courses must fit into the mandated mean and median, which may require several adjustments by the faculty member. After the faculty member finalizes the grades, it takes 24 to 48 hours to post the grades to the web.*

## Incomplete Grades

An Incomplete (I) is a temporary grade which may be given at the instructor's discretion to a student when illness, necessary absence, or other reasons beyond the control of the student prevent completion of course requirements by the end of the academic term.

Incomplete grades may be given only in the following circumstances:

- The student's work to date is passing;
- Attendance has been satisfactory through at least 60% of the term;
- An illness or other extenuating circumstance legitimately prevents completion of required work by the due date;
- Required work may reasonably be completed in an agreed-upon time frame and does not require the student to re-take any portion of the course;
- The Incomplete is not given as a substitute for a failing grade;
- The Incomplete is not based solely on a student's failure to complete work or as a means of raising the student's grade by doing additional work after the grade report time;
- The student initiates the request for an Incomplete grade before the end of the academic term.

Appropriate grades must be assigned in other circumstances. A failing grade and last date of attendance should be recorded for students who cease attending class without authorization. Students who are unable to complete a course and who do not meet these circumstances should consider dropping the course.

To request an incomplete grade, the student must submit a Request for Incomplete Grade (<https://www.du.edu/sites/default/files/2022-11/incompletegradeapplication.pdf>) form to the instructor. The form may be emailed, but the student should communicate with instructor. The instructor and student discuss the terms of the incomplete – what work is to be completed, what the time-frame is, etc. If approved, the instructor specifies terms for making up the incomplete returns a copy to the student and to the Office of the Registrar via email to [registrar@du.edu](mailto:registrar@du.edu). The instructor will place an Incomplete (I) grade into MyDU (<http://my.du.edu/>) along with the rest of their end-of-term grades.

Once the coursework is completed and graded, the instructor must submit the grade using the University's grade change process. It is in the student's best interest that incomplete grades are made up by the end of the following academic term. Incomplete grades must be made up and final grades submitted within one calendar year. Only under the most extenuating circumstances may an Incomplete be made up more than one calendar year from the date it is recorded and only with approval of the dean of the unit in which the course was taken. The coursework may be completed while the student is not enrolled.

Incomplete grades will expire on the date selected by the professor when the grade of incomplete is entered. This date will be no more than one academic year from the last day of classes of the quarter in which the incomplete was incurred. If no specific date is entered by the instructor, the date will default to the end of the same term of the next academic year (eg: an Incomplete grade assigned in Winter Quarter of 2022 will have an expiry date of the end of Winter Quarter 2023). Incomplete grades that are not updated by the expiration date will automatically turn into an F. Instructors may still use the MyDU (<http://my.du.edu/>). grade change system to change an expired Incomplete grade, but the change will require the approval of the Dean of the academic unit.

Incomplete grades appear on the transcript for up to one year and they do not affect the grade point average. Students must resolve all Incomplete grades by graduation, either by having the grade changed by the instructor or by requesting that an F be taken for the class. (This policy affects incomplete grades given in fall 1995 and thereafter. Prior to 1995, unchanged incomplete grades remain on the permanent record as part of hours attempted and are calculated as a failing (F) grade in the GPA.) Notation of the original incomplete status of the grade remains on the student's transcript along with the final grade.

An Incomplete grade may not be considered passing for purposes of determining academic standing, federal financial aid eligibility, athletic eligibility, or other purposes.

An Incomplete should not be assigned when it is necessary for the student to attend additional class meetings to complete the course requirements. Students who receive an incomplete grade in a course must not re-register for the course in order to remove the (I). An Incomplete should not be assigned where the normal practice requires extension of course requirements beyond the close of a term, e.g., thesis or project type courses.

**Note:** Some graduate units may have more restrictive policies.

*Markers of Withdrawal, Incomplete or Failing grades on a student's transcript may impact their satisfactory academic progress for determining federal aid eligibility. Contact the Financial Aid office for further information.*

## Admission and Enrollment Policies

Program-specific admission requirements are set by individual academic units and published annually. Once published, the admission requirements are in effect for the annual admission cycle and may not be altered until the next admission cycle. Applicants must meet all published admission requirements.

Admission Status (p. 1225)

Admission Process and Standards for All Applicants (p. 1227)

Additional Standards for International Applicants (p. 1230)

Additional Standards for Non-Native English Speakers (p. 1230)

## Admission Status

A student may be admitted to graduate study in one of the following classifications:

- Regular Degree Student (p. 1225)
- Provisional Admission (p. 1225)
- Certificate Student (p. 1226)
- Non-Degree Student (p. 1226)
- Lifelong Learner (p. 1226)
- Visiting Scholar (p. 1227)

## Regular Degree Student

Students enrolled in a graduate degree or certificate program who have satisfied document or academic provisions (if applicable) have regular student status. Regular status is required for advancement to degree candidacy and graduation.

## Provisional Admission

### Document Provisions

Students are admitted with a document provision when required official documents (e.g., final transcripts, degree certificates, certified English translations, test scores, etc.) were not received before an offer of admission. All required official documents must be received by the start of the first term of enrollment. If documents are not received by this time, a hold will be placed prohibiting future registration. Students admitted with provisions will be changed to regular status when all required official documents have been received.

Please review the graduate policy for Transcripts and Proof of Degree (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-process-and-standards-for-all-applicants/transcripts-and-proof-of-degree/>) for more information on required credential documents.

## Academic Provisions

Students may be admitted with an academic provision when the program stipulates additional academic requirements (e.g., student must receive a B or better in the first 8 credit hours of coursework by the end of the second term of enrollment). Academic provisional admission is reviewed on a case-by-case basis and the requirements may be specific to each individual student. These requirements and the timeline for meeting them will be outlined in the admission letter. Students admitted with provisions will be changed to regular status when the conditions of the provision have been met. Students who fail to meet the academic provision as outlined in their admission letter may be dismissed from their academic program.

## Certificate Student

A certificate student is one who is engaged in a program of study leading to a certificate. Only academic certificates will appear on the student's transcript. Students must be admitted to a certificate program to be awarded the certificate.

## Non-Degree Student

Non-degree coursework is suited for individuals interested in taking coursework at the University of Denver for any of the following reasons: (1) explore a program or strengthen academic history before applying for admission to a graduate degree or certificate program, (2) complete a course for professional development or for another graduate program outside of DU, or (3) take courses for personal growth.

Admission as a non-degree student does not guarantee admission to a University of Denver graduate degree or certificate program. In the event that the student subsequently wishes to undertake a graduate degree or certificate program at the University of Denver, the regular application procedures must be followed, including the submission of the required application fee. No more than three courses earned as a non-degree student may be applied to the graduate degree or certificate program. All non-degree coursework must be approved by the academic unit for transfer into a degree or certificate program.

All non-degree applicants must have earned a bachelor's degree in order to enroll in graduate level courses. Additionally, non-native English speakers must follow standard graduate admission requirements to demonstrate proof of English language proficiency (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/additional-standards-for-non-native-english-speakers/english-language-proficiency-ielts-toefl/>).

Non-degree students must apply each term.

International non-degree students should contact the University of Denver's International Student and Scholar Services for information on visa eligibility.

### Notes

- Non-degree students interested in taking Iliff School of Theology courses must register at Iliff. The classes will be counted as non-degree credits, not transfer credits, towards the DU-Iliff Joint PhD program with advisor approval upon acceptance into the Joint PhD program.
- DU@2U Distance Program courses may not be eligible for non-degree registration.
- Not all academic units permit non-degree students to register for their courses.

## English Conditional Admission (ECA)

Some graduate programs may offer English Conditional Admission (ECA) to academically qualified non-native English speakers who do not meet the University's minimum English language proficiency requirements. To apply for a program in an academic department that offers ECA, applicants must indicate on their application to the degree program that they wish to be considered for ECA.

ECA students cannot enroll in any regular degree courses prior to meeting the University's English requirement. In order to be granted regular status in their graduate degree program and become eligible to take academic classes, ECA students must present a departmental qualifying minimum TOEFL, IELTS, C1 Advanced or Duolingo English Test score before the start of their program.

## Lifelong Learners

University College offers a Lifelong Learner status to students who are not seeking a degree or certificate. Neither entrance examinations nor a baccalaureate degree is required in order to register for courses as a Lifelong Learner. Students must declare their status as Lifelong Learners during their first quarter of enrollment. The courses cannot be counted toward a degree or certificate.

## Visiting Scholars

Faculty members of other institutions may pursue postdoctoral study for no credit as guests of the University, without paying tuition. Visiting faculty members should apply to the department in which they plan to study. If graduate credit is desired, they must register as non-degree students (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-status/special-status-student/>) and pay the regular tuition rates.

## Admission Process and Standards for All Applicants

All applications for graduate education at the University of Denver require the submission of specific materials as stated by the University or academic unit. These materials must be received in the Office of Graduate Education or appropriate admission unit by the program's published deadline. All documents submitted become property of the University of Denver and cannot be copied or returned to the applicant/student or any other person(s). The information given on the application must be true and complete without evasion or misrepresentation. Applicants who willfully omit, falsify, or provide incomplete statements may be denied admission or dismissed.

## University Admission Criteria

The University of Denver offers admission to graduate applicants who demonstrate the highest potential for successful graduate study. Applicants are evaluated by the individual programs to which they apply on the basis of their prior performance and professional promise as evidenced by academic records, letters of recommendation, standardized test scores, and other supplemental materials. Academic program admission requirements may be higher than University minimum standards. To be admitted as a regular degree student (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-status/regular-degree-student/>) or a certificate student (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-status/certificate-student/>), an applicant must meet the following requirements:

- **Baccalaureate Degree:** Applicants must hold an earned baccalaureate from a regionally accredited college or university or the recognized equivalent from an international institution.
- **The minimum baccalaureate GPA for graduate admission consideration at the University of Denver is a cumulative 2.5 on a 4.0 scale, or a 2.5 on a 4.0 scale for the last 60 semester credits or 90 quarter credits (approximately two years of work). An earned master's degree or higher from a regionally accredited institution supersedes the minimum standards for the baccalaureate. Applicants with graduate coursework who have not earned a master's degree or higher may use the GPA from the graduate work to meet the requirement. The minimum GPA for all graduate coursework undertaken is a cumulative 3.0 on a 4.0 scale.**
- **Standardized Test Scores:** The University of Denver does not require graduate entrance examinations for admission. However, some graduate programs do require standardized exams, such as the Law School Admission Test (LSAT), the Graduate Record Examination (GRE) General Test, or the Graduate Management Admission Test (GMAT), for admission. Some departments may require applicants to take the GRE Subject Test in a specific discipline as well. Please see the published admission requirements (<https://www.du.edu/academics/graduate-programs/>) for specific academic program admission requirements.

**Note:** *The minimum GPA requirement for the JD in the Sturm College of Law is set according to the standards of the American Bar Association.*

## Application

Applications for graduate education at the University of Denver must be submitted online by the program's published deadline.

## Application Fee

A non-refundable application fee is required for each application.

The non-refundable application fee (payable by bank draft, cash, credit card, money order, personal check, or wire transfer) covers the cost of processing application materials. A credit card payment is accepted during online application submission only. Applications will not be processed until the application fee is paid.

Application fee waivers are granted to Fulbright Scholars and McNair Scholars. Proof of participation must be included with the application. Academic units may offer additional fee waivers. Contact the academic unit for more details.

## International Degree Evaluation Fee

Transcripts and proof of degree documents for postsecondary degrees earned from institutions outside of the United States will be released to a third-party international credential evaluator to assess U.S. education system equivalencies. A non-refundable fee for this service will be required before the application is processed.

## Transcripts and Proof of Degree

Students are required to submit one official transcript from each post-secondary institution they have attended or are presently attending, where two quarter hours (or one semester hour) or more were completed, including study abroad and college coursework completed in high school. Proof

of a bachelor's, and if applicable, a master's degree is required from a regionally accredited college or university. Note that during the admission process, unofficial transcripts are accepted. Upon acceptance of an admission offer, official transcripts must be received by the start of the first term of enrollment, or a hold will be placed on the student's account prohibiting future registration.

The applicant is responsible for obtaining all transcripts. University of Denver students and alumni do not need to provide University of Denver transcripts.

Applicants who have earned a degree outside the United States must submit proof of graduation, typically through a degree certificate or diploma. Official study abroad transcripts are required unless the course titles, grades and credits earned abroad appear on another transcript. Applicants educated outside the U.S. are encouraged to contact the Office of Graduate Education or the appropriate admission office for assistance regarding transcript-related materials.

Official transcripts must include the name and date of degree earned, if applicable. Official degree certificates or diplomas must include the name and date of degree earned.

The University of Denver will consider paper transcripts official when delivered to the University of Denver in a sealed envelope from the issuing institution provided the following criteria are met:

- The transcripts must have the original signature of the registrar and/or the seal of the issuing institution.
- The transcripts must be enclosed in an envelope with the stamp or signature of the registrar across the sealed flap.

The University of Denver will consider electronic transcripts official from a domestic institution provided the following criteria are met:

- The transcript is certified as official from the college or university using a third-party agency for the certification process. Approved agencies include Joint Services Transcript (JST), National Student Clearinghouse, Parchment, and Royall and Company. The University of Denver reserves the right to rescind approval of the above-mentioned agencies based on changes in technology utilized by the agency. Upon request, the Office of the Registrar will take into consideration a third-party vendor other than the aforementioned agencies.
- The transcript must be received from the third-party agency by a University official.
- The transcript must be a certified PDF document with no evidence of tampering. The transcript must be retrieved from a secure server. Emailed transcripts will not be accepted.

Certified English translations must accompany all transcripts except for those provided by institutions that issue documents in English. Errors or omissions in English translations may be grounds for refusal or dismissal. Please consult the Office of Graduate Education for specific details.

The University of Denver reserves the right to reject transcripts or request additional information if there is any question about the authenticity of the document. Transcripts with course work in progress will not be considered final and admission will be granted provisionally.

## Supplemental Documents

Graduate units may require additional materials such as letters of recommendation, essays, personal statements, resumes, or other supplemental application documents. Applicants should review the published admission requirements (<https://www.du.edu/academics/graduate-programs/>) for specific guidelines.

## Reuse of Supplemental Documents

Supplemental documents for non-matriculated applicants remain on file for two years from the date of application. Non-matriculated applicants may request to reuse supplemental documents for up to one year from the original application term. Otherwise, new documents will be required.

## Admissions Examinations

Some programs require standardized test scores such as the Graduate Record Examination (GRE). The University of Denver's ETS Institution Code is 4842. Individual graduate programs reserve the right to set test score requirements.

If an exam is required for admission, it must be taken prior to acceptance. The official test scores issued directly from the appropriate testing agency must be received no later than the start of the first term of enrollment, or a hold will be placed prohibiting registration.

Test score validation deadlines are set by the testing agency. It is the applicant's responsibility to ensure official test scores can be reported directly to the University.

**Note:** Contact the graduate unit for details on required admission examinations.

## Admission Offer

An admission offer from the University of Denver must be officially accepted or declined by the stated deposit deadline in the admission letter. If the offer is declined, the applicant will not be eligible to enroll in a future term without reapplying to the program.

The University of Denver is a signatory on the Council of Graduate Schools (<https://cgsnet.org/>) (CGS) Resolution Regarding Graduate Scholars, Fellows, Trainees, and Assistants.

## Admission Deposit

A non-refundable deposit is required of all applicants newly admitted to each graduate program. The admission deposit must be submitted by the stated deposit deadline in the admission letter.

The deposit confirms the applicant's intent to attend the University. Only those who have confirmed their attendance in the program by sending the proper deposit will receive course registration information. Deposit fees vary by program. The deposit is applied to the first term of tuition. However, fully funded graduate assistants and employees using a tuition waiver may request a refund of the deposit from the Bursar's Office upon matriculation.

## Reactivation of Application

An applicant may submit a one-time request to reactivate their incomplete application (submitted application that is missing required materials or the application fee) or completed application that was withdrawn prior to receiving an admission decision to the same program, regardless of delivery mode. The start term for the reactivated application must be within one year of the academic term to which they originally applied (e.g., fall 2017 to fall 2018, or winter 2016 to spring 2016). Additionally, the program must still be accepting applications.

If an applicant wishes to seek admission to a different program, then submission of a new application, supporting materials and payment of the application fee are required.

If more than one year from the start date of the academic term of the original application has elapsed, then submission of a new application, supporting materials and payment of the application fee are required.

## Deferrals and Term Changes

### Prior to an admission decision:

- After submitting an application but prior to receiving an admission decision, applicants may request a one-time change to the term to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.

### Admitted Students:

- If an applicant wishes to defer their term of entry after receiving an offer of admission, they must first pay the enrollment deposit. Deposited students may submit a formal request prior to the start of term to the College/School in which they were accepted or to the Office of Graduate Education to defer their enrollment for up to one year. If the program does not require a deposit, the applicant must first confirm acceptance of the admission offer prior to submitting a formal request to defer their enrollment for up to one year. Students may request to enroll in an earlier or later start term, but only one deferral will be granted per application.
- A deposited (or confirmed, if the program does not require a deposit) student must request a deferral by the last day for 100% refund for dropped classes of the admission term; otherwise the student's admission will be withdrawn. A student that misses this deadline can make a one-time request to the College/School in which they were accepted to defer their admission into the program. Though previously admitted, there is no guarantee admission to a new term will be granted. If approved, admission will be deferred to the next available term but no later than one year from the original admission term.
- Funding awarded with the original admission offer is not guaranteed for the new start term. It is the student's responsibility to consult with a representative from the College/School of admission regarding funding options.
- At the discretion of the College/School of admission, submission of a new application, supporting application materials, and payment of another application fee may be required.

## Change of Graduate Degree Program

An applicant or student wishing to change a major, concentration, location, or delivery mode (i.e., on-campus, online) or wishing to change to a lesser or equal degree program (e.g., doctoral to master's level) within the same College/School has the following options:

### Applicant:

- After submitting an application and prior to receiving an admission decision, applicants may request a one-time change to an academic program within the same College/School to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.

- After an admission decision has been rendered and before the first day of class, a student can request a one-time change to their academic program within the same College/School with approval by the department. A new application, additional supporting materials, and/or a new application fee may be required at the department's discretion. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.
- If an applicant wishes to change to a program outside of the College/School to which they originally applied or change to a higher-level degree program, then submission of a new application, supporting application materials, and payment of a new application fee are required.

### Current Student:

- Starting the first day of class, a student can submit a completed change of graduate program form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) to the Office of Graduate Education. The College/School reserves the right to request that the student submit a full application for admission, including the application fee.
- A student wishing to change to a graduate program outside of the current College/School, or wishing to change to a higher degree (certificate to master's or master's to doctoral), must submit a full application for admission, including the application fee and supporting application materials. A graduate student who wishes to change to another graduate program must be withdrawn/terminated from the program of original admittance and accepted into the new graduate program.

**Note:** Students in University College and JD students in the Sturm College of Law do not submit the change of graduate program form to the Office of Graduate Education. Contact the unit or details on this process.

## Additional Standards for International Applicants

Applicants will be considered international for admission purposes if one of the following statements applies to them:

- The applicant is not a United States national, permanent resident, or citizen.
- The applicant does not hold dual citizenship with the United States and another country.
- The applicant is currently in the United States on an F-1 or J-1 student visa.
- The applicant resides in the United States and holds a non-immigrant visa.

To maintain legal immigration status, international students at the University of Denver must hold an immigration status granted by the U.S. federal government which allows study in the United States. Most students enroll at the University of Denver in F-1 or J-1 immigration status, although other statuses may also permit students to study in the United States.

When an international applicant who requires an F or J visa has been admitted to the University of Denver, for an I-20 or DS-2019 to be issued, the student must submit some combination of the documents listed below, as outlined on their Application Status Page. Students admitted to 100% online programs are not eligible for I-20 or DS-2019 issuance.

- Copy of biographical page of passport
- If applicable, copy of dependent(s) biographical page of passport
- DU Financial Verification form (<https://internationalization.du.edu/issv/fv/>)
- Bank statement or Certificate of Deposit with sufficient funds for the estimated cost of attendance (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-cost-attendance/>) for one academic year (unless program is shorter) as listed by the Office of Financial Aid
- If applicable, student financial guarantee (FGL) letter from the sponsoring agency/government office

Photocopies or scans of the above documents are accepted. These requirements do not apply to U.S. permanent residents or students not in F-1 or J-1 immigration status. International Student & Scholar Services (ISSS) reviews all documents submitted and determines if an admitted student qualifies for an I-20 or DS-2019.

It is the responsibility of an admitted student who has been issued an I-20 or DS-2019 to apply for a visa at a United States embassy and enter the U.S., transfer their F-1 SEVIS record to DU or apply for a change of status to F-1 with United States Citizenship and Immigration Services. For more information or to schedule an appointment with an international student advisor, visit <https://www.du.edu/issv/>. Questions can be directed to [issv@du.edu](mailto:issv@du.edu).

## Additional Standards for Non-Native English Speakers

English Language Proficiency (p. 1231)

Required Tests for GTA Eligibility (p. 1231)

# English Language Proficiency

## TOEFL/IELTS/C1 Advanced/Duolingo English Test

Official scores from the Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS), C1 Advanced or Duolingo English Test are required of all graduate applicants, regardless of citizenship status, whose native language is not English or who have been educated in countries where English is not the native language. Applications will not be processed until the required TOEFL, IELTS, C1 Advanced or Duolingo English Test score is received. The TOEFL, IELTS, C1 Advanced and Duolingo English Test scores are valid for two years from the test date and are considered official only when received directly from the testing agency.

### TOEFL

The minimum TOEFL score accepted by the University is 80 (iBT). The institution code for the University of Denver is 4842.

### IELTS

The minimum IELTS score accepted by the University is 6.5.

### C1 Advanced

The minimum C1 Advanced score accepted by the University is 176.

### Duolingo English Test

The minimum Duolingo English Test score accepted by the University is 115.

**Notes:** Individual graduate programs reserve the right to set higher English language proficiency test score requirements. Graduate Teaching Assistants must meet the Required Tests for GTA Eligibility (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/additional-standards-for-non-native-english-speakers/required-tests-for-gta-eligibility/>) policy

## English Language Exemption

Students are generally exempt from the English proficiency test requirement if they have any of the following:

- Secondary/high school diploma from a school where the language of instruction is English.
- Earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution's sole language of instruction and examination is English.
- Last 30 semester credits (45 quarter credits) of coursework were successfully completed (cumulative 3.0 GPA or higher) from a formally-recognized/accredited university where English is the sole language of instruction and examination.

## Required Tests for GTA Eligibility

### TOEFL/IELTS/C1 Advanced

Any graduate applicant whose native language is not English or is from a country where English is not the native language, who wishes to be considered for a Graduate Teaching Assistantship (GTA) during any year of study in any graduate department at the University of Denver, must demonstrate fluency in spoken English by scoring a minimum of 26 on the Internet Based TOEFL (iBT) exam speaking section, a minimum of 8 on the IELTS exam speaking section, or a minimum of 200 on the C1 Advanced exam speaking section.

### GTA English Language Exemption

Prospective GTAs may be exempted from submitting TOEFL/IELTS/C1 Advanced scores if they:

- have earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution's sole language of instruction and examination is English, AND
- have an additional four or more consecutive years of work/instructional experience in countries with an official native language of English and the language of employment/instruction is English.

**Note:** GTA awards may be revoked or restricted to non-teaching assistantship responsibilities at the discretion of the division if the GTA does not demonstrate sufficient English fluency in the classroom.

## Tuition, Fees and Financial Aid Policies and Procedures

Financial Aid (p. 1232)

Tuition and Fees (p. 1239)



## Financial Aid

Financial aid for graduate students is in large part provided by individual departments based on the mission and goals of the unit. The Office of Financial Aid does not award scholarships, grants, fellowships, or GTA/GRA waivers for graduate students. The student should contact the academic unit in which the student is enrolled or plans to enroll. The Office of Financial Aid offers Federal Work-Study and Federal Direct Loans and provides information on additional financing options, including Federal Direct Graduate PLUS loans and alternative (private) loans.

DU graduate students are eligible for two types of aid:

- Federal and state aid (available to U.S. citizens and permanent residents), which includes the Colorado Graduate Grant, Federal TEACH Grant, Federal Work-Study, and Federal Direct Loans, and
- Merit-based aid, which includes divisional/departmental scholarships, graduate assistantships, fellowships, and other merit-based aid awarded or initiated by the student's academic program of study.

To apply for federal aid and certain types of institutional need-based aid, a student must complete the Free Application for Federal Student Aid (<https://studentaid.gov/h/apply-for-aid/fafsa/>) (FAFSA). Only U.S. citizens, permanent residents, and eligible non-citizens can submit a FAFSA. International students are not eligible.

The FAFSA (<https://studentaid.gov/h/apply-for-aid/fafsa/>) is typically available on October 1st of each year. The University of Denver's school code is 001371. Applicants and students are encouraged to submit the FAFSA by the March 1st priority deadline every year. Approximately 30% of financial aid applications are selected by the U.S. Department of Education for review. This process of review is known as verification. If a student is selected for verification, Financial Aid will send an email to the student requesting additional documentation.

## Federal Direct Loans

To qualify for Federal Direct Loans, graduate students must be enrolled at least half-time in an eligible degree or certificate program (four credit hours or more per quarter/semester). To receive loans, a student must also make Satisfactory Academic Progress (SAP) (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/policies-maintaining-aid/sap/>) in the program of study, not be in default on an educational loan, be taking courses that count toward their degree program, and submit all required financial aid forms. Federal Direct Loans are the most common type of aid for graduate students. Eligibility is determined by information provided on the FAFSA.

## Federal Direct Unsubsidized Loan Information

### Lender:

U.S. Department of Education

### Eligibility Requirements:

Available to students who have submitted a FAFSA, regardless of financial need. If eligible, this loan will be included in your financial aid offer.

### Maximum Loan Amount:

\$20,500 per academic year.

### Interest Rate:

This loan has a fixed interest rate (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#interest-rate>), and interest accrues while you are in school and during both the grace period and repayment. Interest can be paid as it accrues; if not paid, it will be capitalized at repayment. New fixed interest rates are set each July 1st for the upcoming academic year.

### Fees:

An origination fee (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#interest-rate>) is deducted at the disbursement of each installment of the loan, which means the amount you actually receive will be slightly less than the amount borrowed.

### Disbursement Requirements:

To receive funds, you must accept the loan(s) through MyDU, complete both a Master Promissory Note (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#steps-to-receive>) and Entrance Counseling (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#steps-to-receive>) online at [www.StudentAid.gov](http://www.StudentAid.gov) (<https://studentaid.gov/>), and be enrolled in at least 4 credits (half time) that count toward your degree program.

### Repayment Terms:

Repayment begins once the 6-month grace period ends after you graduate or after you are no longer enrolled at least half time. Payments are made to your Direct Loan servicer.

### Repayment Options:

The standard repayment period is 10 years but can be as long as 25 years depending on total borrowing and chosen repayment plan. Loans may be consolidated with other federal loans.

## Federal Direct Graduate PLUS Loan Information

### Lender:

U.S. Department of Education

### Eligibility Requirements:

Available to students who have submitted a FAFSA, regardless of financial need. This loan is not automatically included in most financial aid offers; a separate application is required on [www.StudentAid.gov](https://studentaid.gov) (<https://studentaid.gov/>).

### Maximum Loan Amount:

Up to the total cost of attendance, less all other financial aid.

### Interest Rate:

This loan has a fixed interest rate (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#interest-rates>), and interest accrues while you are in school and during both the grace period and repayment. Interest can be paid as it accrues; if not paid, it will be capitalized at repayment. New fixed interest rates are set each July 1st for the upcoming academic year.

### Fees:

An origination fee (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#interest-rates>) is deducted at the disbursement of each installment of the loan, which means the amount you actually receive will be slightly less than the amount borrowed.

### Disbursement Requirements:

To receive funds, you must accept the loan(s) through MyDU, complete both a Master Promissory Note (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#steps-to-receive>) and Entrance Counseling (<https://studentaid.gov/understand-aid/types/loans/subsidized-unsubsidized/#steps-to-receive>) online at [www.StudentAid.gov](https://studentaid.gov) (<https://studentaid.gov/>), and be enrolled in at least 4 credits (half time) that count toward your degree program.

### Repayment Terms:

Repayment begins once the 6-month grace period ends after you graduate or after you are no longer enrolled at least half time. Payments are made to your Direct Loan servicer.

### Repayment Options:

The standard repayment period is 10 years but can be as long as 25 years depending on total borrowing and chosen repayment plan. Loans may be consolidated with other federal loans.

## Federal Work-Study/Student Employment Program

This work program, funded by the federal government, provides part-time employment at an hourly wage, which is determined by the demands of the job and the skill and experience of the student employee. The program encourages community service and work related to each student's career goals.

### What is work-study?

Work-study is a need-based type of financial aid that allows students to work on campus (or with an approved off-campus employer) to earn money to help pay for educational expenses. It's not a grant (because you must work to earn it), and it's not a loan (because you don't have to repay it).

### Eligibility:

Because work-study funding is limited, it's not included in all students' aid offers. Priority is given to those who applied for financial aid by the priority deadline, and if eligible, it will be included on their financial aid offer.

You can only apply for work-study positions if you have this award as a part of your financial aid offer, and you must be enrolled in at least 4 credits (half time) that count toward your degree program to use it.

### Getting Paid:

The amount shown on your aid offer is the maximum amount you can earn over the academic year (typically **\$5,000**). Actual earnings will depend on your work schedule and hourly rate. Since there is no pre-set pay rate, the amount earned will depend on your position. You'll be paid every two weeks for the hours worked, and your paycheck will be sent directly to you (not applied to your tuition bill).

### Other Part-Time Positions:

There are other work opportunities available! Student Employment maintains an online job board of part-time on- and off-campus positions. These positions are available to all students, regardless of financial need or work-study eligibility. Access the job board listings through Pioneer Careers (<http://du.edu/pioneer-careers/>).

For more information about employment opportunities, contact [stuemp@du.edu](mailto:stuemp@du.edu).

# Graduate Assistantships

Departments assign graduate assistantship positions to eligible students according to the guidelines below. Regardless of terminology a unit or department may use to describe these positions (GXA, GSA, GA, GTI, RSA, etc.) the University recognizes only three official assistantship types: Graduate Teaching Assistantship (GTA), Graduate Service Assistantship (GSA) and Graduate Research Assistantship (GRA). Assistantships can be in support of teaching assignments, general administrative duties, or research. These policies and guidelines apply to GTAs, GSAs and GRAs except where specified and must be adhered to by all graduate colleges, schools, departments and recipients.

## Assistantship Types

Following are descriptions of each type of assistantship:

- **Graduate Teaching Assistant (GTA)**  
Graduate teaching assistants may support faculty by performing instruction-related duties such as teaching lower-level undergraduate courses and labs, developing teaching materials, leading class discussions, tutoring, preparing and giving examinations, and grading examinations or papers. GTAs are funded by the University budget. GTAs must demonstrate fluency in spoken English to be eligible to receive the GTA award. For more information, see the Required Tests for GTA Eligibility (p. 1231) policy.
- **Graduate Service Assistant (GSA)**  
Graduate service assistants may perform administrative and support functions or discipline-specific projects for an academic department or business unit. Responsibilities may include administrative support, lab monitoring, equipment management, web site development and maintenance, editorial work for scholarly journals, or routine support for publications or social media. To support professional development, the graduate service assistant should be given the opportunity to apply his/her academic skills to the assigned tasks and develop new administrative skills. GSAs are funded by the University budget.
- **Graduate Research Assistant (GRA)**  
Graduate research assistants may perform research assignments under the direct supervision of a faculty member who generally is the principal investigator on an external grant or contract. The research must be directly relevant to the student's academic program of study, should relate directly to the student's degree requirements, and should be reasonably expected to contribute to the student's dissertation, thesis, or capstone project. The label "GRA" only applies to graduate assistants who receive stipend and waiver from external awards (e.g. grants or contracts).

## Assistantship Eligibility

An assistantship recipient must be enrolled in an academic program during the terms in which they receive the award, stipend and tuition wavier hours. Departments may stipulate that recipients must be enrolled full-time.

## Assistantship Academic Requirements

Students must be in good academic standing in order to maintain eligibility for an assistantship position. Students on academic probation or suspension are not eligible for an assistantship position until that status is resolved. After two consecutive terms below 3.0 GPA, a student is not eligible for an assistantship position until the GPA is raised to a 3.0 or better.

## Graduate Teaching Assistantship (GTA) Exams, Credentials and Experience

Any graduate applicant whose native language is not English or is from a country where English is not the native language, who wishes to be considered for any Graduate Teaching Assistantship during any year of study in any graduate department at the University of Denver, must demonstrate fluency in spoken English by scoring a minimum of 26 on the Internet Based TOEFL (iBT) exam speaking score, an IELTS score of 8 on the speaking section or a minimum score of 200 on the CAE speaking section.

To serve as instructor of record for an undergraduate course, graduate teaching assistants must be qualified by appropriate credential or tested experience as defined by the Higher Learning Commission:

- Completed program of study in the discipline, with substantial coursework at least one level above that of the courses being taught or developed.
- Earned degree at least one level above that of the program in which they are teaching, typically a master's degree, with substantial graduate coursework in the discipline of those courses.

or

- Industry certification and years of experience successfully working in the field.
- Documented recognition of excellence in teaching.
- Expertise, ability, and talent validated through publication or wide critical and public acclaim.

## GTA English Language Exemption

Prospective GTAs may be exempted from submitting TOEFL/IELTS/CAE scores if they:

- have earned a baccalaureate degree or higher from a formally-recognized/accredited university where the institution's sole language of instruction and examination is English, and

- have an additional four or more consecutive years of work/instructional experience in countries with an official native language of English and the language of employment/instruction is English.

## English Language Proficiency

Prospective or current students who are awarded a GTA position based on the TOEFL/IELTS/CAE minimum scores required for GTAs or granted an exemption must demonstrate sufficient English fluency in the classroom. If a GTA is later found to have insufficient English fluency for instruction-related duties, the award must be revoked and may be converted to a GSA award with non-teaching assistantship responsibilities at the discretion of the division.

## Assistantship Hiring

Assistantship appointments are made on a full-, half-, one-third, or quarter-time basis. Assistantship awards can be made for any one quarter or all four academic quarters.

In general, full-time graduate assistants are expected to devote 20 hours per week to their assignments, half-time graduate assistants devote 10 hours and quarter-time graduate assistants devote 5 hours. However, some academic areas may require different hours.

The majority of graduate assistant positions are awarded by particular graduate programs at the time of admission as part of recruitment packages and are reserved for students in those programs. A general job posting can be found on Pioneer Careers Online (PCO), but students must contact individual programs for internal processes they use to award assistantships.

## Assistantship Employment Restrictions

Students who are admitted with provisions must satisfy the provisions in the time frame specified in the admission letter in order to remain eligible for a graduate assistantship.

If a graduate assistant should wish to change his/her major field of study to another college, school or department, the award is not transferable to the new department.

Graduate assistantships should be awarded to eligible students in the same or closely related field as their degree program.

A graduate student cannot hold more than the equivalent of one full-time assistantship (GTA, GSA and/or GRA). Full-time is normally defined as 20 hours per week (1.0 FTE).

Students cannot simultaneously hold both an assistantship position and a work-study funded position. However students may hold an assistantship and a work-study funded position in separate academic terms.

Students cannot simultaneously hold both a full-time benefitted staff position and an assistantship position, or any combination of the two exceeding 40 hours per week.

Students cannot serve as a graduate assistant in a course in which they are currently enrolled.

## Assistantship Hiring Paperwork

### Background Check and I-9

- All DU employees must complete a background check through HireRight and be cleared for hire by Human Resources prior to officially being offered an assistantship. As long as a graduate assistant is re-hired within one year of their last day worked, then no additional background check is required. All inquiries regarding background checks should be made with Human Resources.
- As mandated by the Immigration Reform and Control Act of November 6, 1986, and House Bill 1017, the University is required to verify the identity and work authorization of all employees. Upon completion and passing of a background check, employees will receive an I-9 Verification Request email where they can complete Section 1 of their form. Instructions for completing Section 2, and presenting the required documentation, will be provided upon completion of their form. If an international student's visa status changes after the student has been hired, a new I-9 must be submitted.

### Other Hiring Paperwork

- All newly hired University of Denver faculty and staff members, including student employees, must complete the required new hire action items (<https://www.du.edu/human-resources/new-employees/action-items/>) either prior to or on their first day of work. Most of these action items, including the W-4 Withholding Allowance Form, can be completed online via MyDU (<https://my.du.edu/>).

## Assistantship Termination

If a graduate assistant is proven incapable of performing the responsibilities of the position, the unit has the right to terminate the award prior to the end of the award period. Units should work with Human Resources when pursuing the termination of a graduate assistant.

If the appointment of a graduate assistant is terminated by means other than death or disablement before the end of an academic term, the award recipient is responsible for repayment of the "unearned" share of the award, including waiver hours "borrowed" from the future (GTA and GSA only). Repayment may occur through deductions from the final paycheck or by other means.

With permission from the appropriate business officer, the program may hire a replacement graduate assistant and reallocate the unused portion of any remaining stipend or waiver award to the new assistant.

## Assistantship Stipend and Waiver Awards

Assistantship offers must include both a tuition waiver and monthly stipend unless the student has completed all coursework and is registered for Continuous Enrollment. In that case, the student may be offered a stipend without a tuition waiver.

Awards are made through the graduate college, school, or department. Assistantship awards can be made for any one or multiple academic quarters.

Assistantship awards will be full-, half-, one-third, or quarter-time. Graduate Assistants who are less than full-time receive stipend and waivers proportional to their appointment.

### Assistantship Stipends

Stipends are paid through payroll and are taxable income.

### Assistantship Waivers

Tuition waivers are considered merit-based scholarships and are not taxable income.

Graduate assistants will not receive tuition waivers during any term they are not receiving a stipend.

Students must inform their program of their plan for waiver hour use.

The combination of all tuition waivers cannot exceed tuition charges (prior to any assessed fees) and waivers cannot be awarded in cash.

Normally, full-time graduate assistants receive 8-10 hours of waiver for each academic term. Awards in specific colleges, schools, or departments may vary.

There is no tuition-waiver benefit for spouses, dependents, or non-dependents of graduate assistants.

When assistantship recipients have both scholarship and waiver hours available in any given term, scholarship hours will be drawn upon first to pay tuition bills. When assistantship recipients are also employees and have a combination of employee waiver, scholarship and/or assistantship waiver hours available in any given term, the employee waiver will be drawn upon first, then the scholarship hours and finally the assistantship waiver hours will be drawn upon to pay tuition bills.

Because the fiscal year ends before the summer term closes, waivers cannot be carried forward from the spring to the summer term.

Waiver hours cannot be used for interterm courses, noncredit courses, or any other fees or fines, including continuous enrollment fees.

Departments have the option to stipulate that tuition-only scholarships will be replaced with tuition waivers.

If the student drops courses after or during the refund period for which waiver hours have been used, the waiver will not be re-awarded for future use.

Graduate assistant positions awarded late or after the fall term may affect other financial aid that a student is receiving.

### GTA/GSA Award Duration and Use

When GTA and GSA appointments are made for multiple terms during an aid year (for instance, fall through spring), tuition waiver awards ("waivers") will be divided equally among the terms. "*Appointment*" means that the student is working as a graduate assistant and earning a stipend. In the case of single term or term-by-term appointments, waivers will be available for use during the term of appointment only (i.e., cannot be borrowed from the future or carried over to the next term).

Tuition waivers cannot be awarded prior to the term of appointment (e.g., waivers cannot be awarded for summer if the student will not be working until fall term).

### GRA Award Duration and Use

GRA awards are for one-quarter duration and GRA waivers cannot carry forward. There is no borrowing from the future and no carry-over from one term to the next, and GRA waivers cannot be made available until the term they are earned. GRA awards are subject to these policies for the life of the research grant.

Neither the stipend nor the waiver portion of a GRA award can cover any period outside of the grant or contract period. For example, if a grant or contract begins or ends at the halfway point of a term, no more than one-half of a full award (stipend and waiver) can be paid during that term.

## Health Insurance Scholarship

The Graduate Assistantship Health Insurance Scholarship ("Health Insurance Scholarship") covers the cost of the DU Student Health Insurance Plan (SHIP) and the Health and Counseling Fee (HCF).

## Health Insurance Scholarship Eligibility

To be eligible for the Health Insurance Scholarship, graduate assistants are required to meet the following criteria for the entire academic year (fall, winter and spring quarters):

- hold a full-time assistantship appointment (GTA, GRA, GRA or combination)
- successfully fulfill the requirements of their assistantship appointment
- have a tuition waiver offer of a minimum of 24 total credit hours
- register for and complete a minimum of 24 total credit hours of graded coursework (e.g., not Continuous Enrollment)
- must not register for Continuous Enrollment alone in any of the three academic quarters

## Health Insurance Scholarship Requirements

Students who wish to receive the Health Insurance Scholarship must accept the terms and conditions of the scholarship and the award in MyDU ([https://login.du.edu/\\_layouts/PG/login.aspx?ReturnUrl=%2F%2Fgo.ashx%3FSAMLRequest%3DJVNdj9owEHy%252FXxHlnSQE2jssiESH0gUlkjvoS8nY6%252FBUmKnXrvH%252FfvaOSic1KKzllka74xn1psx0qZuydTZg9rALwdo76Lo2NQKSXc0iZ1RRFOUSBRtAllIZDv9viR5kpHwWaKuZruM3pNscigjGSq0CaTGfxOvV5%252BX662L19DASQ%252FZCSE6WCi0VfKpZvmgl%252Fnnvup%252FJMM%252B%252BD8GarmPp9U1HbMg7UtkjSt9V6qhLsEuEsRdbrXCcXDMRDku8BPUnGp9reT7V6LkHyrqrJXrrdVkJie8860QteA2YL5LRn82CwvHmgrk%252BbblJpA2no5FOWExdeJYrGASBdTIO8hzdOrxkXjZasvPXFvNS1ZC8dHtYXbRpq%252F5%252Bwn%252FQ7RPKe6EqJU9gCkOICj%252F%252FKTOtaP88MUAuT2BoHcZS%252Buw0ZsC7ofNNsXC0Uw3LTUSw8PAKTJ7Sn1Jfl0%252Bq%252F0UbUAUNweNERbqPFz67VkbHp4TmL%252B7MtSb18aemvRP8VfX6Q3bxd35%252BPoPKv4A%26RelayState%3Dhttps%253A%252F%252Fapi.my.du.edu%252Fcore%252Fsaml\\_sso](https://login.du.edu/_layouts/PG/login.aspx?ReturnUrl=%2F%2Fgo.ashx%3FSAMLRequest%3DJVNdj9owEHy%252FXxHlnSQE2jssiESH0gUlkjvoS8nY6%252FBUmKnXrvH%252FfvaOSic1KKzllka74xn1psx0qZuydTZg9rALwdo76Lo2NQKSXc0iZ1RRFOUSBRtAllIZDv9viR5kpHwWaKuZruM3pNscigjGSq0CaTGfxOvV5%252BX662L19DASQ%252FZCSE6WCi0VfKpZvmgl%252Fnnvup%252FJMM%252B%252BD8GarmPp9U1HbMg7UtkjSt9V6qhLsEuEsRdbrXCcXDMRDku8BPUnGp9reT7V6LkHyrqrJXrrdVkJie8860QteA2YL5LRn82CwvHmgrk%252BbblJpA2no5FOWExdeJYrGASBdTIO8hzdOrxkXjZasvPXFvNS1ZC8dHtYXbRpq%252F5%252Bwn%252FQ7RPKe6EqJU9gCkOICj%252F%252FKTOtaP88MUAuT2BoHcZS%252Buw0ZsC7ofNNsXC0Uw3LTUSw8PAKTJ7Sn1Jfl0%252Bq%252F0UbUAUNweNERbqPFz67VkbHp4TmL%252B7MtSb18aemvRP8VfX6Q3bxd35%252BPoPKv4A%26RelayState%3Dhttps%253A%252F%252Fapi.my.du.edu%252Fcore%252Fsaml_sso)).

After receiving the Health Insurance Scholarship, failure to comply with any of the terms and conditions may result in a hold being placed on the student's account. The hold will not be removed until the student has re-paid the health insurance charges.

The award payment will be automatically applied to the student's account 10 days before the start of every term if they have maintained eligibility, have registered for classes, have been assessed the DU Health Insurance Plan (SHIP) and/or the Health and Counseling Fee (HCF) and have not waived the SHIP and/or HCF charges.

Students registered for fewer than six credit hours of graded coursework will not be assessed the SHIP or HCF fees automatically and must complete the enrollment forms available through the Health and Counseling Center for all applicable terms in order to receive the Health Insurance Scholarship.

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## On-Campus Employment Authorization for International Students

Federal immigration regulations permit F-1 and J-1 students in lawful immigration status to work on campus at the school or program that holds their SEVIS record. On-campus employment (<https://internationalization.du.edu/iss/campus-employment/>) may include graduate teaching assistantships, graduate research assistantships, and student worker positions. International students are not eligible for federal work-study positions due to U.S. citizenship or permanent residency requirements.

F-1 students may work on campus without special authorization as a benefit of their immigration status.

J-1 students must receive written authorization from a responsible officer or alternate responsible officer from either International Student & Scholar Services (ISSS) or their non-DU program sponsor prior to beginning on-campus employment. J-1 employment authorizations may be approved for on-campus employment for up to 12 months.

**Unauthorized on-campus employment, or employment in excess of the maximum numbers of hours permitted per week, is a violation of the student's immigration status.** International students in other immigration statuses may generally not work on campus without an Employment Authorization Document issued by U.S. Citizenship and Immigration Services (USCIS).

Questions regarding the interpretation and application of immigration regulations governing the on-campus employment benefit of F-1 and J-1 students should be directed to International Student and Scholar Services (<https://internationalization.du.edu/iss/>).

## Maximum Number of Hours per Week

F-1 and J-1 students may work up to 20 hours per week (part-time) during quarters of required enrollment and more than 20 hours per week (full-time) during their annual vacation quarter and during official University breaks. These limits apply to the total number of hours worked in a single calendar week (Monday-Sunday) among all on-campus positions.

## Definition of Employment

For immigration purposes, employment—whether on or off campus—is defined as the exchange of services for compensation, monetary or otherwise. International students must have the appropriate authorization from ISSS, the program sponsor, or USCIS prior to beginning any form of employment in the United States.

## Definition of On-Campus Employment

Federal immigration regulations define on-campus employment for F-1 and J-1 students as follows:

- Employment for the host school or program on the institution's premises; or
- Employment for a commercial firm that operates on the premises of the host school or program and that provides direct services to the student population, such as a campus bookstore or cafeteria; or
- Employment at an off-site location that has an established educationally affiliated relationship with the host school or program, generally evidenced by a Memorandum of Understanding.

## Start of Employment Authorization

F-1 students can start on-campus employment no more than 30 days before the beginning of the first term of enrollment in the United States in F-1 status. Students transferring from another school or program may begin on-campus employment after the release of their SEVIS record to the University and reporting to ISSS. J-1 students can start on-campus employment no earlier than the start date listed on their form DS-2019, provided they receive prior written authorization from either ISSS or their non-DU program sponsor.

F-1 or J-1 students beginning a new program at DU after completing another program may continue working on campus in the interim provided a change of level or program has been authorized by ISSS and there is no break in the student's F-1 or J-1 status.

## Curricular Practical Training

F-1 students may request Curricular Practical Training (CPT) authorization from ISSS to participate in a paid internship, practicum experience, or other form of practical training that is an integral or required part of the student's program of study. More information regarding CPT can be found on the ISSS website (<https://internationalization.du.edu/iss/current-students/employment/curricular/>).

## Academic Training

J-1 students may request Academic Training authorization from ISSS or their program sponsor to participate in a paid internship, practicum experience, or other form of practical training that is an integral or required part of the student's J-1 program. More information regarding Academic Training can be found on the ISSS website (<https://internationalization.du.edu/iss/current-students/employment/academic/>).

## Required Documentation to Hire International Students

Departments should refer to the University's I-9 process (<https://www.du.edu/human-resources/new-employees/I-9process/>) for verifying employment eligibility when hiring international students. Please note that a SSN is not required for an F-1 or J-1 student to begin working on campus.

## English Proficiency Requirements

F-1 and J-1 immigration regulations do not require students to have a defined level of English proficiency prior to beginning on-campus employment. However, University policy requires a specific level of achievement in English proficiency for graduate teaching assistantships (p. 1231).

## Financial Aid Policies

### aid-eligible coursework

The U.S. Department of Education requires institutions to ensure that federal financial aid funds are only used to pay for courses that apply to a student's degree program. Beginning with the 2023 fall term, courses that do not count toward a student's degree program may be ineligible for federal or state financial aid.

#### Types of Aid Affected

All types of federal and state financial aid are impacted by this policy. For graduate and law students, this includes Direct Unsubsidized and Grad PLUS loans (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/types-aid/loans/>), work-study (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/types-aid/work-study/>), the TEACH Grant (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/types-aid/grants-scholarships/#federal>), and the Colorado Graduate Grant (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/types-aid/grants-scholarships/#federal>).

***Institutional aid (including scholarships, assistantships and fellowships) is not impacted by the aid-eligible coursework policy.***

#### Determining Courses in Degree Program

A student's degree program is defined by the course and credit requirements listed in the bulletin (<http://bulletin.du.edu/graduate/>). You can use the degree audit tool (<https://www.du.edu/registrar/academic-programs/degree-evaluation/>) to view the courses you must complete for your degree and monitor your academic progress toward graduation. Please contact your academic advisor with any questions about program requirements.

## Courses Eligible for Federal & State Aid

Your financial aid enrollment status may be different from your actual enrollment status. To be eligible for all types of federal and state aid, graduate and law students need to be enrolled in **at least 4 credits** that count toward their degree. So, even if you're enrolled in a class that doesn't count toward your degree, you may still be eligible for federal and state aid.

## Notifications and Adjustments

Students whose aid eligibility is impacted by the aid-eligible coursework policy will be notified after class registration via their DU student email. If you're no longer eligible for federal or state aid, your financial aid will be adjusted prior to disbursement (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/managing-your-aid/your-bill-receiving-your-aid/>) for that term.

Visit the financial aid website (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/policies-maintaining-aid-eligibility/aid-eligible-coursework/>) for much more information.

## Satisfactory Academic Progress

In order to continue receiving financial aid, you must maintain Satisfactory Academic Progress (SAP).

Federal regulations require us to monitor the academic progress of *all* graduate students—including Ph.D. students—receiving financial aid toward the completion of their degree. (**Please note: this policy pertains only to financial aid and is separate from other academic policies published by the institution.**) SAP is monitored on a yearly basis—usually in mid-to-late summer—and is effective the following fall term. Certificate program students are an exception; their SAP is monitored at the end of every term. As a financial aid recipient, you must maintain the following minimum standards to continue receiving financial aid:

- **You must maintain a Cumulative Grade Point Average (CGPA) of 3.00.**
- **JD law students must maintain a CGPA of 2.3** (2.70 for all other law students, including master's, certificate, LLM, and graduate tax).
- **You must complete and pass a minimum of 66.6% of all courses attempted.** This is known as your Cumulative Completion Rate (CCR).
- **You must complete your degree within 150% of the minimum credits required to graduate.** This is known as the Maximum Time Frame (MTF) limit.

Visit the financial aid website (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/policies-maintaining-aid/sap/>) for more information.

## Withdrawal and Financial Aid

Any student who begins classes at DU, applies for financial aid, completes all of the requirements to obtain aid, and then withdraws from classes may have their financial aid adjusted according to federal, state, and institutional regulations. Students must contact the Office of the Registrar to withdraw officially from the University and must contact Academic Advising after withdrawing to complete leave of absence information. Leave of absence affects financial aid status upon return to the University; it does not affect withdrawing from the University.

Students who withdraw during the 100 percent refund period (drop/add) for any term may have all of their aid for that term canceled and returned depending on the type of withdrawal. Students who drop below the number of hours reflected in their financial aid budget during the drop/add period will have their budget adjusted to reflect the new hours and aid will be adjusted accordingly.

## Return of Title IV (R2T4) Funds Policy

Title IV (Federal) funds are awarded to you under the assumption that you will attend school for the entire period for which the assistance is awarded. When you withdraw from all courses, for any reason including medical withdrawals, you may no longer be eligible for the full amount of Title IV funds you were originally scheduled to receive.

If you withdraw from all courses prior to completing at least 60% of the term, you may be required to repay a portion of the federal financial aid you received for that term. A pro-rata schedule is used to determine the amount of federal student aid funds you will have earned at the time of withdrawal.

The return of funds is based upon the concept that students earn their financial aid in proportion to the amount of time in which they are enrolled. Under this reasoning, a student who withdraws in the second week of classes has earned less of his/her financial aid than a student who withdraws in the seventh week. Once 60% of the term is completed, you are considered to have earned all of your financial aid and will not be required to return any funds. If you withdraw during the 100% refund (add/drop) period for any term, all of your aid for that term will be canceled and returned.

Visit the financial aid website (<https://www.du.edu/admission-aid/financial-aid-scholarships/graduate-financial-aid/policies-maintaining-aid/withdrawal/>) for more information.

## Tuition and Fees

Tuition Charges (p. 1240)

Student Fees (p. 1240)



Late Charges (p. 1240)

Student Financial Liability (p. 1240)

Refund Information (p. 1241)

Tuition Refund Appeals (p. 1241)

## Tuition Charges

Students who began their graduate program prior to the fall of 2020 are eligible for flat-rate billing through the summer of 2025. If you are registered for 12-18 credits, you will only be charged for 12 credits. If you register for more than 18 credits, you'll be charged for 12 credits plus the per-hour rate for each credit above 18.

Students who began their graduate program in the fall of 2020 term or later are billed per credit for every registered credit.

Tuition charges for residents or non-residents of Colorado are the same. The University reserves the right to make changes in tuition charges or refund policies without advance notice.

Other academic programs, such as Sturm College of Law, Daniels College of Business, University College and some distance education programs, may have a different tuition rate and students in those programs may not be eligible for the flat rate. Tuition charges for residents or non-residents of Colorado are the same. The University reserves the right to make changes in tuition charges or refund policies without advance notice.

## Student Fees

In order to enhance opportunities for students' use of technology in and out of the classroom and to provide multiple modalities of student learning, a student technology fee is charged each quarter to all students. This fee is charged per credit hour taken. The student activity fee is assessed of all registered graduate and professional students (both part- and full-time).

## Late Charges

Registration beginning on the first day of the quarter is considered late registration. All students (continuing, new, returning leaves of absences, and readmitted) who do not register before the first day of the quarter are assessed a late registration service charge that cannot be waived. Once registered, students may drop and add courses freely through the seventh day of the quarter without financial penalty.

## Late Registration Service Charge

A service charge of \$25 is assessed the first day of the quarter for all students who have not enrolled in at least one course prior to the first day of the quarter. A \$50 service charge is assessed from the second through the fifth days of the quarter (business days, Monday–Friday). If registration is available over the weekend during or immediately following the first five business days, the \$50 service charge is applied to first-time weekend enrollees (Saturday or Sunday). A \$100 service charge is assessed beginning the sixth business day and continuing through the remainder of the quarter. Days are calculated based on the term's academic calendar and not on the class meeting days of specific courses. Tuition, fees and any other charges are due as specified on the billing statement. The service charge is not assessed for adding classes to an existing schedule. The maximum fee assessed for late registration in a given term is \$100.

## Late Payment Fee

Registered students for a given term who have not paid, or made arrangements to pay, their tuition by the appropriate University deadlines may be assessed a late payment fee. Late fees are assessed every month until a balance is paid in full or payment arrangements are set up.

## Student Financial Liability

It is the student's responsibility to abide by the University's payment and refund policies.

If, after completing the registration process, the student does not withdraw from registration by the last day for 100% refund for dropped classes date published on the Academic Calendar (<http://www.du.edu/registrar/calendar/>) on the Office of the Registrar's website, the student agrees to pay the total amount of tuition and other charges set forth. The student understands that if any payment is not made when due, or if the student withdraws, or is required to withdraw, from the University for any reason, then all remaining tuition and other charges are immediately due and payable. All amounts not paid when due may begin to accrue monthly late fees. In addition, the student agrees to pay all collection costs and amounts. If the student has any overdue charges outstanding, the University may recover those overdue amounts by reducing any payments owed by the University to the student.

Students are not removed from classes based only upon non-payment. Students who do not officially withdraw from classes and do not attend have "F" grades assigned and may owe tuition and charges as specified above.

Students with a past due balance for a given term are not allowed to enroll in classes for any subsequent term. Grades and other attendance certifications are withheld and a financial hold placed on the account until payment is received.

## Tuition Adjustment Information

The date of withdrawal from a class at the University is the date that the Registrar's Office receives a written notification of withdrawal or the date the student drops the class online.

In order for tuition charges to be reversed at 100% for complete withdrawals, programs on the quarter system (except University College) should refer to the Academic Calendar (<http://www.du.edu/registrar/calendar/>) on the Office of the Registrar's website, for specific tuition adjustment dates. Tuition adjustments are first applied to any obligations owed to the University, including charges with future dates.

**Note:** *Some units may have different policies regarding tuition, fees and payments. Contact the unit for details.*

## Tuition Appeals

If circumstances beyond your control cause you to stop attending your classes, you may appeal for an exception to the University's refund policy.

You must officially withdraw from all your courses before filing an appeal. You're eligible to file an appeal up to 90 days after the end of the term in which you enrolled in courses for which you'd like a refund.

To be considered for a refund, you must meet one or more of the following criteria and provide appropriate documentation, as specified below:

- You can't complete the course(s) because an immediate family member or a family member has died.  
**Documentation:** (for death) memorial service folder, notice in the paper or copy of death certificate
- You've been forced to relocate for your job, or you've involuntarily lost your job and no longer are eligible for reimbursement through your employer.

**Documentation:** letter on letterhead from immediate supervisor or human resource administrator.

- You're unable to complete your course(s) because of an unexpected increase in job responsibilities, required change in your work schedule or required travel.

**Documentation:** letter on letterhead from immediate supervisor or human resources administrator that specifies dates of increased workload or travel

If your circumstances do not fit the criteria listed above but you believe were beyond your control, you may also submit an appeal with documentation supporting your appeal.

To submit a Formal Tuition Appeal, log into MyDU (<https://my.du.edu/>), search for Request for Tuition Appeal, under the Requests and Other Actions, click Request a Tuition Appeal link. Please contact the Office of Student Billing (<https://www.du.edu/student-billing/>) directly, if you have any questions regarding how to appeal.

The Tuition Appeals Committee, which meets monthly, will review your petitions and deliver its decision to you via letter. **This decision is final.**

**NOTE:** *In accordance with federal, state and institutional regulations, you may be required to forfeit any financial aid you've received, which may result in an outstanding balance owed to the University.*

## Academic Requirements, Policies and Procedures

Academic Standards (p. 1242)

Change of Degree or Program (p. 1245)

Class Attendance (p. 1246)

Doctoral Degree Requirements and Standards (p. 1248)

Electronic Thesis and Dissertation (p. 1252)

Enrollment Status (p. 1255)

Graduation Requirements (p. 1258)

Internships After Completion of Coursework (p. 1260)

Master's Degree Requirements (p. 1260)

Readmission (p. 1264)

Registration (p. 1265)

Student Responsibility for Policies and Procedures (p. 1269)

Student Withdrawal from the University (p. 1269)

Students Called for Military Duty (p. 1275)

Transfer of Credit (p. 1276)

## Academic Standards

Grade Point Average (p. 1242)

Good Academic Standing (p. 1242)

Below 3.0 Grade Point Average (p. 1242)

Graded Work Accepted for the Degree (p. 1243)

Grade Replacement (p. 1243)

Repeating Courses (p. 1244)

Candidate Status and Completion of Coursework (p. 1244)

Grade Changes (p. 1244)

Probation (p. 1244)

Suspension (p. 1244)

Dismissal and (p. 1245) Termination (p. 1245)

Administrative Withdrawal (p. 1245)

## Grade Point Average

The grade point average (GPA) is determined by multiplying the credit points (for example, B+ = 3.3) by the number of credit hours for each course. Next, add up the total credit hours attempted, total the credit points, and divide the number of points by the number of hours. GPA is calculated and truncated to two decimal places (hundredths). GPA is not rounded.

Grades of I, IP, NC, NR, W, P+, P, or NP are not included in the grade point average. 'NA' (Never-Attend) grades are treated like 'F' grades and should be counted as such. Incomplete grades that are not completed within one calendar year from the quarter the original course was taken are converted to grades of 'F' in the GPA. All grades for repeated courses are included in determining the GPA.

## Good Academic Standing

Graduate students must maintain a cumulative GPA of 3.0 or higher to be in good academic standing. Master's students in the Sturm College of Law must maintain a cumulative GPA of 2.7. JD students in the Sturm College of Law must maintain a cumulative GPA of 2.3.

## Below 3.0 Grade Point Average

Any student whose overall grade point average falls below a 3.0 (2.7 for Law Master's, 2.3 for Law JD) is no longer in good academic standing and may be warned, put on probation, suspended or dismissed, depending upon the grade point deficiency. Each quarter on probation, the student must contact the advisor to develop a plan to remedy the academic deficit.

If it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master's, 2.3 for Law JD), or if in the opinion of the student's advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree, the student will be dismissed from the program.

Students whose GPA falls below a 3.0 may not be eligible for some types of financial aid. For more information, see Satisfactory Academic Progress (SAP) (p. 1238), or contact the Office of Financial Aid for details. The student is ineligible to represent the University in intercollegiate activities.

## Graded Work Accepted for the Degree

A grade lower than "C-" renders the credit unacceptable for meeting University degree requirements. Grades of "C-" or better qualify for graduate credit but may not count towards the degree. Students should consult with their program to understand unit-specific minimum grade requirements.

Students cannot take more than eight-quarter hours beyond the degree requirements in order to make up grade deficiencies. These additional credit hours should be relevant for the degree and approved by the student's advisor. Students whose grades are still deficient after taking the additional eight hours are terminated from the degree program.

*Note: Satisfactory grades for the Sturm College of Law may be different. Consult the unit for details.*

## Grade Replacement

### GPA Replacement Policy

The University of Denver allows degree-seeking undergraduate and graduate students to repeat most courses in order to meet the minimum grade requirement for a required course, subject to limits imposed by individual schools and colleges. When a student repeats a course, grades from all attempts appear on the student transcript, and all grades are used in computing cumulative and major grade point averages, total credits, and academic standing. This policy adds the option of GPA replacement to the option of repeating a course.

### Additional Details:

In order to invoke GPA replacement policy for a course, a student must have received an eligible grade in a prior attempt of the course. Grades of **C-, D+, D, D- or F** are eligible for repeat/replace for **undergraduate** students, and grades of **B-, C+, C, C-, D+, D, D- or F** are eligible for repeat/replace for **graduate** students. Once a student invokes the GPA replacement policy for a course, that decision is irrevocable.

When GPA replacement is invoked, the grade from the latest attempt of a course replaces the grade from the most recent prior attempt of the same course in the cumulative GPA.

Grades from all attempts of a course appear on a student's transcript, with those attempts that have been replaced appropriately indicated. The replaced grade is excluded from cumulative grade point average and credit totals in the official academic record; the grade from the latest attempt is included, even if the grade earned in the latest attempt is lower than the replaced grade.

Students should consider whether this is the best way to improve their GPA. Most students will find that when they repeat a course, there is only a small impact on their overall GPA. Another way to increase GPA is to take additional courses and do well in them. Finally, if a student is repeating a course to increase their GPA for their graduate or professional school applications, it is useful to know that these schools may calculate a student's GPA differently.

A student may wish or need to strengthen their knowledge of a particular topic in order to prepare for future classes. This can be a good reason for repeating a course. Undergraduate majors and minors require students to achieve a minimum grade of "C-" in order to count toward graduation requirements. In some programs, Graduate students are required in to receive a B- or better in their coursework.

**A course will not necessarily be easier the second time around. If a student chooses to repeat a course, they should maximize their chances for success by utilizing available resources and practicing good study habits.**

### Eligibility:

- This policy may be invoked only by currently enrolled, degree-seeking University of Denver undergraduate or graduate students. Sturm College of Law students may not invoke this policy and are subject to the academic and grading policies of the Law School.
- Students who have graduated are not eligible for GPA replacement for courses taken prior to earning their degree.
- The policy applies only to undergraduate or graduate courses taken and repeated at DU. Classes ineligible for grade replacement are FSEM, special topics courses and courses designated in the catalog as repeatable for credit (e.g. independent study/research, internship, field experience, thesis/dissertation hours, directed research/study, performance).
- **Undergraduate** students may request grade replacement for up to **4 classes**.
- **Graduate** students may request grade replacement for up to **2 classes**.
- If a student receives a low grade in a class due to academic dishonesty, that grade is not eligible for GPA replacement via this policy.
- Once a student invokes the GPA replacement policy for a course, that decision is irrevocable.
- Courses taken for GPA replacement must be taken for a letter grade.
- Students may request grade repeat/replace only if the particular course is offered again. There is no guarantee that all courses are offered on a schedule that would permit repeat for every student.
- No retroactive adjustments or transactions for prior terms will be performed as a result of repeating a course, including changes to academic standing, or eligibility for honors, athletics, or financial aid.

- Some academic units may limit the number of times a student can enroll in a given course. Such limits must be observed when invoking this policy.
- Grades of incomplete are not eligible for repeat with GPA replacement.
- Requests to invoke the GPA replacement policy must be completed by the **last date for course withdrawal**.
- A request to invoke the policy will be approved as long as the exact same course (subject code, course number) is selected, and the student has enough grade repetition credits left to cover the course. Once the grade repeat/replace credits are fully used, then there will be further no GPA replacement and all subsequent grades will be calculated into the cumulative GPA.
- If a student invokes the grade repeat/replacement policy but drops or withdraws from the course before the end of the term, this attempt does not count against the number of credits a student is allowed to repeat, and the grade from the most recent prior attempt stands.
- All occurrences of the course along with associated grades will remain on the student's academic record as well as on the official transcript. Only the replacement grade will be calculated into the cumulative GPA.
- Tuition is charged for all course attempts. There may be federal financial aid implications for the number of times a specific course is repeated. Students are responsible for checking with the Office of Financial Aid regarding course repeats and aid eligibility.

## Repeating Courses

Unless it is specifically designated as repeatable, a course in which the student has received a qualifying grade may not be repeated for credit.

If a non-repeatable course is taken again, the regular tuition rate is charged, and the course is counted as part of the total credit load. All grades are counted in GPA calculations. The highest grade received in the repeated course fulfills the degree requirements, but hours earned toward degree requirements are counted only once.

All repeated courses appear on student transcripts. Automated advising tools (e.g. the Degree Audit) may show only first grade for the course.

## Candidate Status and Completion of Coursework

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit, and the candidate's status is subject to review at any time.

## Grade Changes

Grades submitted by instructors at the end of the term are final and are not subject to change by reason of revision of judgment on the part of the instructor. Grades cannot be changed on the basis of a second trial, such as a new examination or additional work undertaken or completed after the grade report has been recorded, or by retaking the course.

In the event of a grade error, the faculty member should change the grade using the University's grade change process. Any appeal of a grade must take place within 45 calendar days from which the grade was assigned. Grade changes require the approval of the Chair of the Department and relevant Dean before being approved. Changing an Incomplete grade does not require any outside approval, unless the Incomplete has expired, in which case the Dean must approve the change.

*Note: Some graduate units may have more restrictive policies. Contact the academic unit for details.*

## Probation

Any student whose overall grade point average falls below a 3.0 will be placed on probation. Requirements for probationary status for Sturm College of Law is 2.7 for master's students and 2.3 for JD students.

Each quarter on probation, the student must contact the advisor to develop a plan to remedy the academic deficit.

If it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master's, 2.3 for Law JD), or if in the opinion of the student's advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree, the student will be dismissed from the program.

## Suspension

Students may be suspended from the University for academic or behavioral misconduct and may not be permitted to enroll for a period specified as part of the terms of their suspension.

The University will not accept courses completed at another institution while the student is under suspension.

A suspended student who wishes to re-enroll must apply for readmission through his/her program's admission office and must also apply to the Director of Student Rights & Responsibilities who will determine whether any and all requirements for readmission have been satisfactorily completed.

# Dismissal and Termination

## Academic Dismissal

A student will be recommended for dismissal from their graduate program for the following reasons:

- the student maintains a GPA lower than 3.0 (2.7 for Law Master's, 2.3 for Law JD) for three consecutive quarters (two semesters)
- if it is numerically impossible for the student to raise the GPA to 3.0 (2.7 for Law Master's, 2.3 for Law JD), or if in the opinion of the student's advisor, department chair and/or dean, the student is not making academic progress to finish the requirements of the degree
- the time limit for completing provisions has expired
- severe academic or behavioral misconduct
- violation of the Honor Code

Students who have been dismissed from the academic program are not normally readmitted

## Termination

A student will be recommended for termination from their graduate program for the following reasons:

- the time limit for completion for the degree has expired
- the request for an extension of time has been denied
- the student wishes to change to another degree program outside of the college, school, or department in which the student is currently enrolled

Students who have been terminated from their program due to an expired time limit for degree who wish to be readmitted must meet the following criteria outlined in the Readmission for Terminated Students policy (<http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission/>)

1. Submit a new application to the program and meet the current admissions criteria.
2. If admission is granted, the most current program bulletin must be followed, including all curriculum and program requirements.
3. All previous coursework older than five years must be reviewed by the department to determine if it is still relevant for current term of admittance.

Final approval for admission, consideration of coursework from a program in which a student was previously terminated, and timeline for degree completion must be approved by the Vice Provost for Research and Graduate Education.

**Notes:** *Some programs may have more stringent policies. Contact the unit for details.*

*Requirements and procedures for termination for Sturm College of Law students may be different. Students should consult the unit for appropriate procedures.*

## Administrative Withdrawal

Students are administratively withdrawn from courses that are canceled by the University.

Canceled courses are deleted from the student's record and tuition charges reversed, if appropriate. Students are notified of the cancellation by the college, school or department responsible for offering, and subsequently canceling, the course.

## Change of Graduate Program

An applicant or student wishing to change a major, concentration, location, or delivery mode (i.e., on-campus, online) or wishing to change to a lesser or equal certificate or degree (e.g., doctoral to master's level) within the same College/School has the following options:

### Applicant:

- After submitting an application and prior to receiving an admissions decision, applicants may request a one-time change to an academic program within the same College/School to which they originally applied. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.
- After an admissions decision has been rendered and before the first day of class, a student can request a one-time change to their academic program within the same College/School with approval by the department. A new application, additional supporting materials and/or a new application fee may be required at the department's discretion. Formal requests can be made to either the Office of Graduate Education or to the College/School to which they applied.

*\*If an applicant wishes to change to a program outside of the College/School to which they originally applied or change to a higher-level degree program, then submission of a new application, supporting application materials, and payment of another application fee are required.*

### Current Student:

- Starting the first day of class, a student can submit a completed change of graduate program form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) to the Office of Graduate Education. The College/School reserves the right to request that the student submit a full application for admission, including the application fee.
- A student wishing to change to a graduate program outside of the current College/School, or wishing to change to a higher degree (certificate to master's or master's to doctoral), must submit a full application for admission, including the application fee and supporting application materials. A graduate student who wishes to change to another graduate program must be withdrawn/terminated from the program of original admittance and accepted into the new graduate program.

**Note:** Students in University College and JD students in the Sturm College of Law do not submit the change of graduate program form to the Office of Graduate Education. Contact the unit for details on this process.

## Class Attendance

Students must officially enroll for the courses they attend. A student cannot receive credit or a grade for a course without being enrolled in it.

Instructors have the right and responsibility to establish attendance policies for their courses.

Students are responsible for informing instructors about their absence from class and for completing assignments given during their absence.

## Religious Accommodations and Class Attendance

### Religious Accommodation Statement

The University of Denver has an enduring commitment to diversity and inclusive excellence, including religious diversity. The University honors and respects students' rights to observe sincerely held religious beliefs or practices and provides an educational environment in which all students are free from harassment and discrimination based on religion consistent with the requirements of federal, state and local law. As part of this commitment, the University provides reasonable accommodations for students' sincerely held religious beliefs or practices unless the University determines that such an accommodation would fundamentally alter the curriculum or academic program.

### Religious Accommodation Procedures

Students should follow these procedures in requesting a religious accommodation for academic requirements:

- By the end of the second week of a course, students are expected to examine the course syllabus for potential conflicts with religious beliefs or practices and email their instructor to seek any requested absence(s). In the case of exams or assignments that are added to the syllabus or otherwise announced after the first two weeks of the course, students should email their instructor as soon as possible and in advance of the requested absence(s).
- For courses that are shorter than the traditional quarter or semester, within the first week of the course, students are expected to examine the course syllabus for potential conflicts with religious beliefs or practices and email their instructors to seek any requested absence(s). In the case of exams or assignments that are added to the syllabus or otherwise announced after the first week of the course, students should email their instructors as soon as possible and in advance of the requested absence(s).
- Students who have conflicts with the overall course pedagogy or delivery method, such as the time and date the class is offered or the modality, are encouraged to find an alternative section for the class.
- Requests for absences from an internship, externship, field placement, or other practical learning experience outside the classroom will be assessed on an individual, case-by-case basis in consultation with the University placement supervisor and the field placement supervisor. Students should understand that if an accommodation is granted, missing time from an internship, externship, field placement, or other practical learning experience may require the student to make up the missed time or work. Students who have conflicts with the overall schedule for an internship, externship, field placement, or other practical learning experience are encouraged to consider scheduling the internship, externship, field placement, or other practical learning experience at another time. The student should consult with the University placement supervisor for the program regarding such scheduling needs.

After receiving a request for religious accommodation (webform above automatically emails student-provided instructors), instructors must consider the request and determine whether the accommodation is reasonable and does not fundamentally alter the curriculum or academic program. The instructor should evaluate the request on a case-by-case basis, taking into account relevant factors including, but not limited to:

- the fundamental requirements of the applicable academic program and/or related technical standards;
- the requirements of the course;
- the requirements of the department or major;
- the potential effects of the accommodation on the individual and fellow students;
- the duration of the accommodation request; and
- the availability of alternative accommodations.

Prior to denying a request for religious accommodation or offering an alternative accommodation, if an instructor has concerns regarding whether a request for religious accommodation fundamentally alters the curriculum or academic program, the instructor should consult with the The Associate Vice Chancellor of Equal Opportunity and Title IX (via contact information at right).

The University is not required to accept the student's requested, preferred accommodation if there is more than one alternative that eliminates the religious conflict. When there is more than one alternative, the University may select any of the accommodations, provided that the accommodation will effectively eliminate the religious conflict.

Students are responsible for fulfilling the course requirements, including obtaining the materials and information provided during any missed class(es), and for working with course instructors in advance on an appropriate timeline to submit any missed assignments, take any exams, or complete organized activities.

Once a religious accommodation request is granted, the instructor will provide the student the opportunity to make-up the missed assignments, take any exams, or complete organized activities. In providing this opportunity, the instructor should provide alternatives that are substantially equivalent to the original assignment, exam, or activity.

## Appeals for Denial of Religious Accommodation for Academic Requirements

Students may appeal an instructor's decision denying a request for religious accommodation by submitting a written appeal to the chair of the department, or to the program director if there is no chair, within five (5) business days of the instructor's decision. The chair of the department or program director, as applicable, must consult with the Associate Vice Chancellor for Equal Opportunity and Title IX and/or the Vice Chancellor of Student Affairs or their designee issue a decision in writing within five (5) business days of receiving the appeal and shall include the reasons for the decision.

The student may appeal the decision of the chair of the department or program director denying the appeal to the dean of the appropriate academic unit, or the dean's designee, within five (5) business days of receiving the decision. The dean, or dean's designee, must consult with the Associate Vice Chancellor for Equal Opportunity and Title IX and issue a decision within five (5) business days of receiving the appeal. The decision of the dean, or dean's designee, is final.

Click to Request Religious Accommodations ([https://udenver.qualtrics.com/jfe/form/SV\\_1T9zN1Wjj7J05iR/](https://udenver.qualtrics.com/jfe/form/SV_1T9zN1Wjj7J05iR/))

### Concerns of Harassment or Discrimination

Students who believe that they have been harassed or discriminated against based on religion may contact the Office of Equal Opportunity & Title IX:

[www.du.edu/equalopportunity](https://www.du.edu/equalopportunity) (<https://www.du.edu/equalopportunity/>)

Phone 303-871-7016

Email at [equalopportunity@du.edu](mailto:equalopportunity@du.edu),

In person at the Driscoll Commons, 2050 E. Evans. Suite 30.

## Final Exams

Any final exam for a course must be scheduled during the final exam period. Students must attend all final exams as scheduled by faculty. The final exam schedule has been created to avoid conflicting exams; however, time conflicts are possible. Students should check their final exam schedules early in the term to identify possible conflicts. Students are expected to let their instructors know when they have more than one exam being held at the same time. The Office of the Registrar will attempt to resolve conflicts whenever possible. Final exams are not rescheduled if a student has multiple exams on the same day. It is at the discretion of individual instructors to accommodate student requests for moving an exam in the event that a student has multiple exams on the same day. Final exams are not changed to accommodate student travel plans, and students should only plan travel after the official end date of the term.

The Office of the Registrar schedules final exams for classes held during standard meeting times in fall, winter and spring quarters. Final exams are also scheduled for certain classes meeting one day per week. Since summer quarter is a truncated term, we do not schedule any final exams for that quarter.

## Campus Weather Closures

Sometimes severe storms may create such a hazard that the University makes a decision to close and cancel operations for a period of time. Students can receive information about campus weather closures via email, telephone or text message by registering for the Emergency Notification System (<https://www.du.edu/emergency/notification/>).

## Certificate Requirements

### Course substitutions and Waivers

All required coursework must be completed for Specialized Graduate Certificates. Course substitutions and waivers are not accepted for the Specialized Graduate Certificates.



## Time Limit for Completion of the Certificate

Postbaccalaureate certificates should be completed within three years of beginning the certificate program with the exception of Certificates of Specialization/concentrations, which are earned at the time the master's degree is completed.

## Final Procedures for Earning the Certificate

The student must assume full responsibility for meeting all basic requirements for the certificate as well as the specific requirements outlined by the college, school or department.

Except for students who are completing a Specialized Graduate Certificate, all other students completing an academic certificate must apply for graduation by the deadline. Failure to complete the certificate during the expected graduation term may require a new graduation application and payment of a fee for additional evaluation and services.

## Doctoral Degree Requirements and Standards

The doctorate is the highest degree offered by the University. It is conferred on students who successfully complete those requirements that the faculty of the college, school or department have prescribed as the criteria for determining the general proficiency and specialized competence of the candidate in the candidate's chosen field. Total achievement, within the framework of certain accepted standards and uniform course requirements, constitutes the major consideration in awarding the doctorate. Each candidate's program is planned and carried out under the supervision of the program advisor and committee in accordance with requirements approved by departments, and with regard for the individual nature of the student's objectives.

Requirements (p. 1248)

The Doctoral Dissertation (p. 1249)

Doctoral Dissertation Oral Defense (p. 1251)

Completing the Degree (p. 1252)

## Requirements

### Credit Requirements

The approved range of graduate credit for the doctoral degree is 90-142 quarter credit hours beyond the bachelor's degree. However, some colleges, schools and departments may have different requirements; consult the specific graduate program for details.

Students enrolled in a graduate program should not take courses towards another degree program unless the student has been accepted into the second program, and no more than three courses may be earned at the University of Denver and applied towards a degree program before acceptance into that degree program. Graduate coursework and credit hours already applied toward a degree received from the University of Denver cannot be applied towards another graduate degree of the same level or less.

Advanced degrees are not awarded automatically on completion of the required number of courses or hours of credit.

### Residency Requirements

Enrollment in at least six quarters (four semesters), minimally 45 credit hours, including at least two consecutive quarters (one semester) of full-time attendance is required for graduation.

### Advising

Responsibility for securing approval of a proposed program of study rests with the student. Consultation with the advisor at regular intervals is essential to satisfactory planning and progress toward a degree. The requirements outlined in the college, school, or departmental summaries serve as a guide to program planning and are subject to specific determination in consultation with program advisors, and the student must assume full responsibility for meeting basic requirements and deadlines, as well as the specific requirements outlined by the program advisor.

### Research Tool Requirements

Candidates may be required to demonstrate proficiency in the required tools for research and advanced study.

Where required, tool requirements are determined by the candidate's advisor and committee, and may include one or more languages, statistical methods, laboratory or other research skills. Consult the college, school or department for requirement details.

## Advancement to Preliminary and Final Candidacy

The minimum requirements for advancement to preliminary candidacy include formulation and approval of candidate's general plan of study, achievement of regular status, a minimum grade point average of 3.0 in all work completed to that point, posting of any transfer credit to the candidate's record and planning of tool requirements.

After the first full quarter of doctoral study (normally the first post-Master's quarter), students should arrange with their college, school, or department for an evaluation of status so they may be recommended for advancement to preliminary candidacy.

Students must also be advanced to final degree candidacy by their academic unit.

**Note:** *Advancement to preliminary candidacy may also require satisfactory completion of entrance qualifying examination, if required by the program. Consult the college, school or department for more details.*

## Comprehensive/Competency Examination

This examination is either a written or an oral test designed to evaluate the student's work in the major and related fields. The examination is scheduled at least three quarters (two semesters) prior to graduation. A candidate who fails one or all parts of the examination may petition the college, school or department for re-examination. If granted, a re-examination may not be scheduled until the following quarter.

It is generally expected that students will complete the comprehensive exam prior to defending the dissertation proposal. Students should consult with their unit regarding the timing of the comprehensive exams and the proposal defense.

## The Doctoral Dissertation

The dissertation represents the culminating research experience for doctorate of philosophy students through which degree candidates are expected to complete quality original scholarship that contributes to the theoretical/research knowledge base of the candidate's field of study. The college, school or department determines the amount of credit allowed for research and work on the dissertation. Students should consult the Office of Graduate Education website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>) for instructions regarding how to prepare and format the dissertation.

The Graduate School of Professional Psychology requires their doctorate of psychology candidates to complete a doctoral paper instead of a dissertation and should consult with their program regarding requirements for the doctoral paper.

The Morgridge College of Education requires their doctorate of education candidates to complete a dissertation in practice instead of a dissertation and should consult with their program regarding requirements for the dissertation in practice.

## Program-Level Dissertation Proposal Committee

All candidates for the doctorate of philosophy degree must have a dissertation director who is in the student's graduate program. Programs may require that dissertation proposals be approved by or defended before a committee within the department. Programs reserve the right to determine the composition of the dissertation proposal committee. However, only those who meet the following University requirements may serve as voting members of the oral defense committee.

## Doctoral Dissertation Oral Defense Committee

The doctoral candidate's dissertation oral defense committee will be submitted to the Office of Graduate Education for approval by the Vice Provost for Research and Graduate Education. OGE staff will review the committee to ensure that it meets University policies and the Vice Provost will work with the department/program chair to resolve any concerns that the proposed committee may not adhere to University policies.

Prior to coming to OGE the department/program chair is responsible for confirming the committee membership is appropriate for the dissertation subject matter and for supporting the student's academic needs. If rejected by the chair or the Vice Provost, the dean or designee can review an appeal of committee membership.

The *Thesis/Dissertation Oral Defense Committee Recommendation* form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) should be returned to the Office of Graduate Education as soon as the dissertation proposal has been approved or 30 days following IRB submission but no later than the first day of the quarter in which the student expects to complete the degree.

### Composition

#### Dissertation Director

The dissertation director is ordinarily a tenure-line or research faculty member of the candidate's graduate program. Under some circumstances, faculty with other designations (e.g., clinical) can serve as the dissertation director with approval of the department/program chair and dean/designee. The process for approval is the same as for other committee members (see below).

It is the dissertation director's responsibility to ensure that the student's research meets appropriate academic standards for the discipline in which the degree is being conferred. The dissertation director is a voting member of the committee.

## Committee Members

The committee is composed of a minimum of three and a maximum of six voting members, including the dissertation director. This includes the dissertation director but does not include the Oral Defense Committee Chair, who is a non-voting committee member. Tenure-line and research faculty from DU (or approved Iliff faculty for students in the DU-Iliff Joint PhD program), including those outside the student's program, are automatically eligible to serve on dissertation committees if the dissertation subject is appropriate to their field of expertise.

Faculty with other designations (e.g., clinical, teaching, professor of the practice) are eligible to serve as voting members of the committee if they have been actively<sup>[1]</sup> (p. ) involved in research and scholarship in a relevant field and meet the following requirements:

1. Possession of the research doctorate, terminal degree in the field, or equivalent record of research, scholarship, or achievement appropriate for the program; and
2. Professional productivity as evidenced by achievement such as:
  - Publication of a book or books recognized in the field as scholarly work;
  - Publication of articles in recognized, peer-reviewed scholarly journals;
  - Publication of articles in conference proceedings;
  - Current award or completion of an externally-funded project (e.g. grant recipient or program manager);
  - Possess national eminence in the topic field;
  - Juried performances, exhibitions, or creative works that have received significant regional, national, or international recognition.

Department/Program chairs should submit the CV of an individual to the dean or designee for approval. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs for three years without additional review.

Individuals from other academic institutions may serve as voting members (not director) of the committee. If in a tenure-track or research faculty position in a relevant field at a university or research position in a National Laboratory, they are automatically eligible; if not, individuals must submit a current CV through the department chair for approval by the dean/designee. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs. No more than one committee member can come from outside DU, with the exception of the DU-Iliff joint PhD program, in which case multiple members may come from Iliff.

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[1] (p. ) Actively is defined as contributing to research in the last three to five years

## Oral Defense Committee Chair

The role of the oral defense committee chair is to ensure a fair examination process that adheres to the policies outlined in the Graduate Bulletin. The chair should provide a non-specialist's perspective on the quality of the dissertation. The chair must be familiar with the standards for doctoral research and should have some general knowledge of the topic of the student's dissertation. The chair is expected to have read the dissertation prior to the defense and to participate in the defense as their academic expertise permits, but the chair is not a voting member.

The committee chair must be a tenured member of the DU faculty and must be from a department, school, or college other than that of the candidate<sup>[1]</sup> (p. ). There will be no exceptions to this element of the policy. When a doctoral degree is interdisciplinary, the defense committee chair should whenever possible be from a discipline not represented in the degree. Exceptions to this policy can be approved by the dean or designee when accompanied by a conflict of interest disclosure. Those faculty holding only courtesy appointments in a program are not considered "within" the program.

It is the responsibility of the student and dissertation director to find an appropriate oral defense committee chair who meets these requirements and agrees to serve. In case of difficulty reaching agreement, the chair of the department/program will make a decision. This decision is not appealable.

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[1] (p. ) Students in the DU-Iliff Joint PhD program may have an outside chair from the Iliff School of Theology, but that faculty member must be outside of the field of specialization represented by the student's dissertation.

## Emeriti Faculty

- Emeriti faculty may serve as a voting committee member or outside chair.
- They may continue to finish out advising their students as a dissertation/thesis director but cannot take on new students as director. Before retiring, faculty should work with their department chair to confirm the students and their expected graduation term in which they will continue to serve as their director. The department chair should then submit the approved plan to the Office of Graduate Education.

## Retired Faculty

- Retired faculty may serve as a voting committee member so long as the associate dean and department chair approve. The Office of Graduate Education will keep these approvals on file for 3 years.
- Retired faculty may serve as an outside chair for up to one year post retirement so long as they had tenure prior to retiring and the associate dean and department chair approve. The Office of Graduate Education will keep these approvals on file for one year.
- They may continue to finish out advising their students as a dissertation/thesis director but cannot take on new students as director. Before retiring, faculty should work with their department chair to confirm the students and their expected graduation term in which they will continue to serve as their director. The department chair should then submit the approved plan to the Office of Graduate Education.

## Appeal of Defense Committee Composition

If the department/program chair rejects the composition of the dissertation committee, the student can appeal to the dean or designee. The appeal should include CVs of each proposed committee member, along with a statement explaining why the student believes the composition of the committee is appropriate for the project. The appeal must be signed by the dissertation director to confirm their agreement with the student's proposed committee.

The dean or designee will review the appeal and respond in writing to approve or reject the committee within 10 business days. The decision is final and not subject to appeal.

## Unit-Specific Requirements

Schools and departments reserve the right to establish additional requirements that exceed the University standards. It is the student's responsibility to determine whether or not the unit has requirements in addition to University policy and the unit's responsibility to ensure that those requirements have been met before submitting the Oral Defense Committee Recommendation form to the Office of Graduate Education.

## Doctoral Dissertation Oral Defense

An oral defense of the dissertation is required and is conducted by the candidate's oral defense committee. The defense is concerned primarily with the dissertation or research project but also may include other information in the major field as the committee deems pertinent. The defense must be held at least three weeks before the end of the quarter in which the degree is to be granted. All members of the defense committee must receive a copy of the candidate's dissertation at least two weeks prior to the scheduled defense.

The defense is expected to be held with the student and committee members being present in person. However, if circumstances make it impossible for the student and/or committee members to be physically present, a defense with the student and/or faculty participating by conference call, webcast or other medium is allowed if agreed upon by the student, the dissertation director and committee members. If a disagreement arises with the format of the defense, the Senior Vice Provost or their designee will work with student, chair and committee members to resolve the matter.

## Scheduling of the Oral Defense

Prior to scheduling the defense, the student and dissertation director must have established the candidate's oral defense committee in compliance with the associated policies and have submitted the Thesis/Dissertation Oral Defense Committee Recommendation form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) to the Office of Graduate Education for review.

The student must make arrangements for the date and time of the oral defense with the dissertation director, committee and oral defense committee chair. Students must submit a completed Schedule of Oral Defense form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) to their academic program and the Office of Graduate Education no later than four weeks prior to the date of the defense.

## Conducting the Defense

The Oral Defense Committee Chair will preside over and manage the defense process. The chair is responsible for making certain that the defense is conducted in a professional manner and that the student has a fair opportunity to defend the dissertation. The chair is expected to provide opportunities for each voting member of the oral defense committee to participate in the defense and to ensure that the defense is of high quality while remaining within proper limits of inquiry. Interested faculty members, and in accordance with departmental policy, currently enrolled graduate students also may attend the oral defense. After the oral defense committee has conducted the essential examination of the candidate, questions may be asked by others present if pertinent and appropriate, as determined by the Oral Defense Committee Chair and common practice in the discipline.

When the defense is completed, the chair will request that the candidate and all other persons not on the defense committee leave the room and will call for a motion to pass or fail the candidate. A recommendation to pass can have no more than one negative vote from members of the committee. If the motion is a recommendation to pass, the committee must then agree on the conditions of the recommendation as follows:

- **Pass with no revisions** means that only grammatical, labeling or numbering changes are required. Only a limited number of sentence additions or deletions should be necessary.
- **Pass with minor revisions** indicates that the candidate will be required to reorganize portions of the manuscript and change some of the content.

- **Pass with major revisions** means that a complete chapter or chapters must be rewritten, additional tables are required and interpreted, or the general format must be changed. Responsibility for seeing that needed revisions are made rests with the dissertation director, but committee members also may require their approval before final submission.
- **Fail** indicates that the dissertation content is not of acceptable quality or that the candidate cannot defend the research. In most cases, failing the defense results in the rejection of the student's dissertation and a new or related study usually will need to be undertaken.

A candidate who fails the oral defense may petition the department/program chair for a maximum of one re-examination. The petition should include the reason for the request and committee composition. The Chair of the program will solicit input from the committee before rendering a decision. In the case the Chair is a member of the committee the petition goes to the Dean or their designee. If granted, the re-defense must be scheduled through the Office of Graduate Education and must occur within normal timelines.

The *Result of Oral Defense* form must be signed by all committee members and returned immediately to the Office of Graduate Education. The form cannot be submitted by the student.

## Completing the Degree

### Time Limit for Completion of the Degree

The candidate for the doctorate who holds a master's degree on entering the doctoral program is expected to complete all requirements for the degree no later than seven years after beginning the program, as measured by matriculation into the degree program. Candidates who hold only a bachelor's degree on entering the doctoral program are expected to meet all degree requirements no later than eight years after doctoral studies begin. Failure to complete the degree within the established time limits will result in termination unless the student successfully petitions for an extension to the Senior Vice Provost for Research and Graduate Education. The college, school, or department chair and advisor must recommend this extension in writing. If it is not approved, the student will be dismissed from the program. Students may petition for an extension of time for a minimum of one quarter up to a maximum of one year per request. For more information, see Exceptions (p. 1278) regarding extensions of time.

### Final Procedures for Earning the Doctoral Degree

The student must assume full responsibility for meeting all basic requirements for the degree as well as the specific requirements outlined by the college, school or department.

Before becoming a candidate for graduation, the student must complete the following:

- The candidate must apply for graduation by the deadline. The deadline to apply for graduation is the eighth day of the quarter prior to the quarter that the student plans to graduate. For example, students planning to graduate in the spring quarter should apply to graduate by the eighth day of the winter quarter. Students apply to graduate on MyDU (instructions found on the Office of the Registrar's webpage (<https://www.du.edu/registrar/other-student-services/graduation/>)). Failure to do so will automatically delay graduation to a subsequent quarter. Failure to complete the degree during the expected quarter will require a new application and payment of a fee for additional evaluation and services.
- Satisfactorily complete all coursework and non-coursework requirements for the degree.
- All doctoral students must be advanced to final degree candidacy by their academic unit.
- If the graduate program requires a dissertation, arrange for an oral defense of the dissertation.
  - The Office of Graduate Education should review the oral defense committee as soon as the dissertation proposal has been approved or defended but no later than the first day of the quarter in which the student expects to complete their degree. Formal notification of the oral defense should be filed in the Office of Graduate Education no later than four weeks before the defense date and in accordance with the University schedule of deadlines when graduation candidacy is in the same quarter as the defense.
  - Submit the dissertation to the oral defense committee at least two weeks before the date of the defense.
  - Satisfactorily complete the oral defense at least three weeks before the end of the quarter in which the degree is to be awarded.
  - Submit an electronic copy of the dissertation to ETD/ProQuest and the dissertation director or advisor must submit the final approval of the dissertation to the Office of Graduate Education two weeks prior to the end of the quarter. The student should contact the Office of Graduate Education for the schedule of deadlines and obtain specific instructions for the preparation of the dissertation format.
  - If revisions are such that the dissertation in its final form cannot be filed at least two weeks before the end of the quarter, the awarding of degrees will be postponed.
- Students completing a major doctoral research paper or dissertation in practice should consult with their academic units regarding requirements.
- All Incomplete grades must be removed.
- All in-progress courses must have grades entered.

### Electronic Thesis and Dissertation

As of spring quarter 2008, all theses and dissertations must be submitted electronically to ProQuest (UMI) unless an exemption is granted using the "opt out" procedure. ProQuest/UMI is widely known and respected as the main searchable database for scholarly work; the University of Denver requires students to submit their dissertations and theses to ProQuest.

If the student and the dissertation/thesis chair believe submitting the work to ProQuest will create serious ethical, publishing or other issues, the student should request an exception to this process by submitting an academic exception to the Senior Vice Provost for Research and Graduate Education that explains the concerns.

The electronic submission instructions and deadlines can be found on the Office of Graduate Education's website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>).

Faculty should review the instructions before advising a student about submitting the thesis or dissertation.

EdD students in the Morgridge College of Education may opt into submitting their dissertation in practice to ProQuest but it is not required. If submitting to ProQuest, EdD students must follow the published submission instructions and deadlines.

## Criteria for a Master's Thesis or Doctoral Dissertation

- Requires an approved oral defense committee chair and committee members that meets DU's requirements.
- Successful oral defense of the thesis/dissertation.
- The scheduling of the oral defense and formatting of the thesis/dissertation must be coordinated through the Office of Graduate Education (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>) in accordance with the University schedule of deadlines, graduate policy and formatting requirements.
- All copyright issues must be cleared before the thesis or dissertation is submitted. The student is responsible for obtaining proper permissions for all material used within the work. Evidence of copyright permission may be required with the student's submission to ProQuest (UMI) (<http://www.proquest.com/products-services/dissertations/>). For additional information about copyright permission and the copyright process, visit ProQuest (<http://www.proquest.com/products-services/dissertations/>).
- Electronic submission of "publishable" quality scholarly work.

## Thesis and Dissertation Publication Options

### Embargoes and Restrictions on Accessing Theses and Dissertations

Students should be advised that a thesis or dissertation may be considered to be "previously published" by some publishers if it is put into a searchable digital/electronic repository (e.g. ProQuest). However, it should be noted that the student, not ProQuest (UMI), retains the copyright.

Students should discuss their future thesis/dissertation publication goals with their advisor. Students planning to publish from their thesis or dissertation should consider requesting an embargo of their work.

The student will submit a petition for an academic exception (<http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions/>) explaining the reasons for the embargo. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at [academicexceptions@du.edu](mailto:academicexceptions@du.edu) explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to embargo the work.

During an embargo, ProQuest will completely restrict access to the document for a specified time period. The thesis or dissertation will be held in the ProQuest repository with **no access** until the embargo expires.

### Reasons for Embargo

- The student is interested in pursuing the option of an academic or commercial press acquiring the rights to publish the dissertation or thesis as a book.
- The student is interested in submitting work from the thesis/dissertation to a peer-reviewed journal.
- There are patentable rights in the work for which disclosure may be detrimental to the rights or interests of the author.
- There is an ethical need to prevent disclosure of sensitive or classified information about persons, institutions, technologies, etc. for a time-limited period.

If a student believes that they will need to restrict access for a limited time period, the student can request a six month, one year, or two year embargo.

When an embargo expires, the thesis or dissertation will be automatically made available electronically by ProQuest.

### Renewing an Embargo

If a student wishes to continue to restrict access for a limited time period, the student can request a six month, one year, or two year renewal on the embargo. The student and the thesis or dissertation chair director will submit an academic exception to the Senior Vice Provost for Research and Graduate Education ([academicexceptions@du.edu](mailto:academicexceptions@du.edu)) explaining the issue and stating that access to the work stills needs to be temporarily restricted. The Vice Provost must approve the final decision for permission to renewal embargo. A student may only request two embargo renewals, for a

maximum of a six year embargo period. Students with extenuating circumstances should consult with the Senior Vice Provost for Research and Graduate Education.

If the embargo extension is approved, the student should contact ProQuest directly at 1-800-521-0600 x77020 or via email at [disspub@proquest.com](mailto:disspub@proquest.com).

## University Libraries

ProQuest makes the thesis/dissertation available electronically to the University Libraries. The level of access to the student's work through the University Libraries depends upon embargo choices as described below.

- If the student does not embargo the work, the library will make the work available through the library's online catalog, with links to both ProQuest and the library's digital repository.

If the student embargoes the work for one of the following two reasons, University Libraries will make the work available only to the DU Community and through Inter-Library Loan in a PDF format. The work will not be made available outside the DU Community or over the internet:

- The student is interested in pursuing the option of an academic or commercial press acquiring the rights to publish the dissertation or thesis as a book.
- The student is interested in submitting work from the thesis/dissertation to a peer-reviewed journal.

If the student embargoes the work for one of the following two reasons, University Libraries will restrict access to the work until such time that they are notified by ProQuest that the embargo has been released, or when the author provides written permission directly to University Libraries:

- There are patentable rights in the work or other issues in which disclosure may be detrimental to the rights or interests of the author.
- There is an ethical need to prevent disclosure of sensitive or classified information about persons, institutions, technologies, etc. for a time-limited period.

After the embargo period, the work will be made available through University Libraries online catalog with links to ProQuest and the library's digital repository.

## Opt Out Procedure

In some instances a student may wish to use only University Libraries as the repository of their work. In such cases the student work will be submitted digitally to University Libraries, and it will be made available only to the DU Community and through Inter-Library Loan in a PDF format.

The student will submit a petition for an academic exception (<http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions/>) explaining the reasons why access to the work needs to be restricted. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at [academicexceptions@du.edu](mailto:academicexceptions@du.edu) explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to restrict access to the work.

## Permanently Suppress

In rare cases, where the work includes proprietary information such as company data and records or confidential information that should never be made public, such as client records or interviews or some other serious condition that justifies such an action, it may be appropriate for a student to permanently suppress work. In such cases, the student work will be submitted electronically to University Libraries. The work will be retained by the library and listed in catalog system, but it will not be accessible without permission from the author.

The student will submit a petition for an academic exception (<http://bulletin.du.edu/graduate/academic-and-student-support-services-policies-and-procedures/academic-exceptions-complaints-grievances-and-appeals/exceptions/>) explaining the reasons why access to the work needs to be restricted. The thesis or dissertation chair director will also submit a supporting statement to the Senior Vice Provost for Research and Graduate Education at [academicexceptions@du.edu](mailto:academicexceptions@du.edu) explaining the issue and stating that access to the work needs to be restricted. The Senior Vice Provost must approve the final decision for permission to restrict access to the work.

# Enrollment in Overlapping Quarters/Semesters

## Background

The University of Denver administers federal financial aid under standard term rules. Programs that are eligible for federal student aid must follow the federal rules. Under this guidance standard terms may not overlap with one another. Student enrollment in a semester and quarter at the same time can create federal compliance issues with the standard term rules. This policy provides guidance to the university community for the purposes of advising, program development and registration approval. This policy also serves to maintain federal compliance.

## Policy

The degree program is the determining factor for assigning a student to a quarter program or a semester program. The Office of Financial Aid may process aid for students pursuing two official graduate programs in both semesters and quarters (the law school and another school) based on a

student's primary enrollment pattern during their program. The charts below represent the options of simultaneous enrollment. Students enrolled in two separate degree programs that include semesters and quarters must follow the enrollment rules strictly as defined in the charts to avoid overlapping terms.

The student's enrollment pattern (quarters or semesters) is determined by the program, not the selection of courses. Students solely in a program based on quarter terms may not enroll in semester courses. Students solely in a program based on semester terms (Law) may enroll in some quarters that fit as modules within a semester based on the chart below. Enrollment in courses outside of the student's quarter or semester program must follow the rules for overlapping terms.

## Possible quarter enrollment options for students enrolled in law semester programs

- Fall Semester/Autumn Quarter: Yes
- Fall Semester/Summer Quarter: No
- Spring Semester/Winter Quarter: Yes
- Spring Semester/Spring Interterm: Yes
- Spring Semester/Spring Quarter: No
- Summer Semester/Spring Quarter: No

Recognized programs that include semesters and quarters generally establish a degree progress plan whereby students spend most of the academic year in either the quarter or the semester program. As noted above for students in semester programs, enrollment in some quarters is possible while in the semester program.

## Registration Approval

Students are not allowed to register simultaneously in quarters and semesters outside of the parameters established in this policy. Students should consult with the proper program chair or delegate who will need to ensure that compliance to the above registration practices are followed.

## Consequences of enrolling in overlapping terms

The overlapping term rules apply to all students regardless of financial aid status. Should a student successfully enroll in violation of the practices defined in these rules, the University will notify the advisor and the student that a review and adjustment of course registration is required to maintain compliance. The Office of Financial Aid will not authorize the release of the financial aid for the overlapping terms.

## Program Design

Interdisciplinary programs are a hallmark of the University of Denver's long-term vision of supporting students. Several excellent examples for programs that comply with these policies have already been developed (e.g. JD/MBA, Tax/JD, MSW/JD, MSIS/JD). These models use a cohort experience to ensure that the students achieve their degree success with transparency.

# Enrollment Status

Regular Enrollment (p. 1255)

Concurrent Enrollment (p. 1255)

Consecutive Term Enrollment (p. 1255)

Continuous Enrollment (p. 1256)

## Regular Enrollment

The University's definition of full-time graduate study is eight credit hours or more of coursework or research credit per quarter. Half-time students are enrolled in four to seven credit hours. Less than half-time students are enrolled in one to three credit hours.

Some graduate programs and fellowship awards may require more than eight credit hours of enrollment per quarter to be considered full-time. Contact the individual graduate unit regarding specific enrollment requirements.

## Concurrent Enrollment

Concurrent enrollment, defined as taking courses for credit at the University of Denver and, at the same time, at another institution, is generally not permitted. In order to be concurrently enrolled at another institution, students must successfully petition the Office of Graduate Education and include their reasoning for pursuing concurrent enrollment.

## Consecutive Term Enrollment

All graduate degree-seeking students must be in active status and enrolled for consecutive terms fall through spring.



Enrollment may consist of registration for courses, thesis or dissertation credits, or Continuous Enrollment registration. The minimum thesis or dissertation credit requirements are determined by the individual graduate programs which may require students to register for additional thesis or dissertation credits to maintain degree candidacy. A graduate student who is not in active status and not consecutively enrolled must apply for readmission and pay any continuous enrollment fees owed for previous quarters, if applicable.

Unless a student is on an official leave of absence, a student's status is rendered inactive after one quarter of non-enrollment. The student will not be able to register for courses and will need to submit a *Readmission* form to the program.

Students not planning to be consecutively enrolled must apply for a leave of absence from the university.

**Note:** *Academic units and programs may have additional registration and/or enrollment requirements. Contact the unit for more information.*

## Continuous Enrollment

Registration for Continuous Enrollment (CE) is limited to students who have completed all required coursework (with the exception of independent research hours 4995/5995/5993) and are pursuing academic work/research necessary to complete a degree. CE is designed primarily for students who are working on a thesis, dissertation, or research paper/capstone.

Students who have completed all of their coursework and are working on non-thesis research papers, capstones, performances, or other creative work enroll for four credit hours. Students who have completed all their coursework and are working full time on a thesis, dissertation, or major doctoral research paper enroll for eight credit hours. Doctoral students who have completed all coursework are eligible for continuous enrollment during the preparation of the doctoral comprehensive examinations. CE hours will not appear on student transcripts.

Students enrolled in the dual undergraduate-graduate program who have earned the baccalaureate degree, completed all required graduate coursework, and are working on a thesis are eligible for graduate CE.

CE is not to be used for students who are only engaged in required internships and practicums. Students should register for internship and practicum courses through their department.

Students should be enrolled in CE by the end of the 100% reimbursement/drop-add period to be eligible for the university health insurance and health fee, plus loan deferment. Students who do not enroll prior to the first day of classes of a given quarter will be charged late registration fees as determined by the Office of the Registrar.

CE enables students to maintain active status with the University and access to university resources including library, email, lab access, participation in the DU Student Health Insurance Plan and Health & Counseling fee services, and part-time student rates at the Coors Fitness Center. Students who are appointed DU employees must pay the Coors Fitness Center faculty/staff rate.

CE is not to be used for enrollment purposes while making up an incomplete grade. An exception is if all other coursework is completed and the student is working on their thesis, dissertation or research paper/capstone while completing the work required for no more than one incomplete grade. It is the responsibility of the student and graduate college, school, or department to make this determination prior to approving eligibility for CE credit.

### Registration in Continuous Enrollment

CE requires annual approval by the student's faculty advisor, the Dean and/or the Senior Vice Provost. Students are responsible for registering themselves in CE each quarter by the appropriate registration deadlines.

The *Continuous Enrollment Approval* form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) must be returned to the Office of Graduate Education.

Approval by the Senior Vice Provost for Research and Graduate Education is required for all divisions, schools, and colleges.

Permission to enroll in CE is granted for up to one academic year beginning in the fall quarter. Students requiring CE after fall quarter registration must complete and submit the form prior to the beginning of the subsequent quarter (winter, spring and summer) in order to be enrolled in CE. To avoid late fees, the student must submit a new form for fall quarter of the following academic year.

After permission to enroll is granted, students are responsible for registering themselves online for CE each quarter. Registration for CE must follow the Registrar's deadlines. To avoid late registration charges, students must register for CE prior to the first day of classes. To be eligible for health insurance and loan deferment, students must be registered by the end of the 100% refund period. Hours added after that time will not count towards financial aid eligibility.

There are five course codes for CE. Students register for the appropriate type of CE depending on their thesis/dissertation requirements and financial eligibility status.

- CENR 4500 Non-Thesis (4 credits): Master's level students working on non-thesis research papers, capstones, performances, or other creative work.
- CENR 4600 Thesis (8 credits): Master's level students working on a thesis.

- CENR 5600 Doctoral (8 credits): Doctoral level students working on a dissertation or major doctoral research paper.
- CENR 4500, CENR 4600, and CENR 5600 registrations will confer loan eligibility or loan deferment if the student is eligible to receive financial aid.

Students with an approved time extension for completion of their degree program, but who are no longer eligible for financial aid because they are past the aid eligibility time limit (seven years master's level, six years for MSW, or ten years doctoral) register for

- CENR 4700 Master's Level, Non-Financial Aid Eligible (0 credits).<sup>1</sup>
- CENR 5700 Doctoral Level, Non-Financial Aid Eligible (0 credits).<sup>1</sup>

<sup>1</sup> These courses do not confer loan eligibility or loan deferment.

**Notes:** *Students in University College, the Sturm College of Law, and the Daniels College of Business master's programs are not eligible for continuous enrollment.*

*Peace Corps students are NOT to be put on continuous enrollment for the duration of their Peace Corps assignments. These students must follow the Peace Corps' procedures for maintaining appropriate loan deferment status.*

*Morgridge College of Education doctoral students and students in the DU-Iliff Joint PhD program are required to register for dissertation hours in addition to continuous enrollment. Contact the unit for details.*

*Some units may have more stringent policies. Contact the unit for details.*

## Fees and Readmission

Students must register and pay for CE on a quarter-by-quarter basis. In addition to the standard CE fee, technology fees will be assessed based on part/full-time status (four/eight quarter hours).

Students who have finished their coursework but who have become inactive because they were not registered for CE or on an approved leave of absence from the program must complete the *Continuous Enrollment Application for Re-Admission*. The student must submit transcripts from any institution(s) they may have attended during their absence from DU.

The student will owe CE and technology fees for the quarters they were not enrolled from the winter quarter 2005 forward. In addition, a late fee may be assessed at the time of readmission. Paying fees for previous quarters will not make the student eligible for retroactive enrollment, financial aid, or retroactive loan deferment.

## International Students

Federal immigration regulations require F-1 and J-1 students to enroll full-time for at least three quarters each calendar year (or fall and spring semesters for law students) in order to maintain their immigration status. Exceptions to this requirement may only be authorized by an international student advisor or the program sponsor under very limited criteria.

Federal immigration regulations permit the host institution to define full-time enrollment for F-1 and J-1 students studying at the graduate level. The University defines full-time enrollment for graduate students as eight or more credit hours. To comply with the full-time enrollment requirement, F-1 and J-1 students must enroll in continuous enrollment after all coursework is completed or during the final quarter of coursework, if registered for less than eight credits, while working on the thesis or dissertation, or major doctoral research paper.

CE is not to be used for enrollment purposes in place of registering for required coursework. International students should work closely with their academic programs to ensure that they are able to maintain full-time enrollment in coursework for at least three quarters of each academic year until all coursework is complete (or students are in their final quarter of completing coursework).

F-1 and J-1 students must maintain acceptable levels of health insurance coverage during their academic program, as required of all students by the University. The U.S. Department of State also requires J-1 students to maintain health insurance coverage throughout their exchange program in order to maintain their J-1 immigration status.

F-1 and J-1 students must receive authorization from an international student advisor or their program sponsor prior to dropping below full-time status in an academic quarter when enrollment is required. Failure to receive prior authorization to drop below full-time status is a violation of the student's immigration status and will result in the loss of the student's authorization to lawfully study in the United States.

F-1 and J-1 students should enroll in continuous enrollment (CENR 4600 or CENR 5600) in order to comply with the full-time enrollment requirement while working on the thesis or dissertation, or major doctoral research paper, even if they have reached the maximum limits for their degree programs. Registration in continuous enrollment courses does not confer loan eligibility or loan deferment benefits on a student.

## Financial Aid Loan Eligibility and Loan Deferment

United States citizens and permanent residents participating in CE may be eligible for student loans and loan deferment as long as they are within the maximum time frame allotted for their program.

Students enrolled in CE are eligible for Federal Direct Loans and Federal Work-Study only. The maximum work-study award may be awarded in the amount of \$1500, without the option to increase the award.

Students registered in CE are not eligible for waivers, scholarships, or some forms of financial aid that requires the student to be enrolled on a full-time basis (eight credit hours or more). These include the Graduate Education Doctoral Fellowship and the Graduate Education Doctoral Fellowship for Inclusive Engagement.

However, students on CE may receive a graduate assistantship (GTA, GSA or GRA) as long as they are not required to be enrolled on a full-time basis (eight credit hours or more) according to departmental guidelines.

Registration in CE does not guarantee eligibility for financial aid.

Students must follow the loan procedures established by the Office of Financial Aid (<http://www.du.edu/financialaid/>) and must contact the Office of Financial Aid for details on eligibility for loans and loan deferment. Satisfactory progress towards the degree must be verified.

Eligibility for loans and *in school* loan deferment ends after seven years in a master's program, and after ten years in a doctoral program. Time away from the program (e.g. Leave of Absence, Medical Leave of Absence, or other non-enrollment periods) will count against the loan and loan deferment eligibility time limit. There are alternatives to the *in school* loan repayment deferment that may be applicable. To find out more information about a *forbearance* or *economic hardship* deferment, please contact the Office of Financial Aid or your lender. Students are responsible for submitting lender-required loan deferment forms to the Office of the Registrar (<http://www.du.edu/registrar/>).

## Health Insurance and Continuous Enrollment

Students who are on CE are *not* automatically assessed the Student Health Insurance Plan (SHIP) or health and counseling fee each quarter. SHIP enrollment is available twice a year, in the fall and spring. The Health & Counseling Fee enrollment is available every quarter. Please contact the Health and Counseling Center to discuss enrollment deadlines and payment options, 303-871-2205.

# Graduation Requirements

## Student Responsibility for Graduation Requirements

Students may not receive a University of Denver degree or certificate without completing all requirements. Students must be in good academic standing and may not receive a degree or certificate with fewer than the published number of credits or with a cumulative program GPA below the minimum required for each program they are pursuing (2.3 for JD students in Sturm College of Law, 2.7 for master's students in the Sturm College of Law, 3.0 for all other graduate programs).

## Application for Graduation

All graduate students completing an academic certificate or degree should submit the graduation application two quarters in advance of the intended graduation date. Applications are accepted up to the eighth calendar day of that term. For example, to graduate in the spring quarter (June), the graduation application is due by the eighth calendar day of winter quarter (January). Law students planning on graduating spring or summer semester may apply as of November 1st of that academic year. For those planning on graduating fall semester, the application will be available the first day of that semester. Failure to complete the degree or certificate during the expected graduate term may require a new graduation application and payment of a fee for additional evaluation and services.

Prior to applying to graduate, students need to verify that their curriculum records are accurate and up-to-date. Students who did not apply for graduation by the deadline should review the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating (p. 1258) policy. All requests for walking in commencement and late petitions for graduation must be approved by the Senior Vice Provost for Research and Graduate Education or the Senior Vice Provost's designee.

Note: Students completing a Specialized Graduate Certificate do not need to submit a graduation application and may work with their program directly to ensure they have met all requirements for the Specialized Graduate Certificate.

## Commencement Ceremonies

Formal Commencement ceremonies are held at the University of Denver at the end of the spring and summer terms.

Participating in commencement does not constitute official graduation. It is a celebration that signifies the completion of the appropriate degree requirements and has no academic or legal implications.

## Commencement Program

The Commencement program lists the names of all graduation candidates who applied at the appropriate time to receive degrees at that specific commencement ceremony. The appearance of a name in the program does not guarantee a student's graduation at that time unless all degree requirements have been completed.

## Spring Commencement

### Spring Semester

The Sturm College of Law's Spring Commencement occurs at the end of the spring semester, normally in mid-May. Students who have completed all graduation requirements during autumn or spring semester of the current academic year are invited to participate in the ceremony.

### Spring Quarter

Commencement occurs at the end of the spring quarter, normally in early June. Students who have completed all graduation requirements during autumn, winter, or spring quarters of the current academic year are invited to participate in the ceremony.

Note: Students who have only completed a certificate program are not included in the commencement program or ceremony.

### Summer Commencement

Summer Commencement occurs at the end of summer session, normally in mid-August. Students who have completed all graduation requirements during summer session are invited to participate in the ceremony.

Note: Students who have only completed a certificate program are not included in the commencement program or ceremony.

## Request to Participate in Commencement Ceremony for Students not Graduating

Students who have not completed their degrees may request to participate in the Graduate Commencement Ceremony only if the following parameters have been met for each eligible term:

### Requirements for Walking in Spring Ceremony

- Submit the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating form (found on this Office of Graduate Education webpage (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) to the Vice Provost or the Vice Provost's designee no later than two weeks prior to the graduation date.
- File for graduation within the required time frame.
- Eligibility as a candidate for graduation for the subsequent summer quarter.
- Candidate is within five-credit hours of degree completion, including resolving any incomplete grades.
- Registration for final program requirements in the summer interterm or in summer quarter.
- Complete all non-course degree requirements (e.g., comprehensive examination, practicum, major research paper) two weeks prior to the end of spring quarter. Please note that when a student is registered for an internship course, the internship is considered to be a course-related degree requirement, and the candidate must be within five-credit hours of degree completion.
- If a thesis or dissertation is required for the degree, complete the defense within the first six weeks of the subsequent summer quarter. The defense date must be on file with the Office of Graduate Studies.

### Requirements for Walking in Summer Ceremony

- Submit the Graduate Request to Participate in Commencement Ceremony for Students Not Graduating form (found on this Office of Graduate Education webpage (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) to the Vice Provost or the Vice Provost's designee no later than two weeks prior to the graduation date.
- File for graduation within the required time frame.
- Eligibility as a candidate for graduation for the subsequent fall quarter.
- Candidate is within five-credit hours of completing the degree, including resolving any incomplete grades.
- Registration for final requirements in or before the subsequent fall quarter.
- Complete all non-course degree requirements (e.g., comprehensive examination, practicum, major research paper) two weeks prior to the end of summer quarter. Please note that when a student is registered for an internship course, the internship is considered to be a course-related degree requirement, and the candidate must be within five-credit hours of degree completion.
- If a thesis or dissertation is required for the degree, the defense must be complete within the first six weeks of the subsequent fall quarter. The defense date must be on file with the Office of Graduate Education.

Forms requesting to walk in either the Spring or Summer commencement ceremonies should be returned to the appropriate student services office for approval from the unit and the Vice Provost for Research and Graduate Education. Students may be approved to walk in commencement up until two weeks before of the end of the term, but a student's name may not appear in the commencement program if requests are received only one month prior to the commencement ceremony.

### Diplomas

Diplomas are issued eight to ten weeks after the conclusion of the term in which the student graduates.

**Diploma Name Policy**

The student name listed on a diploma or certificate must match the official name on file at the University (first name, middle name, last name), with the following exceptions:

- option of first name or initial;
- option of diminutive or alternate form for the first name;
- option of a first name which conforms with the graduate's genuine expression of gender identity;
- omission of the first name when the middle name is used as a salutary name;
- option of middle name or initial;
- omission of the middle name;
- inclusion of former or maiden name(s);
- inclusion of proper capitalization and accentuation of name; and,
- inclusion of Hispanic maternal surnames.

Neither titles nor degrees previously earned will be included as part of a graduate's name on a diploma.

## Internships After Completion of Coursework

Some students are required to do an internship as part of the degree requirements, but do not receive course credit while on internship status. These students, who have completed all other coursework, must register for internship credits.

Students should consult the Office of Financial Aid (<http://www.du.edu/financialaid/graduate/>) to see if they are eligible for loans and loan deferment. Students who are not required to participate in an internship are not eligible.

*Note: There are internship programs available to DU students for credit. General regulations governing loans and loan deferments apply. Contact the Office of Financial Aid (<http://www.du.edu/financialaid/graduate/>) for further information.*

## Master's Degree Requirements

Requirements (p. 1260)

Master's Thesis (p. 1261)

Master's Thesis Oral Defense (p. 1263)

Completing the Degree (p. 1264)

## Requirements

### Credit Requirements

The range of approved graduate credits required for a master's degree is 45-92 quarter hours. A minimum of 34 hours of graduate credit must be earned at the University of Denver but vary by unit depending on the number of transferred credits allowed per the transfer of credit policy (<http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/transfer-of-credit/>).

Advanced degrees are not awarded automatically upon completion of the required number of courses or hours of credit.

Students enrolled in a graduate program should not take courses towards another degree program unless they have been accepted into the second program, and no more than three courses may be earned at the University of Denver and applied towards a degree program before acceptance into that degree program. Graduate coursework and credit hours already applied toward a degree received from the University of Denver cannot be applied towards another graduate degree of the same level or less.

### Residency Requirements

Enrollment as a graduate student at the University of Denver for at least three quarters (two semesters) is required for graduation.

### Tool Requirements

Candidates may be required to demonstrate proficiency in the required tools for research and advanced study.

Where required, tool requirements are determined by the candidate's advisor and program and may include one or more languages, statistical methods, laboratory or other research skills. Consult the college, school or department for requirement details.

## Advancement to Candidacy

A review of a candidate's plan of study and progress must be conducted as soon as all the minimum requirements have been met and no later than the first day of the term in which the student expects to complete the degree.

Minimum requirements for the review include completion of any provisional admission requirements, an approved plan of study that will lead to meeting the degree requirements, posting of any transfer work to the student's record, completion of tool (if required) and a grade point average of "B" or better in all work completed to that point. Successful completion of the review and approval by the appropriate student services office constitutes Advancement to Candidacy.

**Note:** Some units may require satisfactory completion of a qualifying examination for Advancement to Candidacy. Consult the academic unit for information regarding requirements.

## Final Examination

The requirement of a final examination for the master's degree is in accordance with the requirements of the candidate's college, school or department. Where required, the examination may be oral, written, or both. The examination may focus on overall course content or it may be the final step in the defense of a thesis.

## Additional Master's Degree Requirements

In addition to coursework, most master's degree programs require a creative project, internship or practicum, oral comprehensive examination and/or major paper or thesis. Typically such projects are managed within the unit or program.

## Master's Thesis

The master's thesis represents the culminating research of the master's degree program. It is a scholarly presentation of original research that is defended as partial fulfillment of requirements for the master's degree. The college, school or department determines the amount of credit allowed for research and work on the thesis. Students should contact the Office of Graduate Education on instructions regarding how to prepare and format the thesis (instructions found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)).

## Program-Level Thesis Proposal Committee

All candidates for the master's degree must have a thesis director who is a faculty member in the student's graduate program. Programs may require that thesis proposals be approved by or defended before a committee within the department or program. Programs reserve the right to determine the composition of the thesis proposal committee. However, only those faculty who meet the following University requirements may serve as voting members of the oral defense committee.

## Master's Thesis Oral Defense Committee

The masters candidate's thesis oral defense committee will be submitted to the Office of Graduate Education for approval by the Senior Vice Provost for Research and Graduate Education. OGE staff will review the committee to ensure that it meets University policies and the Senior Vice Provost will work with the department/program chair to resolve any concerns that the proposed committee may not adhere to University policies.

Prior to coming to OGE the department/program chair is responsible for confirming the committee membership is appropriate for the thesis subject matter and for supporting the student's academic needs. If rejected by the chair or the Senior Vice Provost, the dean or designee can review an appeal of committee membership. The Thesis/Dissertation Oral Defense Committee Recommendation form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) should be returned to the Office of Graduate Education as soon as the thesis proposal has been approved or 30 days following IRB submission but no later than the first day of the quarter in which the student expects to complete the degree.

### Composition Thesis Director

The thesis director is ordinarily a tenure-line or research faculty member of the candidate's graduate program. Under some circumstances, faculty with other designations (e.g., clinical) can serve as the thesis director with approval of the department/program chair and dean/designee. The process for approval is the same as for other committee members (see below).

It is the thesis director's responsibility to ensure that the student's research meets appropriate academic standards for the discipline in which the degree is being conferred. The thesis director is a voting member of the committee.

### Committee Members

The committee is composed of a minimum of two and a maximum of five voting members, including the thesis director. This includes the thesis director but does not include the Oral Defense Committee Chair, who is a non-voting committee member. Tenure-line and research faculty from DU,

including those outside the student's program, are automatically eligible to serve on thesis committees if the thesis subject is appropriate to their field of expertise.

Faculty with other designations (e.g., clinical, teaching, professor of the practice) are eligible to serve as voting members of the committee if they have been actively<sup>[1]</sup> (p. ) involved in research and scholarship in a relevant field and meet the following requirements:

1. Possession of the research doctorate, terminal degree in the field, or equivalent record of research, scholarship, or achievement appropriate for the program; and
2. Professional productivity as evidenced by achievement such as:
  - Publication of a book or books recognized in the field as scholarly work;
  - Publication of articles in recognized, peer-reviewed scholarly journals;
  - Publication of articles in conference proceedings;
  - Current award or completion of an externally-funded project (e.g. grant recipient or program manager);
  - Possess national eminence in the topic field;
  - Juried performances, exhibitions, or creative works that have received significant regional, national, or international recognition.

Department/Program chairs should submit the CV of an individual to the dean or designee for approval. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs for three years without additional review.

Individuals from other academic institutions may serve as voting members (not director) of the committee. If in a tenure-track or research faculty position in a relevant field at a university or research position in a National Laboratory, they are automatically eligible; if not, individuals must submit a current CV through the department chair for approval by the dean/designee. Once approved, the Office of Graduate Education will maintain these approved lists for individual programs. No more than one committee member can come from outside DU

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[1] (p. ) Actively is defined as contributing to research in the last three to five years

## Oral Defense Committee Chair

The role of the oral defense committee chair is to ensure a fair examination process that adheres to the policies outlined in the Graduate Bulletin. The chair should provide a non-specialist's perspective on the quality of the thesis. The chair must be familiar with the standards for master's thesis research and should have some general knowledge of the topic of the student's thesis. The chair is expected to have read the thesis prior to the defense and to participate in the defense as their academic expertise permits, but the chair is not a voting member.

The committee chair must be a tenured member of the DU faculty and must be from a department, school, or college other than that of the candidate. There will be no exceptions to this element of the policy. When a master's degree is interdisciplinary, the defense committee chair should whenever possible be from a discipline not represented in the degree. Exceptions to this policy can be approved by the dean or designee when accompanied by a conflict of interest disclosure. Those faculty holding only courtesy appointments in a program are not considered "within" the program.

It is the responsibility of the student and thesis director to find an appropriate oral defense committee chair who meets these requirements and agrees to serve. In case of difficulty reaching agreement, the chair of the department/program will make a decision. This decision is not appealable.

## Emeriti Faculty

- Emeriti faculty may serve as a voting committee member or outside chair.
- They may continue to finish out advising their students as a dissertation/thesis director but cannot take on new students as director. Before retiring, faculty should work with their department chair to confirm the students and their expected graduation term in which they will continue to serve as their director. The department chair should then submit the approved plan to the Office of Graduate Education.

## Retired Faculty

- Retired faculty may serve as a voting committee member so long as the associate dean and department chair approve. The Office of Graduate Education will keep these approvals on file for 3 years.
- Retired faculty may serve as an outside chair for up to one year post retirement so long as they had tenure prior to retiring and the associate dean and department chair approve. The Office of Graduate Education will keep these approvals on file for one year.
- They may continue to finish out advising their students as a dissertation/thesis director but cannot take on new students as director. Before retiring, faculty should work with their department chair to confirm the students and their expected graduation term in which they will continue to serve as their director. The department chair should then submit the approved plan to the Office of Graduate Education.

## Appeal of Defense Committee Composition

If the department/program chair rejects the composition of the thesis committee, the student can appeal to the dean or designee. The appeal should include CVs of each proposed committee member, along with a statement explaining why the student believes the composition of the committee is appropriate for the project. The appeal must be signed by the thesis director to confirm their agreement with the student's proposed committee.

The dean or designee will review the appeal and respond in writing to approve or reject the committee within 10 business days. The decision is final and not subject to appeal.

## Unit-specific Requirements

Schools and departments reserve the right to establish requirements that exceed University standards. It is the student's responsibility to determine whether or not the unit has requirements in addition to University policy and the unit's responsibility to ensure that those requirements have been met before submitting the Oral Defense Committee Recommendation form to the Office of Graduate Education.

## Master's Thesis Oral Defense

The candidate's oral defense committee conducts the oral defense of the master's thesis. The defense must be held at least three weeks before the end of the quarter in which the degree is to be granted.

All members of the defense committee must receive a copy of the candidate's thesis at least two weeks prior to the scheduled defense.

The defense is expected to be held with the student and committee members being present in person. However, if circumstances make it impossible for the student and/or committee members to be physically present, a defense with the student and/or faculty participating by conference call, webcast or other medium is allowed if agreed upon by the student, the thesis director and committee members. If a disagreement arises with the format of the defense, the Senior Vice Provost or their designee will work with student, chair and committee members to resolve the matter.

## Scheduling of the Oral Defense

Prior to scheduling the defense, the student and thesis director must have established the candidate's oral defense committee in compliance with the associated policies and have submitted the Thesis/Dissertation Oral Defense Committee Recommendation form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) to the Office of Graduate Education for review.

The student must make arrangements for the date and time of the oral defense with the thesis director, committee, and oral defense committee chair.

Students must submit a completed Schedule of Oral Defense form (found on the OGE website (<https://www.du.edu/graduate-education/current-student-resources/dissertation-thesis-information/>)) to the Office of Graduate Education and their academic program no later than four weeks prior to the date of the defense.

## Conducting the Defense

The oral defense committee chair will preside over and manage the defense process. The chair is responsible for making certain that the defense is conducted in a professional manner and that the student has a fair opportunity to defend the thesis. The chair is expected to provide opportunities for each voting member of the oral defense committee to participate in the defense and to ensure that the examination is of high quality while remaining within proper limits of inquiry. Interested faculty members, and in accordance with departmental policy, currently enrolled graduate students also may attend the oral defense. Before or after the oral defense committee has conducted the essential examination of the candidate, questions may be asked by others present if pertinent and appropriate as determined by the Oral Defense Committee Chair and common practice in the discipline.

When the defense is completed, the chair will request that the candidate and all other persons not on the defense committee leave the room and will call for a motion to pass or fail the candidate. A recommendation to pass can have no more than one negative vote from members of the committee. If the motion is a recommendation to pass, the committee must then agree on the conditions of the recommendation as follows:

- **Pass with no revisions** means that only grammatical, labeling or numbering changes are required. Only a limited number of sentence additions or deletions should be necessary.
- **Pass with minor revisions** indicates that the candidate will be required to reorganize portions of the manuscript and change some of the content.
- **Pass with major revisions** means that a complete chapter or chapters must be rewritten, additional tables are required and interpreted, or the general format must be changed. Responsibility for seeing that needed revisions are made rests with the thesis director, but committee members also may require their approval before final submission.
- **Fail** indicates that the thesis content is not of acceptable quality or that the candidate cannot defend the research. In most cases, failing the defense results in the rejection of the student's thesis and a new or related study usually will need to be undertaken.

A candidate who fails the oral defense may petition the department/program chair for a maximum of one re-defense. The petition should include the reason for the request and committee composition. The Chair of the program will solicit input from the committee before rendering a decision. In the case the Chair is a member of the committee the petition goes to the Dean or their designee. If granted, the re-defense must be scheduled through the Office of Graduate Education and must occur within normal timelines.



The *Result of Oral Defense* form must be signed by all committee members and returned immediately to the Office of Graduate Education. The form cannot be submitted by the [student](#).

## Completing the Degree

### Time Limit for Completion of the Degree

Master's degree candidates are expected to complete degree requirements within five years of beginning their programs, as measured by the matriculation into the degree program.

Failure to complete the degree within the established time limits will result in termination unless the student successfully petitions for an extension to the Senior Vice Provost for Research and Graduate Education. The college, school, or department and the student's advisor must recommend this extension. If it is not approved, the student will be terminated from the program. Students may petition for an extension of time for a minimum of one quarter and up to a maximum of one year per request. For more information, see Exceptions (p. 1278) regarding extensions of time.

*MCE: The Ed.S. must be completed in six years.*

### Final Procedures for Earning the Master's Degree

The student must assume full responsibility for meeting all basic requirements for the degree as well as the specific requirements outlined by the college, school or department. The student must complete the following:

- Apply for graduation by the deadline. Failure to complete the degree during the expected graduation term may require a new application and payment of a fee for additional evaluation and services.
- Satisfactorily complete all coursework and non-coursework requirements for the degree.
- Arrange for an oral defense of the thesis, if the graduate program requires one. The Office of Graduate Education should review and approve the oral defense committee as soon as the thesis proposal has been approved or defended but no later than the first day of the quarter in which the student expects to complete the degree. Formal notification of the oral defense should be filed in the Office of Graduate Education no later than four weeks before the defense date and in accordance with the University schedule of deadlines when graduation candidacy is in the same quarter as the defense.
- Complete any required final defense, oral, written or both, at least three weeks before the end of the quarter in which the degree is awarded.
- All Incomplete grades must be removed at least three weeks before the end of the term in which the degree is to be awarded.
- All in-progress courses must have a grade entered.
- Submit an electronic copy of the thesis to ETD/ProQuest and have the thesis director or advisor submit the final approval to the Office of Graduate Education two weeks prior to the end of the quarter. The student should contact the Office of Graduate Education for the schedule of deadlines and obtain specific instructions for the preparation of the thesis format.
- If revisions are such that the thesis in its final form cannot be filed at least two weeks before the end of the quarter, the awarding of degrees will be postponed.

**Notes:** *Students in Formal or Flexible Dual Degree programs must file an application for graduation for both degree programs.*

*Individual academic units may have more stringent policies. Contact the unit for details.*

## Readmission

### Readmission for Inactive Students

Students who are within their time limits for completion of their degrees, but have interrupted their graduate programs by not registering for one or more consecutive terms (excluding summer) without properly withdrawing by requesting a leave of absence, must submit a readmission form to the program.

Students who still have coursework to complete must submit an application for readmission and indicate the last term attended and the expected term of re-entry. The department must approve the request for readmission and the student must submit transcripts from any institution(s) attended during their absence from DU. Once readmission is complete, students may register during the regular registration period, including priority registration, according to the Registrar's deadlines.

Students who have permanently withdrawn from the university and would like to return must meet the following criteria:

- Date of withdrawal cannot be more than five years
- The student must still be within their time to degree completion per the quarter of matriculation

If a student does not meet this criteria, they will be required to follow the Readmission for Terminated Students policy (<http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission/>). Graduate units reserve the right to request that the student submit a full application for admission (which includes the application fee) to the appropriate admissions office.

## Readmission for Terminated students

Students who have been dismissed from a program or have an expired time limit for degree that wish to be readmitted need to complete the following:

1. Submit a new application to the program and meet the current admissions criteria.
2. If admission is granted, the most current program bulletin must be followed, including all curriculum and program requirements.
3. All previous coursework older than five years must be reviewed by the department to determine if it is still relevant for the current term of admittance.

Final approval for admission, consideration of coursework from a program in which a student was previously terminated, and timeline for degree completion must be approved by the Senior Vice Provost for Research and Graduate Education.

**Note:** Per "Section 484C of the Higher Education Act (HEA) provides that an institution of higher education may not deny readmission to a service member of the uniformed services for reasons relating to that service."

Please visit the U.S. Department of Education (<http://www2.ed.gov/policy/highered/guid/readmission.html>) website for full text version of policy and requirements.

## Registration

Student Responsibility for Registration Procedures (p. 1265)

Registration Offices (p. 1265)

Course Registration (p. 1266)

Course Information (p. 1267)

## Student Responsibility for Registration Procedures

Students must register by the appropriate deadlines for all courses they wish to attend.

Students may register for courses through M (<https://PioneerWeb.du.edu>)yDU (<https://my.du.edu/dashboard/>), in the registration office located in the Office of the Registrar (<http://www.du.edu/registrar/>), or as designated by the college or school the student is attending. Courses requiring special permissions or forms, such as independent study, restricted enrollment, those with unmet prerequisites, or those resulting in a credit-hour overload may require students to register in the Office of the Registrar. Students are expected to check with academic advisors and/or the program requirements in the academic bulletin to identify prerequisites and course restrictions prior to attempting to register for courses.

After priority registration, students may drop or add courses without approval or penalty (except for the late registration fee) through the first seven days of a quarter (summer session excluded) through M (<https://PioneerWeb.du.edu>)yDU (<https://my.du.edu/dashboard/>) or during regular office hours in the registration office. All students in the following categories who do not register before the first day of the quarter are assessed a late registration service charge: continuing students, new students, students returning from leave of absence and readmitted students. The late registration service charge cannot be waived. Registrations are not processed after the designated registration period of the quarter.

Students may drop or add courses without approval or penalty (except for the late registration fee) through the first seven days of a quarter (summer session excluded) through M (<https://PioneerWeb.du.edu>)yDU (<https://my.du.edu/dashboard/>) or during regular office hours in the registration office.

Please refer to the *Important Dates Calendar* for more information regarding registration deadlines.

## Registration Offices

Registration is overseen by different offices depending upon the student's program. Questions about registration dates, deadlines or procedures should be directed toward the appropriate registration office.

Graduate students, other than University College, Law, and Social Work, may contact the Office of the Registrar (<http://www.du.edu/registrar/>) at 303-871-4095.

The University College S (<http://www.universitycollege.du.edu>)tudent Services (<http://universitycollege.du.edu/>) can be reached at 303-871-2291.

The Sturm College of Law (<http://www.law.du.edu>) can be reached at 303-871-6132.

The Graduate School of Social Work (<http://www.du.edu/socialwork/>) can be reached at 303-871-3463.

## Course Registration

### Section Changes

Students may change from one section of a course to another with the instructor's approval for the section being added. The section being dropped is deleted from the student's record.

### Adding Courses

Generally, courses may be added from the second to eighth week of a ten-week quarter with an instructor's signature. Courses may not be added after the eighth week of the quarter. Deadlines for adding courses may differ for semester, interterm periods, and non-conforming terms that are not the standard ten weeks.

### Waitlists

Contact the individual academic units for their policies on waitlisted courses.

### Credit Load

A full-time graduate student may enroll for 8 to 18 credit hours each quarter.

A credit-hour load of more than 18 hours requires instructor and advisor approval and the signature of the dean of the unit. Each credit hour taken in excess of 18 hours is charged at the current hourly tuition rate.

**Note:** *The total study load includes all courses taken at the University of Denver and at other institutions concurrently. Courses taken for no-credit (NC) are also applied toward the total study load. The maximum enrollment for any quarter is 20 credit hours.*

## Dropping Courses

### Notification by Student of Intent to Withdraw

You may also submit a withdraw request via your M (<https://pioneerweb.du.edu/>)yDU (<https://my.du.edu/dashboard/>). Navigate to Student Tools, followed by Records and Requests, and finally Withdraw from DU. We record your official date of withdrawal as the date you notify the Office of the Registrar or the registration office associated with your specific program, of your intent to withdraw. If the request to withdraw is received by another unit with registration authority, the effective date is the date that office is notified. During the automatic withdrawal period classes will be dropped effective the date of notification.

When a student ceases to attend a course, the student remains enrolled in the course unless the course is officially dropped through the appropriate registration office. A course may be dropped without instructor's approval through the published date for automatic withdrawal (generally the end of the sixth week of a standard ten week quarter). A student cannot drop a course after the automatic withdrawal (W) deadline without the instructor's signature and advisor's signature. All required signatures must be submitted to the appropriate registration office. The student is liable for payment of all tuition and charges related to the course.

Students may not withdraw from courses after the eighth week of the quarter (or after the fourth week of a five- or six-week course).

In cases where the grade report indicates the student never attended, the Registrar may process the withdrawal request without referral to the Vice Provost's office or the Graduate Academic Concerns Committee. Section and level corrections are also delegated to the Registrar's Office.

In some cases, the student may need to submit a formal petition for an exception to academic policy to withdraw from a course.

**Notes:** *Some programs may have more stringent policies regarding withdrawal from courses. Contact the unit for details.*

*Contact the Sturm College of Law for semester system withdrawal procedures.*

International students who are considering withdrawing from the University should also contact the Office of International Student and Scholar Services (ISSS) in addition to following the Office of Graduate Education procedures.

### Official Drop Periods

Courses dropped through the first seven days of a ten week quarter (Monday–Sunday, summer session excluded) are deleted from the student's record. Tuition will be reversed through this time period (first 10 percent of the term), if applicable.

A notation designating a withdrawal ("W") is assigned for courses officially dropped after the first week of the quarter. The course appears on the student's record with a withdrawal ("W") grade notation. Credit hours for the withdrawn course are not earned and the "W" grade notation is not calculated in the GPA. A course may be dropped without instructor approval through the published date for automatic withdrawal (generally the end of

the sixth week of a quarter, 60 percent of the term). Withdrawal deadlines and tuition refund schedules are available at [www.du.edu/registrar](http://www.du.edu/registrar) (<http://www.du.edu/registrar/>).

## Academic Dishonesty

A student can be prevented from dropping a course in cases of suspected academic dishonesty, even during the automatic withdrawal (W) period.

In cases of suspected academic dishonesty, the Office of the Registrar (<http://www.du.edu/registrar/>) can reinstate a course that has been dropped without notification to the student. Once the case is heard by the Office of Student Conduct (<http://www.du.edu/studentlife/studentconduct/>) or reviewed by the unit in which the case originated, and if academic dishonesty is determined, an instructor may assign a student a failing (F) grade for the course. A withdrawal (W) for the course is not honored. If the accused student is found innocent of academic dishonesty and there has been an attempt to drop during the automatic withdrawal period, the drop is processed and a notation of withdrawn (W) assigned.

## Requesting Drop when Student is Failing

An instructor may refuse to give permission to drop a course to a student who is failing the course.

## Drops with Approval

After the sixth week of a ten-week quarter the instructor's signature are required to drop a course.

## Drop Deadlines

Withdrawals during the two weeks (ten class days, Monday through Friday) prior to the scheduled final examination period are not allowed.

The Office of the Registrar (<http://www.du.edu/registrar/>) will maintain these and other important registration activity deadlines.

**Notes:** Some units may have different policies regarding registration processes, deadlines and procedures for adding/dropping of courses and academic dishonesty. Contact the Office of the Registrar for more details.

Registration deadlines may differ for interterm periods and courses that do not conform to the standard ten week term.

University College, Graduate Tax and the Sturm College of Law may have different policies regarding registration processes, deadlines and procedures for adding/dropping of courses. Contact their registration offices for more details.

## Repeating Courses

Repeatable courses include independent research, independent study, topics courses and music performance courses. Unless it is specifically designated as repeatable, a course in which the student has received a qualifying grade may not be repeated for credit.

If a non-repeatable course is taken again, the regular tuition rate is paid and the course is counted as part of the total credit load. All grades are counted in GPA calculations. The highest grade received in the repeated course fulfills the degree requirements, but hours earned toward degree requirements are counted only once.

All repeated courses appear on student transcripts. Automated advising tools (e.g. the Degree Audit) may show only first grade for the course.

## Course Information

### Course Number Designation

Graduate credit cannot be earned in courses numbered below 3000.

Not all 3000-level courses may be offered for graduate credit. Students should consult the course description in their unit, program, and course schedule prior to enrolling in any 3000-level course to verify it is listed at the graduate level and may count as credit for the graduate degree. 3000-level courses that are not designated as graduate level are not approved to count toward graduate degrees.

The course number consists of a three or four letter subject code that identifies the academic unit offering the course, followed by four numbers that indicate the level of the course.

Pre-collegiate, Remedial, or Continuing Education Unit Courses	0001-0999
Undergraduate Courses (Lower Division)	1000-1999
Advanced Undergraduate Courses (Upper Division)	2000-2999
Advanced Undergraduate and Graduate Courses (Combined)	3000-3999
Graduate Courses	4000 or Over

## Schedule Type

### Independent Study

Independent study provides opportunities for the capable student to do special work under individual supervision in areas not covered by class offerings.

Projects must be undertaken within the academic term in which they are registered. Independent study may not be taken instead of, or to modify, a regular course offered by a department. In addition, independent study cannot be used to account for study taken at another university or at the undergraduate level. The study must be conducted with DU faculty at the graduate level.

The department may limit the maximum number of Independent Study credit hours a student may apply towards their degree.

The students should demonstrate qualities necessary for interested and intensive inquiry. The student, with the approval of the instructor and department concerned, must agree upon the topic and outline.

Graduate students must obtain applications for independent study projects from the Office of the Registrar (<http://www.du.edu/registrar/>). Partial applications will not be processed and registration after published registration dates is not permitted. To be eligible for independent study, the student must be in academic good standing (i.e., 3.0 GPA for graduate students). Independent studies must be at least one credit hour and generally not to exceed five hours. Independent study projects appear on the student's transcript with the specific topic as the course title and academic grades (A-F) are assigned.

The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved and agree to assume responsibility if problems arise.

### Independent Research

Independent research opportunities are available to students primarily for thesis and dissertation research or other independent research. The department may limit the maximum number of Independent Research credit hours a student may apply towards the degree.

Projects must be undertaken within the academic term in which they are registered and registration after published registration dates is not permitted.

Students obtain applications from their academic department. Incomplete or partial applications will not be processed. Upon successful completion of the project or on its termination by request of the department, the research advisor will record a final grade. The department may use the A-F grading system in evaluating the research or record "P" (pass) or "F" (fail) for the course.

The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved and agree to assume responsibility if problems arise.

### Directed Study

A directed study course is a permanent catalog course delivered on an individual basis when the course is not offered that term. Directed studies are approved under extenuating circumstances to provide an opportunity to complete a required course.

Directed studies use the same forms and processes as independent studies. Partial applications will not be processed. Directed study courses appear on the student's transcript with the specific course title and must be approved by the instructor and department concerned. There can be no change in the basic content of the course. In particular, this means the level, subject code, description, title, grading policy (A-F, P/NP), credits and course content cannot differ from the permanent course. Projects must be undertaken within the academic term in which they are registered. Registration after published registration dates is not permitted.

The responsibilities of the instructor of record are to establish specific requirements for the course of study, see that the grades are submitted, approve the credentials of other faculty involved, and agree to assume responsibility if problems arise.

### Experiential Learning/Internship Credit

Experiential learning courses consist of supervised experience in an area of specialization that may be conducted either on or off campus with the student making periodic reports to the instructor. These include clinical, practicum, internship, student teaching, and cooperative work experience. They do not include graduate teaching or research assistantships at DU.

### Courses for no credit

A student may register for no credit (NC) in any course with approval of the course instructor and only where space is available. A no credit registration cannot be changed to a credit registration after the deadline for registration has passed. Furthermore, a student enrolled for credit cannot change to no credit after the end of the sixth week of the quarter. Such courses count as full credit value in determining the total study load allowed. Courses taken on a no credit basis do not apply as part of the minimum credit-hour requirements for any graduate degree. The tuition charge for no credit courses is the same as for credit courses.

If adding the no-credit course creates a course overload, it requires approval from the instructor, advisor and dean of the unit.

No credit courses are listed on the student's permanent record with a grade of No Credit (NC). Students receiving any type of financial aid, scholarship, grants or tuition waiver should check with the Office of Financial Aid (<http://www.du.edu/registrar/>) before registering for NC as financial aid or waiver may not cover courses taken for no credit.

**Note:** Some units may have more stringent policies regarding no credit courses. Students should consult their registration office for information.

## Audit Registration

Fulltime DU students may register to audit courses on a space-available basis. Audit registration permits students to participate in courses, but grades are not recorded and credit is not awarded. Permission from the instructor is required and some programs may require additional approvals. Course restrictions such as prerequisites apply to course auditors. The following course types may not be audited: online, lab, clinical, practicum, performance (except for ensemble), internship/externship, independent or directed study or studio. Course auditors do not submit assignments or participate in exams. Audited courses do not appear on a student's transcript and do not count for fulltime status, loan deferments, financial aid, etc.

Audit registration may not be changed to credit registration after the deadline for registration has passed. Credit registration may not be changed to audit registration after the deadline to drop classes. Students may audit only one course per term.

Enrolled, degree-seeking DU students may audit certain courses on a space available basis. Tuition is not charged, but relevant course fees are charged.

## Permission for Undergraduates to Register for Graduate Courses

Undergraduates may request to enroll in graduate courses that are well suited to their programs of study. This opportunity is available to seniors whose academic achievement makes graduate-level work appropriate. This policy applies to graduate courses with course numbers of 4000 and above. Some 3000-level courses are approved for either undergraduate or graduate credit. Undergraduate courses may not be taken for graduate credit.

### Graduate courses for undergraduate credit

Students must be classified as a senior and have an overall cumulative GPA of at least 3.0. The student must obtain approval of the course instructor; chair or program director of the graduate program; Office of Graduate Education; and the student's major advisor. Graduate courses taken for undergraduate credit may not be subsequently used to satisfy graduate requirements unless the student is in an approved dual undergraduate/graduate degree program.

### Graduate courses for graduate credit

Students who have been admitted to a DU graduate program do not require permission to register for a graduate course for graduate credit. Otherwise, undergraduate students must be classified as a senior and have an overall cumulative GPA of at least 3.0. The student must obtain approval of the course instructor; chair or program director of the graduate program; and Office of Graduate Education. Courses taken for graduate credit may not be used to satisfy undergraduate requirements unless the student is in an approved dual undergraduate/graduate degree program.

## Student Responsibility for Policies and Procedures

Students may have questions on a range of topics from academic standards to graduation requirements. To successfully navigate the policies and practices of the institution, we invite you to take some time to read the Graduate Policies and Procedures (p. 9).

Individual schools and departments may have additional policies particular to their graduate programs. Please make sure you understand both; however, it is important to know that unit-specific policies do not override university-wide policies. Please consider contacting the Office of Graduate Education for questions about the university's policies and procedures.

## Student Withdrawal from the University

Things to Consider Prior to Withdrawing (p. 1269)

Withdrawing (Temporary or Permanent) (p. 1271)

Personal Leave of Absence (p. 1271)

Medical Leave of Absence (p. 1272)

Mandatory Withdrawal Policy (p. 1275)

## Things to Consider Prior to Withdrawing

Students who wish to drop all courses in a term and take a leave of absence or withdraw permanently from their programs are advised to consider the impact on the following items:

## Timeline for Degree Completion, Cohort Placement and Degree Requirements

While on an approved leave of absence, students are guaranteed a place in their current program when they return to the University, provided all deadlines and rules are observed. Some units may have more restrictive guidelines for a leave of absence. Students should consult with their unit and program for more information before deciding to take leave. Students returning from leave have the same registration priority as continuing students. It is important to note that students are still held to the original timeline for completion of the degree, unless a student is on an approved medical leave of absence. Non-degree students or students who are beyond the time limit to complete their degrees are not eligible for a leave of absence.

Students who have permanently withdrawn from the university and would like to return must meet the following criteria:

- Date of withdrawal cannot be more than five years
- The student must still be within their time to degree completion per the quarter of matriculation

If a student does not meet this criteria, they will be required to follow the Readmission for Terminated Students policy (<http://bulletin.du.edu/graduate/academic-requirements-policies-and-procedures/readmission/>). Graduate Units reserve the right to request that the student submit a full application for admission (which includes the application fee) to the appropriate admissions office.

## Tuition and Fee Payment and Refund Schedule

Outstanding debts must be cleared with the Bursar's Office. A student's leave application will be accepted even if they owe money to the University. However, students will not be allowed to register for future terms if they have any outstanding debts to the University. In the case of extenuating circumstances that are beyond the student's control, a student may appeal for an exception to the University's refund policy.

## Withdrawal Deadlines

Enrolled students should review the academic calendar (<http://www.du.edu/registrar/calendar/>), and be aware of the important dates and term-specific withdrawal deadlines.

## Health Insurance Coverage

University of Denver Health Insurance coverage may be interrupted or discontinued. To learn more about the coverage, students should consult with the staff in the Health and Counseling Center (<http://www.du.edu/health-and-counseling-center/>) at 303-871-2205.

## Financial Aid, Scholarships, Work-Study, GTA/GRA and Loan Repayment Terms

Students should be clear about the impact of withdrawal on loan repayment requirements as well as scholarships, teaching assistantships and other forms of University aid. While on a leave of absence, students are not eligible to receive financial aid, including work-study. Some forms of University aid (i.e. GRA, GSA and GTA positions and other scholarships or fellowships) are not guaranteed to be reinstated if a student takes a leave of absence. In addition, student loan repayment terms may be impacted and in some cases repayment may begin when a student goes on leave. It is the students' responsibility to notify their lender they are taking a leave of absence and will not be enrolled at the University.

Students should apply for financial aid well in advance of the term they expect to return to school so their disbursement is available at the beginning of the term. Contact the Office of Financial Aid (<http://www.du.edu/financialaid/>) for additional information.

## F-1 or J-1 Visa Immigration Status for International students

International students who are interested in withdrawing should be aware of certain restrictions in the immigration laws. Non-immigrant students may not remain in the United States in F-1 or J-1 immigration status if they are not enrolled full-time in school unless they meet certain criteria and have approval from International Student and Scholar Services (ISSS). In order to take a leave, international students may need to either leave the United States while out of school or change to another non-immigrant status. Before withdrawing and applying for a leave, international students should consult with an advisor in the ISSS office.

## University Housing Contract

Housing contracts are for the entire academic year; please see housing policy to understand approved reasons for checking out during the academic year. Students must check out of the apartment within 24 to 48 hours of withdrawing.

## Benefits for Veterans

For students receiving veterans' benefits, the Coordinator of Military Programs in the Office of the Registrar should be notified of withdrawal plans.

## Parking Permits and Unpaid Citations

Unpaid citations must be cleared with Parking Services, and parking permits should be returned to avoid additional costs.

## University Libraries Books and Overdue Book Fines

All library books should be returned, and overdue book fines should be paid prior to withdrawing.

## Contact Information

It is university policy that students maintain a preferred off-campus address and email account. It is each student's responsibility to keep both a current mailing address and email address updated while on leave. If a student's address changes while on leave, the address should be updated through myDU.

## Withdrawing (Temporary or Permanent)

Students considering time away from graduate study must communicate with the University prior to taking time off from the graduate program and fill out the appropriate paperwork. There are two types of withdrawals: temporary and permanent. Regardless of withdrawal type, the first step for students enrolled in courses is to officially drop courses.

### Temporary Withdrawal

Students planning to resume studies at the University of Denver may qualify for a temporary withdrawal. This type of withdrawal includes personal and medical leaves. A graduate student who wants to take time off from the University must fill out the withdrawal form in MyDU (<https://my.du.edu/dashboard/>) by the Registrar's published deadline to drop classes. Students may indicate their intent to return by applying for a personal leave of absence during the withdrawal process.

### Permanent Withdrawal

Students wishing to discontinue graduate study must communicate the decision to permanently withdraw from the graduate program in writing to their department and the Office of the Registrar.

**Note:** *Students in University College and the Sturm College of Law work directly with their department to go on a Personal Leave of Absence. Consult the unit for details.*

## Personal Leave of Absence

A graduate student may withdraw from the University temporarily or permanently for non-medical reasons. For medical circumstances, see *medical leave of absence*. Students who wish to withdraw permanently from their programs should notify their departments as well as the Office of the Registrar in writing. A graduate student who wants to take time off from the University must fill out the withdrawal form in MyDU (<https://my.du.edu/dashboard/>) by the Registrar's published deadline to drop classes. Students may indicate their intent to return by applying for a personal leave of absence during the withdrawal process. Students who fail to withdraw will be liable for full tuition and fee charges, and a failing grade may be recorded for every course for which the student is registered.

In general, leaves of absence are for students who want to take a period of time away from the University (excluding summer) with the intent to return. The maximum period of time for a single leave of absence is three consecutive quarters, excluding summers. Students who need an additional leave of absence should complete a new withdrawal form in MyDU (<https://my.du.edu/dashboard/>). While on an approved leave of absence, students are guaranteed a place in their current program when they return to the University, provided all deadlines and rules are observed. Some units may have more restrictive guidelines for a leave of absence. Students should consult with their unit and program for more information before making a decision about whether to take a leave. Returning students have the same registration priority as continuing students. It is important to note that students are still held to the original timeline for completion of the degree.

Students who are called to active military duty while enrolled should apply for a leave of absence. Active Peace Corps volunteers may apply for a leave of absence for the term of their Peace Corps service.

Students on a formal internship, cooperative education, or clinical placement program as part of an academic program at DU should not apply for a leave of absence as they may need to be enrolled for internship or practicum credits. Instead, students should work with their graduate unit to be sure they are in compliance with program requirements.

Students who have outstanding judicial sanctions or actions due to violations of the Honor Code will not be considered in good standing with the University of Denver and must first be cleared by the Office of Student Rights and Responsibilities before they may be readmitted to DU. Please contact the Office of Student Rights and Responsibilities (<https://studentaffairs.du.edu/student-rights-responsibilities/>) with any questions before applying for a leave of absence.

Prior to returning to the University, students should contact their advisors for information on choosing courses appropriate for each academic program. Please contact the appropriate student services office with questions about returning to the university and registering for courses. International students must contact ISSS (<http://www.du.edu/intl/issis/about.html>) to obtain proper immigration documents before returning.

**Note:** *Students in University College and the Sturm College of Law work directly with their department to go on a Personal Leave of Absence. Consult the unit for details.*



# Medical Leave of Absence

## Medical Leaves and Reentries

A student with a mental health and/or physical health condition may elect to apply for a Medical Leave of Absence from the University. The Medical Leave of Absence and Medical Reentry Policies describe the circumstances under which a student may request a Medical Leave of Absence and the student is responsible for both the documentation for the Medical Leave of Absence and the Medical Reentry process. The procedures the student must follow are outlined in the policy.

## Medical Leave of Absence and Medical Reentry Policies

### Overview of the Medical Leave and Reentry Process

#### Part 1: Medical Leave Process at a glance:

- Submit Intent to Withdraw for health/medical reasons via MyDU (<https://my.du.edu/>) portal
- Submit Treating Healthcare Provider Medical Leave of Absence Form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=59](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=59)) to Student Outreach & Support (SOS)
- Applicable Student Affairs & Inclusive Excellence staff members reviews completed medical leave application
- SOS will notify the student regarding the decision via electronic letter
- If approved, SOS will place a hold on the student's account. The hold is removed when the student successfully completes the reentry process.

#### Part 2: Medical Reentry Process at a glance:

- Student submits Reentry from Medical Leave of Absence Form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=57](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=57)).
- SOS will remove the hold on the student's account allowing them to register for courses
- Treating Healthcare Provider(s) submits Treating Healthcare Provider Medical Reentry Form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=58](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=58)).
- Applicable Student Affairs & Inclusive Excellence staff members review completed medical leave reentry application
- SOS will notify the student regarding the decision via electronic letter.

A student with a mental health and/or physical health condition may apply for a voluntary Medical Leave of Absence from the University. The student initiates the process for a Medical Leave of Absence by completing the Withdrawal Form, which is available on MyDU, citing health/medical as the reason for withdrawal.

To qualify for a Medical Leave of Absence, the student must then submit adequate medical documentation (consistent with the requirements listed below) from the student's treating physician, licensed mental health provider, or other licensed healthcare provider specifying the mental health and/or physical health condition(s) that causes a degree of functional impairment that warrants a complete withdrawal from academic study for the applicable academic term. The medical documentation must reflect that the student had a consultation – either in-person or virtually via tele-health – with the treating physician, licensed mental health provider, or other licensed healthcare provider during the term for which the student is requesting a withdrawal for medical reasons. The student will be on a general leave until they submit adequate documentation and until the applicable Student Affairs & Inclusive Excellence staff members approve the documentation, at which time the student will be moved from a Updated August 2023 | 2 personal leave of absence to a Medical Leave of Absence. If the student does not submit adequate medical documentation by the last day of the term, the student's status will remain a general withdrawal.

**NOTE:** If the student does not complete the medical leave process by the last day of the term, and did not withdraw from courses by the published deadlines, SOS will refer the student to the Academic Exceptions Process.

1. Students experiencing mental health and/or physical health conditions should promptly seek care from their treating physician, licensed mental health provider, or other licensed healthcare provider and should promptly submit their Withdrawal Form initiating the Medical Leave of Absence and submit adequate medical documentation by last day of classes.
2. Prior to submitting the Withdrawal Form via MyDU, the student should (1) consult with a Student Outreach & Support (SOS) Student Support Advisor to understand their options for addressing the mental health and/or physical health condition, including referral to AccessibleDU: Student Disability Services for consideration of accommodations; the process for applying for a Medical Leave of Absence and returning from such a leave; and the possible implications related to University housing; (2) contact the Office of Financial Aid to determine the amount of financial aid to be returned; (3) contact the Office of the Bursar with questions regarding the tuition adjustments; and (4) contact other appropriate offices, such as International Student and Scholar Services, to determine the impact on visa status. The Student Support Advisor can assist the student in contacting these other offices as necessary.

Student Affairs & Inclusive Excellence staff, including the Health and Counseling Center staff, will determine whether the student has submitted adequate medical documentation from the student's treating physician, licensed mental health provider, or other licensed healthcare provider that meets the criteria listed below. The student and their treating healthcare provider should have a shared understanding of the information being submitted to the University on the student's behalf. If the student's treating healthcare provider does not address every item identified in the Treating Healthcare Provider Form, the University will likely not approve the student's request.

3. The documentation must be submitted as a PDF file on official letterhead with the provider's signature and the date the letter is written and must include the following, as outlined in the Treating Healthcare Provider Medical Leave of Absence Form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=59](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=59)):
- The treating physician, licensed mental health provider, or other licensed healthcare provider's professional qualifications and licensure;
  - Date the student first consulted the provider; Updated August 2023 | 3
  - Number and type (i.e., in person or virtual) of visits with the provider;
  - Diagnosis of the mental health and/or physical health condition;
  - Date(s) that the provider observed and/or identified the mental health and/or physical health condition(s) that caused a degree of the functional impairment that impacted the student and warrants withdrawal from all courses for the term;
  - Based on the provider's direct evaluation of the student, the provider's professional opinion of when the symptoms of the mental health and/or physical health condition first began;
  - Impact of the condition on the student's participation in academic activities (including attending classes and completing coursework);
  - Treatment recommendations and estimated length of treatment plan; and
  - Assessment of student's willingness and/or ability to carry out substantial self-care obligations.

#### **Exchange of Information with Treating Physician, Licensed Mental Health Provider, or other Licensed Healthcare Provider**

- Students must submit a completed Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliant consent form to their treating physician, licensed mental health provider or other licensed healthcare provider's office to authorize their healthcare provider to submit the required medical documentation to the University.
- In connection with the Medical Leave of Absence, the student may also be required to submit a Family Educational Rights and Privacy Act (FERPA) release permitting the University's Student Affairs & Inclusive Excellence staff to exchange information with the student's treating physician, licensed mental health provider or other licensed healthcare provider to address the student's ability to perform as a student for the period covered by the Medical Leave of Absence, the duration of the approved Medical Leave of Absence, and the Medical Reentry process.

#### **Medical Leave of Absence Eligibility Requirements and Conditions**

- Students may seek a Medical Leave of Absence only for their own personal mental health and/or physical health circumstances. Students may seek a leave of absence for other reasons as specified on the Withdrawal Form on the MyDU portal.
- Students participating in an international education program may not seek a Medical Leave of Absence for the term in which the student is participating in the international education program if the program includes enrollment at an institution other than DU. In such cases, students should consult the policies of the institution which they are enrolled. Updated August 2023 | 4
- The Medical Leave of Absence program is not intended to shield a student from unsatisfactory progress or any other academic irregularity unrelated to the student's mental health and/or physical health condition.
- Graduate students who receive an approved Medical Leave of Absence are eligible for relief for their time-to-degree requirements, provided that graduate students seeking a Juris Doctorate from the Sturm College of Law are subject to the time to degree requirements of the applicable accrediting body.
- If a student takes courses for credit at another institution while on a Medical Leave of Absence, the student must comply with the applicable policies for receiving transfer of credit toward a degree from the University. Undergraduate students should refer to the Office of the Registrar Undergraduate Transfer Policy. Graduate students should refer to the transfer of credit procedures in the Graduate Bulletin.
- A student may receive a Medical Leave of Absence (including any retroactive requests for a retroactive withdrawal for medical reasons) a total of **two (2) times** during enrollment in an educational program at the University. The Dean of Students/Associate Vice Chancellor for Student Affairs & Inclusive Excellence, or their designee, in consultation with the Director of the AccessibleDU: Student Disability Services and the Assistant Vice Chancellor of the University's Health & Counseling Center or their respective designees, has the discretion to determine whether to grant an additional Medical Leave of Absence.
- If the Student Affairs & Inclusive Excellence staff approves the medical documentation for a Medical Leave of Absence, Student Affairs & Inclusive Excellence staff will forward the approval letter to the Office of the Bursar. A student cannot revoke a Medical Leave of Absence after the University has approved medical documentation.
- If the student is unable to engage to complete the process in any capacity, other University processes can be activated (e.g., Academic Exceptions) when the student is able to engage.
- If the student has submitted the Withdrawal Form and has already withdrawn from all classes, but submits the appropriate medical documentation after the last day of the term, the student must file for a Tuition Refund for Medical Reasons. If the student has not submitted the Withdrawal Form and is not yet withdrawn from all classes, but submits the appropriate medical documentation after the last day of the term, the student will be directed to submit a petition for a late drop for medical reasons through the Academic Exceptions Process to drop all courses for the requested term. The student must provide adequate medical documentation according to the requirements set forth in the Academic Exceptions Policy.

### Financial Considerations

- If Student Affairs & Inclusive Excellence staff approves the Medical Leave of Absence, Student Affairs & Inclusive Excellence will forward the approval letter to the Office of the Bursar for review of any tuition adjustments based on the Tuition and Fees Policy. All questions regarding tuition adjustments should be directed to the Office of the Bursar either via email at [bursar@du.edu](mailto:bursar@du.edu) or by phone at 303-871-4944.
- Students who receive financial aid should speak to the Office of Financial Aid via email at [finaid@du.edu](mailto:finaid@du.edu) or by phone at 303-871-4020.

### Reentry from a Medical Leave of Absence

The student must provide adequate medical documentation from the student's treating physician, licensed mental health provider, or other licensed healthcare provider that demonstrates the student is prepared to participate successfully academically and is willing and/or able to carry out substantial self-care obligations. To allow sufficient time for processing and registration, the student must complete the following steps for the reentry process at least 14 Business Days before the start of the term. Under this policy, Business Day refers to any weekday Monday through Friday in which the University is in operation, including days when the University is in operation, but classes are not in session. For example, University holidays are not Business Days.

1. Complete the Reentry from Medical Leave of Absence form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=57](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=57)).
2. Submit medical documentation from the student's treating physician, licensed mental health provider, or other licensed healthcare provider addressing the following criteria, as specified in the Treating Healthcare Provider Medical Reentry Form ([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=58](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=58)). The student and the provider should have a shared understanding of the information being submitted to the University on the student's behalf. If the treating healthcare provider does not address every item identified in the Treating Healthcare Provider Medical Reentry Form, then the University may not approve the student's request.

The documentation must be submitted as a PDF file on official letterhead with the providers signature and dated within a month of the first day of the academic term for which the student seeks reentry and must include the following, as outlined in the Treating Healthcare Provider Medical Leave of Absence Form:

- a. The treating physician, licensed mental health provider, or other licensed healthcare provider's professional qualification and licensure;
- b. Professional opinion regarding the student's ability to participate academically with a full-time course load and willingness and/or ability to carry out substantial self-care obligations at the University with or without continued treatment;
- c. A treatment summary with the following specificity:
  - Time span and type of treatment provided to the student while on the Medical Leave of Absence;
  - Whether the treatment was concluded (with or without the healthcare provider's approval) or is on-going;
  - Specific intensive treatment, if any, while on the Medical Leave of Absence
  - Demonstrated understanding of the diagnoses and functional impairment that resulted in a Medical Leave of Absence;
  - Description of how the treating physician, licensed mental health provider, or other licensed healthcare provider completing the form addressed these specific issues in the treatment of the student during the Medical Leave of Absence;
  - If treatment is ongoing: recommended treatment plan during student's return to study, any continuing care needs or concerns for the student, who will be providing the care needs; and
  - Any safety concerns for the student or for others in the University community

The Dean of Students/Associate Vice Chancellor for Student Affairs & Inclusive Excellence or their designee, in consultation with the Director of AccessibleDU: Student Disability Services and the Assistant Vice Chancellor of the University's Health & Counseling Center or their respective designees, has the discretion to determine whether the student has submitted adequate medical documentation to support the reentry application.

The student must comply with all other applicable procedures for returning to the University.

If a student seeks to extend their Medical Leave of Absence beyond one (1) year, the student should contact their Academic or Program Advisor and the staff in Student Outreach & Support at [sos@du.edu](mailto:sos@du.edu).

Students are advised to continue to work with SOS and other support services at DU as the student return from a Medical Leave of Absence. Student Support Advisors will reach out to students returning from leave to offer to schedule a meeting to discuss on-going support.

### Options for Incomplete Applications and Applications/Documentation Submitted After the Last Day of the Term

**Late Drop for Medical Reasons:** Students who submit incomplete Medical Leave Applications or submit applications after the last day of the term will be referred to the Academic Exceptions Committee. The student must complete and file a petition through MyDU. More information can be found by reviewing Academic Exception Policy.

**(NOTE: Medical documentation must reflect that the students had a consultation – either in-person or virtually via tele-health – with the treating physician, licensed mental health provider, or other licensed healthcare provider during the term for which the student requests the retroactive withdrawal for medical reasons.)**

### Appeals of Adverse Decisions Regarding Medical Leave of Absence or Reentry from a Medical Leave of Absence

A student may appeal an adverse decision regarding a Medical Leave of Absence and/or Reentry from a Medical Leave of Absence to Dean of Students/Associate Vice Chancellor for Student Affairs & Inclusive Excellence, or their designee, by completing and submitting the Appeal Form

([https://cm.maxient.com/reportingform.php?UnivofDenver&layout\\_id=48](https://cm.maxient.com/reportingform.php?UnivofDenver&layout_id=48)) within five (5) Business Days of the date the decision was sent to the student. The grounds for appeal are limited to the following:

- The existence of procedural errors so substantial that such errors greatly impacted the decision; and/or
- New medical documentation that was not reasonably available at the time of the initial decision.

As stated in its Non-Discrimination Statement, the University of Denver prohibits discrimination based on protected characteristics, including discrimination against students with disabilities. Students with disabilities who seek accommodations to fully access the medical leave process should promptly contact Student Disability Services to submit a request for such accommodations.

Students who have concerns regarding discrimination or harassment in the application of these policies should contact the University's Office of Equal Opportunity & Title IX.

The Dean of Students/Associate Vice Chancellor for Student Affairs & Inclusive Excellence or their designee will make a good faith effort to complete the appeal within ten (10) Business Days from the date on which the appeal is provided to the Dean of Students/Associate Vice Chancellor for Student Affairs & Inclusive Excellence or their designee.

## Mandatory Withdrawal Policy

### Mandatory Withdrawal Policy

In extraordinary circumstances, a student may be subject to a mandatory withdrawal if the C.A.R.E. team determines the student exhibits behaviors that substantially impede the student's academic success and/or significantly disrupts the learning environment of others.

## Students Called for Military Duty

### Introduction

The University of Denver supports students called to active duty in the armed services by providing academic support, tuition relief or refunds, and reinstatement of students whose documented service has required their sudden withdrawal or prolonged absence from their enrollment at the institution. Service is defined by voluntary or involuntary active duty in the Armed Forces, including such service by a member of the National Guard or Reserve. When a University of Denver student is under a call or ordered to active duty, the following provisions will apply.

### Purpose

This guideline offers suggestions for ways in which academic and administrative units and faculty may assist students who are called to active military duty.

### Student Responsibility

A student who receives orders to report for active military duty should submit a copy of those orders to the Lead Academic Certifying Specialist in the Office of the Registrar. The Lead Academic Certifying Specialist will provide a copy of the orders and an official leave of absence request (if applicable) to the Office of Graduate Education or the Office of Undergraduate Academic Resources, as well as the Office of Financial Aid (if applicable), and notify the student's instructors. The Specialist may also assist with the arrangement of course completion options, but it is generally the student's responsibility to work directly with instructors to determine appropriate course completion options.

If, due to the urgency of their military assignments, students are unable to submit the orders before reporting, they may submit them either while on duty or upon returning to school. DU can only consider requests for changes to grades or tuition charges after official orders have been submitted.

### Course Completion Options

Instructors are urged to work with students called for military duty to enable the completion of coursework whenever it is reasonably feasible. If the majority of course's class sessions must be missed, however, the course should usually be dropped. When military orders are received late in the term, instructors may offer the option of an incomplete, if academically appropriate.

If, after arranging a course completion strategy, the nature of a student's military service prevents completion of the coursework, the instructor and the Lead Academic Certifying Specialist should be notified. They will assist the student in determining and implementing an appropriate course of action.

### Other Academic Matters

- Students who have suspended enrollment due to service requirements are allowed to re-enter their programs, provided satisfactory academic progress had been made prior to suspension. Existing policies for re-entry or readmission to the University will apply.
- Time spent away from the University by graduate students on military deployments will not count toward time limits set for degree completion.

### Administrative Matters

- A student who is forced by virtue of military orders to drop selected courses or withdraw from a term should receive a 100% refund of any tuition the student has paid for the courses dropped or withdrawn. Refunds of tuition and fees paid by financial aid or other third parties will be handled by the Bursar and the Office of Financial Aid so as not to disadvantage the student but in accordance with applicable regulations.

- A student on financial aid who is forced by virtue of military orders to drop selected courses or withdraw from a term should not be penalized in terms of financial aid eligibility, making academic progress, or other financial aid criteria.
- If a student has arranged an attempt to complete a course and finds that the nature of the military service prevents the student from completing the course work, the student should notify the faculty member and the Lead Academic Certifying Specialist and request their assistance in determining and implementing an appropriate course of action (e.g., requesting an incomplete, dropping the course, and written official leave of absence if needed).
- Room and board charges will be pro-rated based on the student's official check-out date.
- For new students, an enrollment deposit is required to confirm their acceptance of the offer of admission. If a student is deployed to active duty military service before the beginning of the planned term of enrollment, the deposit will be refunded.
- Students may appeal any administrative decisions related to their military participation by requesting the procedures for doing so from the Lead Academic Certifying Specialist.

## Transfer of Credit

### Criteria

- Credits earned at the University of Denver are not considered transfer credit. Students who would like to apply previously earned DU credits (<http://bulletin.du.edu/graduate/admission-and-enrollment-policies/admission-status/special-status-student/>) towards a degree or certificate should refer to the degree requirements and policies within their unit.
- The student is responsible for seeing that the transfer of credit is posted on the DU transcript and that the appropriate approval has been received.
- Graduate coursework and credit hours already applied toward a degree received from another institution cannot be accepted as transfer credit towards another graduate degree or certificate of the same level or less. Graduate credit earned and not applied towards a degree or certificate may be eligible for transfer of credit to a University of Denver degree.
- An official transcript must be on file in the Office of the Registrar.
- The transfer credit must have been earned as graduate credit in a field similar for which the student is currently seeking a degree at an institution accredited by a Department of Higher Education recognized agency. Transfer credit is approved on a course-by-course basis, unless it is a blanket transfer of credit hours for a doctoral program from a previously earned master's degree.
- The credit must have been earned within a five-year period preceding the request for transfer of individual courses. Exceptions to this regulation may be made only by petition with specific justification by the college, school, or department to the Senior Vice Provost for Research and Graduate Education.
- Coursework with a "B-" grade may be requested to be transferred, providing the average of all graduate transfer coursework is "B" or better. If only one course is to be transferred, the grade must be "B" or better (a grade of "B-" or lower is unacceptable).
- Courses taken on a pass/fail basis are not acceptable for transfer, unless the instructor provides a class syllabus and the student provides proof from the institution that a "Pass" is equivalent to a "B" or better.
- Transfer credit is not included in the computation of the grade point average for the current degree.

### Coursework Taken Prior to Enrollment at the University of Denver

Credits earned prior to enrollment in a degree program at the University of Denver may be transferred to meet degree requirements at the University of Denver in accordance with the transfer of credit policy and for students entering the University without a previous graduate degree or students entering a University of Denver doctoral program with a master's degree. The request for the transfer should be made prior to or during the first quarter of attendance as a University of Denver degree-seeking student and no later than the term preceding that in which the student wishes to graduate.

### Coursework Taken After Enrollment at the University of Denver

If the credit to be transferred is earned while the student is already enrolled in a degree program at the University of Denver, the student may transfer graduate credit earned from a regionally accredited institution to meet degree requirements at the University of Denver in accordance with the transfer of credit policy.

- The student must initiate in writing a request for approval of outside coursework prior to enrolling in the course. The written request, which is submitted to the college, school or department, should include the name of the institution where the course will be taken, the course title, number of credit hours, course description, and the student's reasons for requesting outside credit.
- The student is responsible for seeing that the Office of Graduate Education has given preliminary approval for the request prior to enrollment. A final review and approval may be granted upon the receipt of the student's final, official transcript from the transfer institution and/or study abroad institution in the returning quarter and no later than the term preceding that in which the student wishes to graduate. Retroactive transfer credit requests may not be approved.

### Transfer of Credit for Certificate Programs

Transfer credit toward a certificate is limited to 25% of the minimum number of credits required for the certificate. Note that course substitutions and/or waivers are not accepted for a Specialized Graduate Certificate. Some programs may have more restrictive limits. Contact the unit for details.

## Transfer of Credit for Masters Programs

Transfer credit toward a master's degree is limited to 25% of the minimum number of credits required for the degree. Some programs may have more restrictive limits. Contact the unit for details.

## Transfer of Credit for Educational Specialist Programs

Transfer credit toward an Educational Specialist (EdS) degree is limited to a maximum of 15 quarter credits. Credits may be transferred from a previous earned master's degree or from previous graduate coursework not earned toward a degree. All credits requested for transfer must be applicable toward the EdS degree and approved on a course-by-course basis by the department chair.

## Transfer of Credit for Doctoral Programs

With approval from the student's advisor and the chairperson of the department, doctoral students may reduce the required hours for a doctoral degree by up to 45 hours with an earned master's degree from a regionally accredited university.

The student must initiate in writing the request for posting the master's degree through the program of study. The student is responsible for seeing that the department, appropriate student services office of the college, school, or department and the Office of Graduate Education have approved the request.

An official transcript must be on file in the Office of the Registrar and must demonstrate that the student earned a "B" average or better in the master's degree program.

The student's University of Denver academic department must fill out the *Transfer of Credit Request form* (found on the Office of Graduate Education website (<https://www.du.edu/graduate-education/current-student-resources/academic-resources/>)) and provide a statement stating that the student's master's degree is appropriate and that the student possesses an adequate background for the doctoral degree being sought.

Fifteen additional quarter hours may be allowed to be transferred provided the credits have been earned after the master's degree was awarded, and it does not conflict with the doctoral residency requirement that requires enrollment at the University of Denver in at least six quarters (four semesters), including at least two consecutive quarters (one semester) of full-time attendance.

**Note:** Some graduate programs may have more stringent policies regarding transfer credit. Contact the unit for details.

### Exceptions:

- *Morgridge College of Education: Students must complete 90-quarter hours in addition to a master's degree for the PhD program, excluding the PhD in Counseling Psychology and the PhD in School Psychology.*
- *English: Students must complete 90-quarter hours in addition to a master's degree for the doctoral program.*
- *GSSW: An MSW (or equivalent) plus 75 credits are required for completion of the PhD program in Social Work. The MSSW and MSSA are equivalent to the MSW.*
- *DU/Iliff Joint PhD: Students must complete 90-quarter hours in addition to a master's degree for the PhD program.*
- *Sturm College of Law: In some circumstances, Graduate Legal Studies students may transfer up to 8 semester credits. Please contact the Office of Graduate Legal Studies for details.*
- *University College: Students should submit transfer of credit requests to University College.*

## Academic and Student Support Services, Policies and Procedures

Academic Exceptions, Complaints, Grievances and Appeals (p. 1277)

Disability Services Program (p. 1282)

Immunizations and Health Requirements (p. 1283)

Professional and Academic Conduct (p. 1283)

Student Records (p. 1284)

Support Services and Resources (p. 1291)

## Academic Exceptions, Complaints, Grievances and Appeals

Exceptions (p. 1278)

Discrimination or Harassment Complaint Procedures (p. 1278)

Complaints for External Agencies (p. 1279)

Procedures for Academic Grievances and Appeals (p. 1279)

Procedures for Grade Appeals (p. 1281)

## Exceptions

### Academic Exceptions Policy

Academic policies define institutional standards and ensure equitable treatment of all students. All students are expected to observe the academic policies and practices of the University set forth in the University Bulletin. However, in instances of documented extraordinary circumstances, a student may request an exception to a policy or practice.

The Academic Exceptions Committee is a standing subcommittee of the Undergraduate & Graduate Councils which represents the Councils' interests as advisory to the Vice Provost for Academic Affairs. As chair of the Committee, the Vice Provost appoints its members and ensures that the Committee is representative of appropriate academic and administrative units. Decisions of the Committee are final.

### Purview

The Academic Exceptions Committee considers requests for exceptions to University-wide academic policies affecting students. This is an academic committee that cannot take considerations of convenience, financial cost, or academic standing into the decision.

Exceptions should be submitted within one calendar year after the completion of the quarter in question and prior to a student's degree being certified and posted to the transcript. Any exceptions that do not meet this expectation should include a rationale for why the request was not made within the appropriate timeframe.

### Required Documentation

A valid petition includes, at minimum, the official online request submission through [M \(https://my.du.edu/dashboard/\)](https://my.du.edu/dashboard/) [yDU \(https://my.du.edu/dashboard/\)](https://my.du.edu/dashboard/), written documentation from the student and supporting documentation, as appropriate for the petition type. Additional documentation may be required. Documentation may be emailed to [academicexceptions@du.edu](mailto:academicexceptions@du.edu) or faxed to 303-871-4566. It is the responsibility of the student to ensure that all documents are submitted in a timely fashion.

The Vice Provost for Academic Affairs or designee has final determination as to whether the documentation the student has submitted is sufficient.

### Petition Review and Status

- It is the responsibility of the students to check the status of their petitions and respond to requests by the Committee representative.
- The student will be notified (via MyDU (<https://my.du.edu/dashboard/>)) of the decision within one week of when the request was reviewed.
- A student has 45 days from the initial submission to complete the petition. If, at the end of 45 days there are still outstanding documents, the petition will be cancelled, and the student will need to resubmit a new petition.
- A student may re-petition if there is new documentation that was not reasonably available at the time of the initial decision.
- 

## Discrimination or Harassment Complaint Procedures

The University is committed to creating and maintaining a community in which people are treated with dignity, decency, and respect. The environment of the University should be characterized by mutual trust, freedom of inquiry and expression, and the absence of intimidation, oppression, and exploitation. People in this community should be able to work and learn in a safe atmosphere. The accomplishment of this goal is essential to the academic mission of the University. Consistent with this commitment, the University will not tolerate any unlawful discrimination, harassment, or gender-based violence of any kind. When the University becomes aware that a member of the University community may have been subjected to or affected by discrimination, harassment, gender-based violence, the University will take prompt, appropriate action to enforce University policy.

We do this by facilitating compliance with Title IX of the Education Amendments of 1972; the Americans with Disabilities Act; Section 504 of the Rehabilitation Act of 1973; Title VI and VII of the Civil Rights Act of 1964; the Age Discrimination Act of 1975; the Age Discrimination in Employment Act of 1967; Equal Pay Act; Colorado Equal Pay for Equal Work Act; the Colorado Protecting Opportunities and Workers' Rights ("POWR") Act; and any other federal, state, and local laws, regulations, or ordinances

The University's Office of Equal Opportunity & Title IX (EOIX) is responsible for enforcing the University's Discrimination and Harassment Policy pursuant to the published University's procedures located on the Office of Equal Opportunity & Title IX's website (<https://www.du.edu/equalopportunity/policies-procedures/>), which offer options for supportive measures, informal, and formal resolution. The policy and procedures are intended to comply with the prohibitions of all applicable federal, state, and local non-discrimination laws.

Office of Equal Opportunity & Title IX policies and procedures ([https://www.du.edu/equalopportunity/policies\\_procedures/](https://www.du.edu/equalopportunity/policies_procedures/))

## Complaints for External Agencies

Several external agencies are available to students who have exhausted all other opportunities for resolution within the University.

### Colorado Department of Higher Education

The Colorado Department of Higher Education regulates Colorado institutions of higher education. Their complaint policy may be found on the Colorado Department of Higher Education (<https://higher.ed.colorado.gov/students/how-do-i/file-a-student-complaint/>) website.

### U.S. State Education Regulatory Agencies

Through distance learning and other programs, the University of Denver provides instruction throughout the world. Students may direct concerns or complaints to regulatory agencies in their state. A list of U.S. state education regulatory agencies can be found on the State Contacts (<https://www.du.edu/site-utilities/statecontact/>) page.

### Higher Learning Commission

Complaints regarding the institution's ongoing ability to meet the criteria of institutional accreditation may be directed to the Higher Learning Commission. Individuals interested in bringing an appropriate complaint to the attention of the Higher Learning Commission should take some time to compile a complete submission, as outlined below. The official complaint must be submitted through the available on-line form (<https://www.hlcommission.org/Students-Communities/complaints.html>).

1. On the form, fill out the relevant contact information, institutional details, and timing of the matter.
2. Indicate in your complaint why you believe the issues raised in your complaint are accrediting issues. If possible, please review the Higher Learning Commission's Criteria for Accreditation (<https://www.hlcommission.org/Policies/criteria-and-core-components.html>) on the Higher Learning Commission (<https://www.hlcommission.org/>)'s (<https://www.hlcommission.org/>) website prior to writing this section. You should also indicate how you believe the Higher Learning Commission can assist you with this matter. Remember that the Higher Learning Commission cannot assist you in understanding your tuition bill, arranging for a refund of tuition, obtaining a higher grade for a course, seeking reinstatement to an academic program, etc.
3. Attach documentation to support your narrative wherever possible. (For example, if you make reference in your complaint to an institutional policy, include a copy of the policy with your complaint.) Helpful documentation might include relevant portions of the catalog, letters or email exchanged between you and the institution, learning agreements, etc.
4. Review the webform notifications regarding personally identifiable information, authorizations, and acknowledgements.
5. A few reminders:
  - Please do not use abbreviations or nicknames (e.g., NMS or USC or U of N).
  - The Higher Learning Commission does not accept complaints from third parties.

Please note that complaints must be submitted to the Higher Learning Commission by webform or available paper form. The Higher Learning Commission will not consider complaints that are not in writing. The Higher Learning Commission's complaint policy generally precludes it from reviewing matters more than 2 years old.

The Higher Learning Commission will acknowledge your complaint within thirty days of receiving it and let you know whether your complaint is complete and whether it raises issues that are related to accrediting requirements or whether it is an individual dispute outside the jurisdiction of the Higher Learning Commission's complaint policy.

Email questions to [complaints@hlcommission.org](mailto:complaints@hlcommission.org)

## Procedures for Academic Grievances and Appeals

Active students may appeal academic and student status related decisions and/or seek resolution of complaints or grievances through the Academic Grievance and Appeal Procedure during their enrollment at the University of Denver.

Graduate units may have additional requirements specific to their accreditation or professional standards. It is the responsibility of the student to determine whether the graduate unit has specific requirements and the responsibility of the unit to ensure that those requirements are addressed prior to advancing the grievance to the Office of the Provost. In the event of conflict between any grievance process published in unit manuals or websites, the formal grievance process will govern.

### Eligible and Ineligible Concerns

#### Eligible Concerns

These procedures may be used only by active students with the following concerns:

- A grievance or appeal regarding academic standing during their enrollment at DU.
- An academic decision made by a faculty or staff member, administrator or committee of the University of Denver that directly and adversely affects the student—e.g., program termination or dismissal, academic suspension, removal from a course, termination of GTA or GRA appointment.



- The grievance or appeal must be based on problems of process or concerns of bias, retaliation, or other impropriety and not on differences in judgment or opinion concerning academic performance.

**Note:** Students who wish to appeal a termination or dismissal from a program must do so within 45 calendar days of the term following their last term as an active student. For concerns of bias and retaliation based upon a protected class, the grievance will be referred to the Equal Opportunity Office, which may alter the timeline and process.

### **Ineligible Concerns**

These procedures may not be used to resolve the following concerns:

- appeals related to disciplinary actions taken by the Conduct Review Board
- grade appeals
- admission decisions
- appeals or grievances submitted beyond the published timeline

## **Formal Grievance and Appeal Process**

### **First Level: Informal Resolution**

Students are expected to attempt to resolve complaints informally with the faculty or staff member, administrator or committee responsible for the academic decision. This attempt must include discussion of the complaint with the involved party or parties. *If all reasonable informal efforts to resolve a complaint fail, the student may file a formal grievance or appeal.*

If the complaint involves a charge of unlawful discrimination, the student may report the situation to the Office of Equal Opportunity or an appropriate supervisor who must immediately notify the Office of Equal Opportunity.

### **Second Level: Submission of the Formal Grievance or Appeal to Program Director/Chair**

If a student elects to file a formal grievance or appeal, it must be filed within 45 calendar days into the next quarter after the contested decision or grade was officially recorded and during which the student is enrolled at DU. All grievances and appeals must be filed in writing, signed and dated by the student and include supporting documentation at the time it is filed. The grievant/appellant must minimally provide the following:

- a clear description of the decision being grieved or appealed,
- the basis or bases for challenging the decision,
- the identity of the party or parties who made the decision,
- the specific remedy or remedies requested, and
- a description of all informal resolution attempted.

The decision of the program director or department chair must be issued in writing within 30 calendar days of receiving the grievance and shall include all of the following:

- a copy of the student's formal grievance,
- relevant findings of fact,
- decision and the reasons for the decision reached, and
- the remedy which is either granted or denied and/or any alternative remedies suggested.

### **Third Level: Submission of the Formal Grievance or Appeal to Dean**

The party who finds the resolution unsatisfactory may appeal the decision in writing to the dean of the academic unit within five business days of receiving the program director or department chair's written decision.

The dean may render a decision on the matter or may refer the grievance or appeal to a standing grievance/appeal committee or establish an ad hoc committee to hear the matter. When an ad hoc committee is established, the student who lodges the appeal may designate one of the faculty members who will serve on this committee. This member must be tenured or tenure-track faculty from the University of Denver. Members of the unit involved in the grievance may not serve on the ad hoc committee and must recuse themselves if they are members of the standing committee.

The committee may, at its discretion, receive from the student, relevant faculty or staff members or other individuals, any additional evidence or argument that it deems necessary to resolve the grievance or appeal.

The appeals committee will begin deliberations as soon as possible and provide the dean a written recommendation no later than 30 calendar days after the date that the dean's office received the written, dated request for appeal at this level. The dean will make a final decision and distribute it to all affected parties within five business days after receiving the committee's recommendation.

### **Fourth Level: Submission of the Formal Grievance or Appeal to Provost**

The party who finds the resolution unsatisfactory may appeal the decision to the Provost within five business days of receiving the dean's decision. The Provost will hear only those grievances and appeals based on problems of process or concerns of bias, retaliation, or other improprieties unrelated to protected class status and not on differences in judgment or opinion concerning academic performance. Within five business days after receiving

the appeal, the Provost may refer grievances or appeals to appropriate bodies or personnel. If the issue is referred to the Graduate Council, its chair will appoint three members of the Council as a Grievance Committee to hear the case and shall designate one of the committee members to serve as chair.

Anyone called upon by the Provost or the Provost's designee shall submit a written recommendation within 30 calendar days of receiving the case. The Provost is the final authority in the matter and will report the disposition of the case to all involved parties within 30 calendar days of receiving a recommendation from the designee.

### **Scope of Review**

Any University agent charged with reviewing a formal grievance or appeal may gather additional relevant facts if necessary and/or meet with involved parties. The reviewer will base a decision on documented evidence.

### **Deviation from Procedures**

These guidelines provide basic steps for resolving appeals and grievances. The steps may vary based upon the structure of the academic unit or the particularities of the situation. The Provost or the Provost's designee may choose to approve or may direct a deviation from these procedures, for example, postponement of a time limit or elimination or addition of a step in the process, in order to ensure an effective and timely resolution.

### **Grievance or Appeal Record**

Documentation in support of a grievance or appeal will be held by the person responsible for considering the grievance or appeal at that stage and passed along to the person responsible for the next step, if any. A record of meetings or interviews must be made and kept as part of the grievance or appeal record as well. The complete grievance or appeal record will consist of the original grievance or appeal, all documentary evidence and all formal decisions made at each step of the process.

### **Failure to Meet Deadlines**

If after a formal grievance or appeal is filed, the University agent charged with review of the grievance or appeal fails to meet any deadline at any stage of the process, the grievant/appellant may proceed directly to appeal to the next higher University administrator in the manner prescribed by these Procedures, subject to the relevant time limitation calculated from the date of the missed deadline. The failure of any University administrator to meet any deadline shall not entitle the grievant/appellant to any relief requested, nor shall such a failure be construed as tantamount to a decision in the grievant/appellant's favor. Any grievant who fails to meet the deadlines imposed by these Procedures will be bound by the decisions previously made.

*\* The Provost may refer grievance appeals to appropriate bodies or personnel.*

## **Procedures for Grade Appeals**

### **Procedure for Grade Appeals**

#### **Guidelines for Interpretation and Implementation**

##### **Scope of Review**

Grade appeals must be based on problems of process and not on differences in judgment or opinion concerning academic performance. The burden of proof rests on the student to demonstrate that one or more of the following occurred:

- The grading decision was made on some basis other than academic performance and other than as a penalty for academic misconduct.
- The grading decision was based upon standards unreasonably different from those which were applied to other students in the same course and section.
- The grading decision was based on an unreasonable departure from previously articulated standards, such as standards defined in the course syllabus.

The chairperson, grade appeal committee, or dean may recommend grade changes but shall have the power to alter grades only in cases of clearly established procedural error or substantial capriciousness or arbitrariness in evaluation.

##### **Timeline**

The formal procedure must be started within 45 calendar days after the contested decision or grade was officially recorded. The grade appeal process officially begins on the date the "Academic Appeal" document is received by the faculty member.

##### **Appeal Record**

Any appeal must be in writing, dated and headed with the words "Academic Appeal." Once a formal appeal is presented to a faculty member, it must be presented in its original form at all later levels of appeal, although new statements may be added at any time.

Any evidence and all direct and supporting statements once made become part of the permanent record of the appeal and must be produced at each level of appeal.

At each level of appeal, a written, dated decision and written reasons for the decision must be provided to the affected party or parties—the student, the faculty member, and any person who has rendered a decision at an earlier level of appeal.

Students are permitted to submit evidence in writing. At the discretion of the University, students may be invited to present their appeal in person.

## Grade Appeal Process

### First Level: Appeal to the Faculty Member

A student will, where possible, attempt to resolve the issue informally with the professor before filing a written grievance. Should attempts at informal resolution fail, the student may wish to file a formal grade appeal. After receiving a formal appeal, the faculty member shall assure that a written decision with express reasons is available or delivered to the student within 30 calendar days. Should the student fail to take further action within seven calendar days after receiving the faculty member's decision, that decision shall stand. If the student is dissatisfied with the decision or does not receive a response from the faculty member within 30 calendar days, he or she may proceed to the second level of appeal.

### Second Level: Appeal to the Department Chair/Program Director

If the student elects to continue the appeal, he or she may appeal to the chair of the department or program director if there is no chair. The chair or director shall assure that a written decision or recommendation about the appeal is available or delivered with express reasons within 30 calendar days after receiving the appeal.

If the student is dissatisfied with the decision or does not receive a response from the chair or director within 30 calendar days, he or she may proceed to the third level of appeal. Should the student or faculty member fail to take action on the chair's decision or recommendation within seven calendar days following its receipt, the accepted recommendation of the faculty member or new decision by the department chair shall be final.

### Third level: Appeals Committee

If the student elects to continue the appeal after the chair's decision or recommendation has been received, he or she may take the matter to the dean of the appropriate academic unit (or the dean's designee) within seven calendar days.

The dean shall ascertain within 30 calendar days whether the appeal procedures at the first and second levels have been duly followed; if they have not, he or she will require that they be followed before taking further action.

The appeals committee shall consist of three faculty members chosen by the dean or the dean's designee. The dean or designee shall serve on the appeals committee as chairperson without vote. All deliberations of the committee will be closed and confidential.

Faculty from the same department as the faculty member involved in the case may not serve on the appeals committee.

The appeals committee should meet as soon as possible, but no later than 30 calendar days after a written, dated request for appeal at this level has been received and the Dean has ascertained that appeal procedures at the first and second levels have been duly followed. The presence of all eligible committee members (the three faculty members and the dean or designee) shall constitute the quorum.

A written recommendation shall be furnished by the appeals committee and transmitted through the office of the dean to all affected parties within seven calendar days after the conclusion of the committee's deliberations.

The decision of the appeals committee is final.

*Note: There is a separate appeal procedure for courses taught in the College of Law. Students with grievances in College of Law (<http://www.law.du.edu/>) courses should consult the specific guidelines for academic grievance procedures for that unit.*

## Disability Services Program

### AccessibleDU: Student Disability Services (SDS)

The SDS is dedicated to giving students with disabilities an equal opportunity to participate in the University's programs, courses and activities. SDS provides reasonable accommodations, at no cost, to any student who has a documented disability as required by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, as well as other applicable legislation. The SDS works with the student to design accommodations intended to mitigate the impact of a student's disability and to afford equal opportunity and full participation in University programs for undergraduate, graduate and non-degree seeking students.

Students who need accommodations for a disability in order to fully participate in University programs, courses and activities should contact the SDS. This contact should be made as far in advance as possible. It is the joint responsibility of the student, SDS and other DU faculty and staff to work together to meet students' needs.

The SDS requires current supporting documentation of a student's disability in order to establish protections under the ADA/Section 504 and determine appropriate and reasonable accommodations and/or academic adjustments. A student's documentation is kept separate and private and is not shared as part of the student's DU Transcript.

For more information, please visit the SDS website (<https://www.du.edu/studentlife/disability-services/>), or stop by our office in Driscoll South, Suite 13 or call us at 303-871-3241. SDS hours are 8 a.m.–4:30 p.m., Monday–Friday. SDS hosts in person student office hours Mondays and Wednesdays 11:00-1:00.

# Immunizations and Health Requirements

## Immunization Requirements

### State of Colorado and University of Denver Immunization Requirements

Colorado State Law and University of Denver policy requires all students to receive two (2) doses of vaccine against measles, mumps, and rubella (MMR) and a review of information regarding Meningococcal disease (meningitis) prior to registration. Additionally, all first year undergraduates and students living in DU Housing must show proof the Meningococcal ACWY vaccination given within the past five (5) years.

If proof of immunity and acknowledgement of meningitis information (or proof of vaccination for incoming class) is not submitted to the University of Denver Health & Counseling Center, you will not be registered for classes. **Immunization record information must be submitted to the DU Health and Counseling Center by your program's registration date.**

*(Colorado Revised Statutes §25-4-901 to 909)*

**Students will NOT be able to register for Fall Term classes without providing this information.**

In the event of an MMR or meningitis outbreak on campus, those students for whom an exemption has been submitted will be withdrawn from classes by the CDPHE (Colorado Department of Public Health and Environment) until the outbreak is contained (this can take six to eight weeks). Those students who have exempted out of the requirements will not be entitled to a refund of tuition or a tuition credit for any missed time.

### Diversity, Equity and Inclusion Note

The HCC/DU recognizes that mandatory vaccination requirements may place undue burden on communities of color and those with trauma related to historical and contemporary experiences with medical care. We are relying on your compliance as we work to keep our communities safe. We have made efforts to remove barriers to care such as cost and access and follow the most rigorous scientific evidence available when providing and recommending healthcare to students. The premium is included on the tuition bill and is split into two coverage periods, fall and spring when students are enrolled in one (1) or more credit hours per quarter or semester.

<https://www.du.edu/health-and-counseling-center/medical/immunization.html>

**Note:** *University College students are exempt from this requirement.*

## Health Insurance Requirements

Student Health Insurance is a mandatory requirement at the University of Denver. If a student is covered by other insurance that complies with the Affordable Care Act requirement, in that can be waived. Refer to the Adequate Health Insurance Coverage (<https://www.du.edu/health-and-counseling-center/coveragecosts/waiver.html>) information.

*While the Health & Counseling Center (HCC) is open to all students, the HCC is not a Medicaid/Medicare provider. We encourage students to purchase the Health & Counseling Fee (HCF) in order to receive discounted services but the student is responsible for the remaining amounts as we do not bill insurance companies which includes Medicaid/Medicare. If a student is covered by Medicaid/Medicare, it is the patient's responsibility to seek a Medicaid/Medicare provider to ensure coverage for services.*

Please consider the many benefits of participating before waiving, especially if the student plans on enrolling in the Health and Counseling Fee. HCC Coverage Options (<https://www.du.edu/health-and-counseling-center/coveragecosts/>)

The Student Health Insurance Premium is assessed to students registered in most academic units on campus (excluding University College and programs including the Graduate Tax, Executive MBA and Continuous Enrollment for all programs). *The premium is included on the tuition bill and is split into two coverage periods, fall and spring when students are enrolled in one (1) or more credit hours per quarter or semester.*

\*DU students enrolled in a completely online program are not eligible for HCC services or to enroll in the DU Student Health Insurance Plan.

Please note: The DU HCC is the primary care provider for the DU SHIP.

<https://www.du.edu/health-and-counseling-center/coveragecosts/index.html> (<https://www.du.edu/health-and-counseling-center/coveragecosts/>)

# Professional and Academic Conduct

Honor Code (p. 1283)

Academic Misconduct (p. 1284)

## Honor Code

All members of the University of Denver are expected to uphold the values of integrity, respect and responsibility. These values embody the Honor Code for students, faculty, staff and administrators as members of the University community. Our values are defined in the following ways:

- *Integrity*: acting in an honest and ethical manner;
- *Respect*: honoring differences in people, ideas and opinions;
- *Responsibility*: accepting ownership for one's own conduct.

The complete text of the Honor Code and Honor Code violation procedures relating to students is maintained by Student Rights & Responsibilities (<http://www.du.edu/studentlife/studentconduct/>).

**Note:** Some units may have additional or more stringent ethical guidelines. Students should contact the department for details.

## Academic Misconduct

### Academic Integrity

The University of Denver creates an academic learning environment grounded in Academic Integrity. Students are expected to engage honestly and demonstrate responsibility in research and academic assignments. Therefore, all work and grades should result from the Student's own understanding of the materials and their effort.

When evidence/information indicates that a Student may have violated an Academic Integrity Policy, Academic Actions, Educational Outcomes, and Status Outcomes are possibilities. Academic Actions include, but are not limited to required re-do of an assignment, grade reduction, failure of an assignment, and/or failure of a course. Status Outcomes include written warning, probation, elevated probation, suspension, or dismissal. Students may appeal these decisions.

A student can be prevented from dropping a course when it is alleged they have engaged in academic dishonesty. A course can be reinstated if the student has dropped the course during the automatic withdrawal ("W") period. In cases of suspected academic dishonesty, the Office of the Registrar can reinstate a previously dropped course. The Office of the Registrar is not required to notify the student of reinstatement. If the Student is found responsible for violating an academic integrity policy, a withdrawal notation ("W") for the course, even if processed during the automatic withdrawal period, is not honored. If the Student is found not responsible for violating an academic integrity policy, and there has been an attempt to drop during the automatic withdrawal period, the drop is processed and a notation of withdrawn ("W") assigned. Refer to <https://studentaffairs.du.edu/student-rights-responsibilities/faculty-staff-resources/academic-integrity> (<https://studentaffairs.du.edu/student-rights-responsibilities/faculty-staff-resources/academic-integrity/>) for policies and procedures concerning academic integrity and the University of Denver Honor Code.

## Student Records

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## Disclosure of Student Information

The Family Educational Rights and Privacy Act (FERPA) affords eligible students certain rights with respect to their education records. (An "eligible student" under FERPA is a student who is 18 years of age or older or who attends a postsecondary institution.) These rights include:

1. The right to inspect and review the student's education records within 45 days after the day the University receives a request for access. A student should submit to the Registrar a written request that identifies the record(s) the student wishes to inspect. Request forms are available from the Registrar. The registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the registrar, the registrar shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes is inaccurate, misleading or otherwise in violation of the student's privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to provide written consent before the University discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent. The University discloses education records without a student's prior written consent under the FERPA exception for disclosure to University officials with legitimate educational interests. A University official is a person employed by the University in an administrative, supervisory, academic, research or staff position (including law enforcement unit personnel and health staff); a person serving on the board of trustees; or a student, volunteer or employee of a partner organization serving on an official committee, such as an admission, disciplinary or grievance committee, or assisting another University official in performing his or her tasks. A University official also may include a contractor outside of the University who performs an institutional service or function for which the

University would otherwise use its own employees and who is under the direct control of the University with respect to the use and maintenance of PII from education records, such as an attorney, auditor or collection agent or a student volunteering to assist another University official in performing his or her tasks. A University official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her institutional duties for the university.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Student Privacy Policy Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-4605

### Directory Information

The law provides that “directory information” may be released without the consent of the student. The University of Denver designates the following student information as “directory information.”

The student’s name (including prefix/honorific and personal pronouns), addresses, telephone numbers, electronic mail and webpage addresses, employer, job title, photographic and video images, date and place of birth, field of study, full-time or part-time status, class (e.g., graduate, sophomore, junior), participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, anticipated date of graduation, degrees and awards received, thesis and dissertation titles, the most recent previous educational agency or institution attended by the student.

Students may prevent the University from disclosing directory information by submitting a “Request to Prevent Disclosure of Directory Information” form (available online and from the Office of the Registrar) to the Office of the Registrar, University Hall, G33.

### Disclosure

Students may authorize the University to share information from education records with third parties such as parents. Authorizations may be completed online or by completing an authorization form available in the Office of the Registrar.

FERPA permits the disclosure of PII from students’ education records, without consent of the student, if the disclosure meets certain conditions found in §99.31 of the FERPA regulations. Except for disclosures to University officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student –

- To University officials, including faculty, within the University whom the University has determined to have legitimate educational interests. This includes contractors, consultants, volunteers or other parties to whom the University has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(7)-(a)(1)(i)(B)(2) are met. (§99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student’s enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2)).
- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the University’s State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation or enforcement or compliance activity on their behalf. (§99.31(a)(3) and 99.35)
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid or enforce the terms and conditions of the aid. (§99.31(a)(4))
- To organizations conducting studies for, or on behalf of, the University, in order to (a) develop, validate or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. (§99.31(a)(7))
- To parents of an eligible student if the student is a dependent for IRS tax purposes. (§99.31(a)(8))
- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to §99.36. (§99.31(a)(10))
- Information the University has designated as “directory information” under §99.37. (§99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))

- To the general public, the final results of a disciplinary proceeding, subject to the requirements of §99.39, if the University determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the University's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))
- To parents of a student regarding the student's violation of any Federal, State or local law, or of any rule or policy of the University, governing the use or possession of alcohol or a controlled substance if the University determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

As of January 3, 2012, the U.S. Department of Education's FERPA regulations expand the circumstances under which a student's education records and PII contained in such records—including Social Security Number, grades, or other private information—may be accessed without the student's consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education or state and local education authorities ("Federal and State authorities") may allow access to student records and PII without consent to any third party designated by a Federal or State authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to a student's education records and PII without the student's consent to researchers performing certain types of studies, in certain cases even when the University objects to or does not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State authorities may collect, compile, permanently retain and share without the student's consent PII from education records, and they may track participation in education and other programs by linking such PII to other personal information about the student that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

### Additional Information

Questions about these policies and procedures may be directed to the Office of the Registrar at 303.871.3897. Request forms and additional information are available on the web at [www.du.edu/registrar](http://www.du.edu/registrar) (<http://www.du.edu/registrar/>) or in the Office of the Registrar at 2197 South University Blvd., Room G33, Denver, Colorado 80208.

## Maintaining Contact Information

### E-Mail

You will receive an @du.edu email address to use while enrolled at the University of Denver. All emails sent to you by the University will be delivered to your @du.edu email address. Information on accessing your @du.edu email address can be found at <http://go.du.edu/office365> ([https://univofdenver.service-now.com/techservices/sub\\_content.do?sysparm\\_article=KB0011276](https://univofdenver.service-now.com/techservices/sub_content.do?sysparm_article=KB0011276)). Upon graduation, you will have the option to move your email account to an @alumni.du.edu address.

The IT Computer HelpDesk can assist with logging into MyDU (<https://my.du.edu/dashboard/>) and answer questions on a variety of other technical topics. To contact the HelpDesk call 303-871-4700, send email to [support@du.edu](mailto:support@du.edu) or access support through the IT website (<https://www.du.edu/it/contact/>).

The University sends much of its correspondence solely through email. This includes policy announcements, emergency notices, meeting and event notifications, course syllabi and requirements, and correspondence between faculty, staff, and students. The University is not responsible if payment of tuition and fees is not made because a student did not receive a billing notice. Students may be assessed a late fee if payment is not received by the due date printed on the bill. Such correspondence is mailed only to the official university email address. Faculty, staff, and students are expected to check their email on a frequent and consistent basis in order to stay current with University-related communications. Faculty, staff, and students have the responsibility to recognize that certain communications may be time-critical. This policy applies to all members of the University of Denver community; faculty, staff, and students.

### Address Information

#### Student Location and Addresses Policy

Accurate address and student location information is imperative for many reasons. Safety and emergency notification processes require accurate student location information. Certain educational benefits are based on student location; regulations for international students require the University to maintain accurate address information. Federal regulations (34 CFR § 668.43) require that for programs leading to licensure, the university must determine the location of the student enrolled in the program and must notify students if professional licensure or certification requirements in the state in which they are located are not met by the curriculum of the program, or if DU has not determined whether the curriculum meets the requirements in the state where they are located. Other federal regulations (34 CFR § 600.9) also require DU to obtain authorization to operate in any state where a student is located.

DU will determine all students' location (state):

1. At the time of the student's initial application to an educational program; and
2. Upon receipt from the student of information about a change in the student's location or address;
3. DU will solicit student location and address information at least two times per year and maintain and publish processes for students to provide address and location information;

4. If a student does not provide a physical location, and the student is enrolled in at least one on-campus course, then the student's physical location is determined to be Colorado.
5. If a student does not provide a physical location, and the student is not enrolled in at least one on-campus course, then the student's physical location is determined to be the state provided in the student's address.

Students unable to make address changes online can pursue the following options:

- Visit the registrar's office on the garden level of University Hall or download the Address/Phone/Email Change Request form from <http://www.du.edu/registrar> (<http://www.du.edu/registrar/>).
- Send an email to [registrar@du.edu](mailto:registrar@du.edu); include student number and indicate which address or addresses are to be changed. (See following address types.)
- Call 303-871-4095. (For security reasons, students are asked to give identifying information.)
- Send a fax to 303-871-4300. (Include student number, month and date of birth, and indicate which address types are to be changed.)

### Types of Addresses

- **Mailing:** This is the default address used by DU. All constituents should have a correct mailing address.
- **Billing:** Used to send the tuition bill to a different address from the mailing address.
- **Business:** Your place of work. For DU employees, this will be your office address.
- **Grades:** Used to send grades to a different address than the mailing address.
- **Home:** Used to distinguish a permanent (family) address for students from out of the area, or a home address for alumni. International students and employees (visa classes F, M and J) must maintain a valid foreign address in this field.
- **On--Campus:** Used only for University housing addresses. It is populated automatically each term.
- **Parents:** DU can maintain up to two addresses for parents.
- **Seasonal:** Used to override your permanent mailing address for certain times each year—e.g., a summer house.
- **Temporary:** Used to override your permanent mailing address for a single specified period.

### Telephone Numbers

Students can enter several different types of telephone numbers in their student account: permanent home, business, cell, fax and local (if different from permanent home). Indicate the type and whether the number should be added or deleted on the front of the form. If checked as "unlisted," the telephone number will only be released to University officials.

### Notification preferences

Students may opt to receive emergency notifications and other official University notifications via text message. Notification preferences may be updated in MyDU (<https://my.du.edu/dashboard/>) by navigating to Student Tools, Records and Requests, Update your notification preferences.

## Preferred Name Usage

The University of Denver recognizes that many of its constituents routinely use a first name or full name other than their legal name. As part of being a welcoming and inclusive campus, the University of Denver uses preferred first names and chosen/lived/professional names widely in the course of DU business and education.

### What is a "Preferred First Name" and what is a "Chosen/Lived/Professional Name?"

Beyond legal name, DU maintains two options for names which substitute in place of all or part of the legal name in University systems.

#### Preferred First Name:

A first name by which an individual wishes to be identified that is other than the individual's legal name is a "preferred first name." This is analogous to a nickname. Students and employees can submit a preferred first name online. The preferred first name will be displayed in addition to legal name rather than replace it, for example: Shaquille Rashaun O'Neal (Shaq).

#### Chosen/Lived/Professional Name:

A chosen/lived/professional name is used in place of a legal name and replaces the legal name in most cases. This name option can include a first, middle and/or last name. For example, chosen/lived/professional name of Cardi B would replace the legal name of Belcalis Marlenis Almanzar.

#### Limitations on Use of Chosen/Lived/Professional Names

Because use of legal name is necessary in certain records and communications, both the legal name and chosen/lived/professional name are stored in DU's information systems. When a student or employee contacts a DU office in person or by phone, the staff in that office may only have electronic access to the legal name.

While DU will use of the chosen/lived/professional name in most instances, students and employees should be aware that the use of the legal name will continue to be necessary in certain communications and processes due to DU business or legal requirements and/or system limitations.



## More Information on Name Options

### Reasons for using Preferred First Names or Chosen/Lived/Professional Names

Many members of the DU community use a first name or full name that differs from their legal name. These may include individuals who prefer to use:

- a middle name instead of a first name;
- a nickname;
- an anglicized name;
- names with special characters: e.g., Renée, François, Zoë, Sørina, Peña
- a name to which the individual is in the process of legally changing;
- a name that better represents the individual's gender identity;
- a name that reflects professional activities, publications, etc.

### How to request a preferred first name be entered in DU information systems

Members of the DU community can submit a preferred first name online through MyDU (<http://my.du.edu/>). Type "profile" in the search, select My Person Profile. Preferred first names can be removed by clicking Update with nothing in the field.

### How to request a chosen/lived/professional name be entered in DU information systems

To request your chosen/lived/professional name, you can complete and submit your request using our online form (<https://na4.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=371b95bf-9b4f-4b2c-a89a-dcfb608e8167&env=na4&acct=b24a216b-183e-4eeb-93f6-edfd6712ee1b&v=2>) or our paper Name Change Request Form (<https://www.du.edu/sites/default/files/2022-11/namechangerequestform.pdf>). Please submit the form to the office indicated in the instructions. Chosen/lived/professional names may be removed using the same form.

### Use of Names within DU Systems

DU displays preferred first names and chosen/lived/professional names in most public-facing uses. This includes written communications, web displays and internal reports and processes. Not all University departments will have access to preferred first names while interacting with students.

### Use of Legal Name

Use of legal name is necessary for certain data exchanges such as those to government agencies that verify the identity of a student by using the student's legal name. These include (but are not limited to) transcripts, payroll, tax, insurance, banking, financial aid and federal or state reporting.

### Name Designation Request Policy

Individuals may designate a preferred first name or chosen/lived/professional name with which they identify and by which they prefer to be known. DU reserves the right to deny a name request in its information systems if the request is fraudulent, carries connotations offensive to good taste and decency, or violates University Regulations and/or Student Code of Conduct.

### ID Card

The ID printing system will automatically pull your first and last name from the DU information platform. You can request for your "preferred first name" to be used instead; simply let the ID office know prior to printing. In order to use a preferred first name, you must have added that name into the DU system and wait about 24 hours for the systems to fully update. While getting an updated card, don't forget you can also update your picture! Your DU ID card can also be used as an ATM card if you have accounts with US Bank, which has an on-campus location in Driscoll Commons. If US Bank has your legal info on file, your DU ID, with preferred first name, works for them!

### DU Email Addresses

DU will provide a new DU email address, upon request, for students or employees who have requested a chosen/lived/professional name. For further information, contact the IT Computer Help Center: <https://www.du.edu/uts/helpdesk/>.

### Diploma Names

Students may also specify a "diploma name" to use on DU diplomas. Additional information on diploma names can be found here: <https://www.du.edu/registrar/transcripts-grades-records/diplomas> (<https://www.du.edu/registrar/transcripts-grades-records/diplomas/>).

## Gender Designation & Personal Pronouns

We've added fields to your information systems that allow members of our community to self-identify by gender identity and pronouns. DU already asks affiliates to self-identify by current legal sex (often coded as "gender"), race/ethnicity, veteran status and disability. By expanding our optional self-identification categories related to gender identity, we're able to understand and acknowledge our constituents more accurately and inclusively.

### How Do I Update My Information?

Prospective students and employees are asked some basic demographics questions when applying, while current community members can update their personal information through MyDU (<https://my.du.edu/>).

The expanded fields are optional but encouraged, and a "prefer not to respond" option is available. Unless you indicate something different, your legal name and sex will remain the default in all systems; other fields will note "not available" or be blank.

We recognize that even these expanded options do not represent all the categories that DU affiliates use to describe themselves. We are using the additional fields and these expanded options to gauge constituent interest and institutional utility. We plan to follow up with various campus constituencies to assess how we might improve descriptors, and potentially offer more and better options in the future.

Identity	Options Offered	Explanation
Legal Sex	<ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> <li>• X</li> <li>• I elect not to self-identify at this time</li> </ul>	For DU's required reporting, and to avoid even the appearance of identity fraud, this must match current government designation.
Gender Designation	<ul style="list-style-type: none"> <li>• Man</li> <li>• Woman</li> <li>• Non-binary</li> <li>• I elect not to self-identify at this time</li> <li>• Option not listed</li> </ul>	Consistent, lived identity. Unlike legal sex or anatomical descriptors, this is the level at which most people interact with others.
Personal Pronouns	<ul style="list-style-type: none"> <li>• any/all</li> <li>• fae/faer</li> <li>• he/him/his</li> <li>• he/el</li> <li>• he/they</li> <li>• she/her/hers</li> <li>• she/ella</li> <li>• she/he</li> <li>• she/he/they</li> <li>• she/they</li> <li>• they/them/theirs</li> <li>• they/elle</li> <li>• they/he</li> <li>• they/she</li> <li>• ze/hir/hirs</li> <li>• Option not listed</li> </ul>	Term used as stand-in for name in conversation and correspondence. This is an ongoing, expanded list; it likely cannot ever be fully exhaustive. If there is something you would like us to add, consider, or shift, please let us know at <a href="mailto:inclusion@du.edu">inclusion@du.edu</a> or visit <a href="https://www.du.edu/equity/trans-hub">https://www.du.edu/equity/trans-hub</a> ( <a href="https://www.du.edu/equity/trans-hub/">https://www.du.edu/equity/trans-hub/</a> ) for more information.

Prefix/Honorific	<ul style="list-style-type: none"> <li>• Mr.</li> </ul>	Example optional titles or honorifics used in formal greeting or correspondence. Some are traditionally based on gender, age and/or marital status.
	<ul style="list-style-type: none"> <li>• Mrs.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Ms.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Mx.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Dr.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Hon.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Prof.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Rev.</li> </ul>	

### How Will This Information Be Used?

Most immediately, the University will use aggregate information to understand campus demographics better, and to improve our acknowledgment of and services to our diverse communities. This can include more robust support resources, enhanced training for service providers, more accurate reports and potential advocacy to external reporting agencies for improving their systems.

With this additional information, we are working to better connect various campus software systems so that your preferred name, pronouns and salutations are available from the central database, and are used consistently, accurately and respectfully by all affiliates. Ideally, every University interaction would be informed by the appropriate info: employees having phone and in-person conversations, auto-generated messages and online records would all use preferred names and pronouns. However, please note that we cannot yet guarantee every communication will use these selections.

### Who Will Have Access to This Information?

With the exception of student directory information, access to all affiliate information is restricted by law and policy to University officials and those granted access by individual students.

Like most other personal information, an affiliate's legal sex and gender designation are not considered directory information and are not released, accessed or used without permission. However, students who sign FERPA releases for their parents/guardians/others should understand that this identifier information can be requested/disclosed.

As part of a student's name, prefix/honorific titles are considered directory information and will be used publicly.

All affiliates should be aware that providing this information to DU does make it available within the restrictions outlined above, so it should be provided thoughtfully and intentionally.

## Transcripts

A transcript is an official copy of a student's academic record showing the student's academic status at the time it is issued. The official transcript includes the complete academic record of courses taken at the University of Denver. Transcripts may be ordered online, by mail or fax, or in person at University Hall, garden level in the main hall. Transcripts require one to two working days of processing time. To order official transcripts online, log in to MyDU (<https://my.du.edu/dashboard/>) and type Transcripts in the search. A credit card is needed to complete online orders. To order transcripts by mail or fax, a signed Transcript Order Form (<http://www.du.edu/registrar/media/documents/transcript.pdf>) is required along with payment in the form of cash, check or money order. An email request is NOT accepted.

Send written transcript requests to

University of Denver  
Office of the Registrar  
2197 S. University Blvd.  
Denver, CO 80208-9405  
Attn: Transcripts

Students may check for current holds at M (<https://PioneerWeb.du.edu>)yDU (<https://my.du.edu/dashboard/>). The registrar does not hold transcripts pending change of grade. "Issued to Student" is stamped on official transcripts sent to or picked up by students.

Unofficial transcripts or transcripts from Colorado Women's College/Temple Buell are also available through this method.

## Contact Information

For transcript information and status inquiries, call 303-871-4095 or email transcripts@du.edu.

## Support Services and Resources

Bereavement Policy (p. 1291)

Crisis Assessment Risk Evaluation (CARE) Behavioral Intervention Team (p. 1291)

Pioneers CARE (p. 1296)

Student Death Response and Notification Guidelines (p. 1297)

## Bereavement

### Student Bereavement Policy

A student's absence from class will be excused in the event of a death in the student's immediate family or household for up to three consecutive business days for in-state memorial services and five consecutive business days for out-of-state memorial services. The student is responsible for fulfilling the course requirements and for working with course instructors on an appropriate timeline to submit any missed assignments/requirements.

The Office of Student Outreach & Support (SOS) is the designated office to help support the student and review all available options if the death has an impact on the student's academic progress for the term. Faculty requesting confirmation of the bereavement leave should consult with the SOS staff.

## Crisis Assessment Risk Evaluation (CARE) Behavioral Intervention Team

### Crisis Assessment Risk Evaluation (C.A.R.E.) Behavioral Intervention Team

Dear Campus Community,

As part of our culture of care and support, the University of Denver is committed to providing care and access to resources to create a safe and secure environment for our campus community to maintain our safety, health, and well-being. The C.A.R.E. team is comprised of staff and administrators across campus who are dedicated to crisis support and behavioral intervention in the best interest of the individual student and the campus community. The C.A.R.E. team takes a proactive, objective, supportive, and collaborative approach to the prevention, identification, assessment, intervention, management of, and coordinated response to situations and behaviors that may be disruptive or pose a risk of harm. As we care for both the individual student and the campus community, the following policies outline the ways in which the C.A.R.E. team intervene, identify behavioral expectations and other support strategies to help the student remain in good standing with the University. While the C.A.R.E. team leads this effort of behavioral intervention, every member of the community has a shared responsibility and shared ownership in the culture of care and support. In gratitude of our partnership,

The C.A.R.E. team

### Overarching Policy

Crisis Assessment Risk Evaluation Behavioral Intervention Team Policy and Procedures The University of Denver's Crisis Assessment Risk Evaluation Behavioral Intervention Team (CARE Team) aims to provide care and access to resources. The CARE Team strives to promote a safe and secure environment for our University community and to maintain the safety, health, and well-being of the University community through proactive, supportive, and collaborative approaches. The CARE Team aims to address and manage patterns and/or instances of concerning behavior to support a student, consistent with the student's individual rights, while balancing the safety, health, and well-being of the University community. Members of the University community should inform the CARE Team of any student exhibiting behavior(s) that are concerning, a significant disruption, and/or pose a substantial risk of harm by submitting a referral to Student Outreach & Support (SOS). SOS will respond to all such reports in a private manner, with information only released on a need-to-know basis in accordance with applicable federal and state laws and regulations. For life threatening situations, first call 911, then notify Campus Safety at 303-871-3000. In addition to implementing the following protocol for referrals of concerning or disruptive behaviors, the University may also refer such behavior to the Office of Student Rights & Responsibilities for action under the Honor Code, including but not limited to the Policy on the Disruption of the Learning Environment, and/or to the Office of Equal Opportunity & Title IX (EOIX) for evaluation pursuant to the University's Discrimination and Harassment Policy and applicable EOIX procedures. The CARE Team is dedicated to the prevention, identification, assessment, intervention, and management of student situations and behaviors that pose:

- a significant disruption to the student's living and/or learning environment; and/or
- a substantial risk of harm to individuals and/or the safety, health, and well-being of the University community.

The CARE Team's primary modes of intervention to address patterns of concerning behavior are coordinated responses that include, but are not limited to, the following:

- Providing support and connection to University resources through initial outreach and meetings with Student Support Advisors assigned through Student Outreach & Support;
- Referring the student to Accessible DU: Student Disability Services (SDS) to determine whether the student is eligible for reasonable accommodations to assist the student in meeting their academic and community expectations;
- Issuing Behavioral Expectation Letters to outline behavioral expectations, connect students to appropriate campus and healthcare resources to address the concerning behavior, and developing a plan of action to help the student to remain in good standing with the University;
- Mandating an Individualized Assessment and/or Threat Assessment where applicable
- Exploring the voluntary withdrawal options pursuant to the University's Leave of Absence or Medical Leave of Absence policies;
- Requiring temporarily removal students from the University as an interim intervention; and/or
- Invoking the Mandatory Withdrawal Policy where applicable.

### **Support and Connection to University Resources through Student Outreach & Support**

SOS assists students experiencing academic, social and/or personal difficulty, mental, emotional, or physical health concerns, and crisis situations. SOS staff review referrals to better understand the student's individual circumstances, and then Student Support Advisors aim to connect the students with relevant resources.

### **Reasonable Accommodations**

When a student indicates that a mental, emotional, and/or physical health concern is a contributing factor to concerning or disruptive behavior, the student may be encouraged to meet with the Student Disability Services (SDS) staff to explore whether the student is eligible to request reasonable accommodations to assist the student in addressing the behavior, with input from the student's healthcare provider(s) as appropriate.

### **Behavioral Expectation Letters**

The goal of a Behavioral Expectation Letter is to:

- Identify concerning behavior;
- Outline behavioral expectations;
- Connect students to appropriate campus, healthcare, and other resources to address concerning behavior; and
- Develop an action plan to help the student remain in good standing with the University.

A Behavioral Expectation Letter may require that the student consult with a licensed professional to perform an Individualized Assessment and/or Threat Assessment. The University may initiate an Individualized Assessment and/or Threat Assessment when:

- The student's behavior significantly disrupts the living and/or learning environment of others;
- The student may be unwilling and/or unable to carry out substantial self-care obligations; and/or
- The student's behavior poses a credible and substantial risk of harm to the safety, health, and/or well-being of individual(s) within the University community.

The results from the Individualized Assessment and/or Threat Assessment will inform the implementation of interim support strategies, referrals to other University resources, including possible reasonable accommodations, and other levels of intervention.

### **Temporary Removal**

The University may temporarily remove a student from campus as an interim action if the Vice Chancellor for Student Affairs or designee, determines, after considering the reasonably available information, that the removal of the student is necessary to protect an individual or the University community from a credible and substantial risk of imminent harm. Within three (3) to five (5) business days of the temporary removal decision, the University will provide the student who has been temporarily removed from the campus with the opportunity to meet either in-person or remotely with the Vice Chancellor for Student Affairs, or designee, to respond to the basis for the temporary removal and/or to present additional information. Following this meeting, the Vice Chancellor for Student Affairs, or designee, may either continue or rescind the temporary removal. If the temporary removal is rescinded, the University may proceed with a mandatory withdrawal, pursuant to the Mandatory Withdrawal policy. A temporary removal may remain in effect until the Vice Chancellor for Student Affairs, or designee, makes a determination regarding the student's status pursuant to the Mandatory Withdrawal policy.

### **Student Rights & Responsibilities**

The Office of Student Rights & Responsibilities (SRR) oversees adherence to and has authority for resolving potential violations of the University of Denver Honor Code and/or the Policy on the Disruption of the Learning Environment. Should a student be unwilling to cooperate with University administrators in addressing patterns and/or instances of concerning behavior, the University may move forward with reporting the behavior and/or non-compliance to SRR.

For more information regarding the Honor Code and the Policy on the Disruption of the Learning Environment, please refer to the DU Honor Code.

### **Referral to Options for Withdrawal from the University**

If a student is engaging in patterns of behavior that poses a significant disruption or threat to the student's living and learning environment and/or results in credible and substantial risk of harm to the safety, health, and/or well-being of individual(s) within the University community, the University may request that the student review voluntary withdrawal information, which could include the University's Leave of Absence or Medical Leave of Absence policies.

### **Mandatory Withdrawal Policy**

To promote safe and productive living and learning conditions, the University must balance the needs of the individual and those of the University community in determining when a student's behavior necessitates separation of that student from the University. The Vice Chancellor for Student Affairs & Inclusive Excellence, or designee, has the authority to initiate the process for mandatory withdrawal pursuant to the University's Mandatory Withdrawal policy when the Vice Chancellor for Student Affairs & Inclusive Excellence, or designee, determines that:

- The student poses a credible and substantial risk of harm to the safety health, and/or well-being to individuals within the University community or to the University community as a whole; or
- The student's behavior significantly disrupts or threatens the living and learning environment of other members of the University community.

### **Individualized Assessment Policy**

The University may initiate an Individualized and/or Threat Assessment for the following reasons:

- The student's behavior significantly disrupts the living and/or learning environment of others;
- The student may be unwilling and/or unable to carry out substantial self-care obligations; and/or;
- The student poses a substantial risk of harm to individuals within the University or to the safety, health, and/or well-being of the campus community.

The University of Denver's Crisis Assessment Risk Evaluation Behavioral Intervention Team (CARE Team) will direct the student to consult with a licensed mental health professional or threat assessment professional to complete the Individualized Assessment. The Dean of Students/Associate Vice Chancellor and Chair of the CARE Team will typically communicate the individualized assessment guidelines through a Behavioral Expectation Letter. The student is expected to follow through with the action plan set forth in the Behavioral Expectation Letter to remain in good standing with the University. The University has the right to review and approve the selection of the licensed professional who is completing the assessment.

The University will seek a release from the student under the Family Educational Rights and Privacy Act (FERPA) to provide the licensed professional with applicable sources of information related to the patterns of concerning behavior, if such records exist. These may include University incident reports/referrals, police reports, emergency room reports, and witness statements. The assessment may require multiple visits, and the student is responsible for payment of any associated costs or fees, on a pro-rated basis according to the degree of financial assistance the student receives. The University will request that the student sign a HIPAA Release of Information form for the assessor to provide the CARE team with findings and recommendations from the assessment.

Once the student submits the signed FERPA release, the University will send the selected provider the assessment form to complete. Based on the results of the Individualized Assessment, the University may recommend further action, including, but not limited to, resource referrals, discussions with the AccessibleDU: Student Disability Services (SDS) regarding reasonable accommodations, discussions of voluntary Medical or Personal Leave of Absence, Temporary Removal and/or a Mandatory Withdrawal.

### **Individualized Assessment**

A comprehensive individualized assessment is a holistic approach to determine biological, psychological, and sociocultural factors that may be impacting the student's behavior.

### **Threat Assessment**

When the University is concerned about the safety of the campus community, we may enlist the services of Nicoletti-Flater and Associates or another nationally recognized forensic psychology group, to provide the University of Denver's CARE Team with a threat assessment. This assessment may be either or both of the following:

1. An indirect, paper assessment—the University would provide the group information about the student/incident including, but not limited to, Student Rights and Responsibilities reports, Housing & Residential Education reports, various forms of communication, social media postings and any other pertinent information; and/or
2. A direct assessment—in addition to providing the group with information in accordance with an indirect, paper assessment, the University would mandate that the student would meet with a designated individual to discuss the incidents and behaviors of concern.

### **Student Rights & Responsibilities**

The Office of Student Rights & Responsibilities oversees adherence to and has authority for resolving violations of the University Honor Code. Should a student be unwilling to cooperate with University administrators in addressing patterns and/or instances of disruptive behavior, the University may

move forward with reporting the disruptive behavior and/or noncompliance to the Office of Student Rights & Responsibilities. For more information regarding the Honor Code, please refer to the DU Honor Code.

### **Mandatory Withdrawal Policy**

Crisis Assessment Risk Evaluation Behavioral Intervention Team Mandatory Withdrawal Policy The University of Denver's Crisis Assessment Risk Evaluation Behavioral Intervention Team (CARE Team) is committed to providing care and access to resources to promote a safe and secure environment for our campus community and to maintain the safety, health, and well-being of campus community members through a proactive, objective, supportive, and collaborative approach. To promote safe and productive living and learning conditions, the University must balance the needs of the individual and the community in determining when a student's behavior warrants removal of a student from the University. Prior to initiating the Mandatory Withdrawal process, the University will:

- Determine on an individualized basis whether the University can implement reasonable accommodations through the AccessibleDU: Student Disability Services (SDS) to allow the student to remain at the University;
- When practicable and appropriate, facilitate a voluntary withdrawal under the University's Leave of Absence or Medical Leave of Absence policies;
- Conduct an Individualized and/or Threat Assessment based on the opinions and recommendations of the student's treating healthcare provider(s), the opinions and recommendations of any healthcare professional(s) consulted by the University, any other information the student chooses to provide, and the best available evidence to the University;
- Protect the student's privacy by disclosing information only on a need-to-know basis, in accordance with applicable federal and state laws and regulations, and only requiring the student to provide a HIPAA release for access to medical documentation that is reasonably necessary to complete an Individualized Assessment.

The University will initiate the Mandatory Withdrawal process only if, after the student has undergone an Individualized and/or Threat Assessment, (a) the University concludes that the student's continued participation in programs, courses or activities would require accommodations that would be unreasonable or fundamentally alter the nature of the programs, courses or activities; (b) the student rejects all reasonable accommodations offered and cannot meet the essential eligibility requirements of the programs; (c) even with all reasonable accommodations offered, the student cannot meet the essential eligibility requirements of the programs; or (d) the student is unwilling to carry out substantial selfcare obligations and/or poses a significant risk of serious harm to their own safety and/or the safety of member of the University community. If the student refuses to participate in an Individualized and/or Threat Assessment, the University may initiate the Mandatory Withdrawal process.

### **Process for a Mandatory Withdrawal**

Except in emergencies (see Temporary Removal), the University will provide the student with at least five (5) business days advance written notice, including the following information:

- That the University is considering the student for a Mandatory Withdrawal;
- The basis for the possible Mandatory Withdrawal;
- The student's right to meet, either in person or remotely (at the sole discretion the Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee), with the Associate Vice Chancellor for Student Affairs or designee to respond to the basis for the possible Mandatory Withdrawal and to present additional information;
- The date, time, and location/manner of this meeting or instructions for scheduling this meeting;
- The student's right to have an advisor or support person, who may not speak on behalf of the student, with them during the meeting;
- A statement that the student's failure to attend this meeting will not prevent the University from moving forward with this process; and
- A statement that, if the student decides to withdraw voluntarily, the University will suspend the Mandatory Withdrawal process.

The Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee will make a decision regarding continuance or withdrawal from the University, in consultation with, at a minimum the Assistant Vice Chancellor of Health and Wellness or designee, Director of Student Outreach & Support or designee (Dean of Students Office), Director of Student Rights & Responsibilities or designee (Dean of Students Office) and the Associate Director of Campus Safety or designee. If the Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee determines that (a) the student poses a substantial risk of harm to individuals within the University or to the University community as a whole, or (b) the student's behavior significantly disrupts the living and learning environment of other members of the University community, the Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee has the authority to place the student on a Mandatory Withdrawal.

The University will prepare a statement of rationale to be filed with the student's record for any decision requiring a student's Mandatory Withdrawal and will include the requirements for re- admission to the University.

### **Student Rights & Responsibilities**

The Office of Student Rights & Responsibilities oversees adherence to and has authority for resolving violations of the University of Denver Honor Code. Should a student be unwilling to cooperate with University administrators in addressing patterns and/or instances of concerning behavior, the University may move forward with reporting the concerning behavior and/or noncompliance to the Office of Student Rights & Responsibilities. For more information regarding the Honor Code, please refer to the DU Honor Code.

### Reconsideration and Appeal Process for Mandatory Withdrawal

The appellate officer for students is the Vice Chancellor for Student Affairs or designee. Students may appeal the Mandatory Withdrawal by submitting a written appeal within five (5) business days of the date of the decision. The student's submission must state the specific grounds for reconsideration/appeal. Where the reconsideration/appeal is on the grounds of new, previously unavailable information, the student must submit that information with the written appeal.

The University will consider reconsideration/appeals based on the following grounds:

- The existence of procedural error(s) including concerns of bias or discrimination on the part of the decision makers.
- Presentation of new and significant information that was not reasonably available at the time of the initial review and would likely alter the decision.

Mere disagreement with the decision is not grounds for reconsideration/appeal.

The appellate officer will issue their determinations in writing within five (5) business days of the submission of the appeal. In extenuating circumstances, the appellate officer may notify the parties in writing that additional time is needed to issue a determination. For concerns of bias and retaliation based upon a protected class, the student may file a report with the Office of Equal Opportunity & Title IX. Appeal determinations are final and are not subject to further review.

### Returning from the Mandatory Withdrawal

Any student subject to a Mandatory Withdrawal may submit a written request to return to the University in the term following the student's withdrawal subject to the University's re-entry policies, and the student must include, at a minimum, any appropriate documentation demonstrating compliance with the conditions for re-admission, if applicable. The University may require the student to sign all reasonable and relevant records releases authorizing direct communication between the University and any individual holding information relevant to this matter, including but not limited to the student's medical provider(s), whether on-campus or off-campus, the student's friends and family, and/or employees of previous institutions the student attended, as appropriate.

For full consideration, the student must submit these materials at least 14 business days prior to the term in which the student is seeking to resume their studies. The student may also present any other relevant documentation or information that the student believes supports the request for return or re-admission.

The Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee, in consultation with at a minimum, the Executive Director of the Health and Counseling Center or designee and the Associate Director of Campus Safety or designee, will review the available information, the best available objective evidence, and, if applicable, current medical Updated knowledge, to determine:

- whether the student has satisfied the conditions for re-admission, if applicable;
- whether the student can function appropriately in the living and learning environment of the University community;
- whether the student no longer poses a credible substantial risk of harm to individuals within the University or to the University community as a whole.

The Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee will notify the student in writing of the decision within five (5) business days of the receipt of the student's request unless the University can show good cause for the delay. If Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee approves the request for permission to return, the Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee may approve with the inclusion of additional recommendations or requirements.

If Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee denies the request, the University will include in the written communication what additional steps the student must take to meet the conditions for readmission. The Vice Chancellor for Student Affairs or designee will also include in the written communication information on appealing the denial.

The student may appeal the decision of the Dean of Students/Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee to the Vice Chancellor for Student Affairs or designee by submitting a written request and any supporting materials within five (5) business days of the date of the decision. The Vice Chancellor for Student Affairs or designee will promptly review all appropriate records and documentation and confer with appropriate campus professionals. The Vice Chancellor for Student Affairs or designee will then affirm, overturn, or modify the decision of the Associate Vice Chancellor for Student Affairs and Inclusive Excellence or designee and communicate the decision to the student in writing within five (5) business days, unless the University can show good cause for delay. This decision is final and is not subject to further review.

For students placed on a Mandatory Withdrawal for medical reasons, they will be required to go through the medical re-entry process as outlined in the Medical Leave of Absence and Re-Entry policy.

### Courses Dropped



Each course that is dropped after the first week of the term will result in a withdraw notation (“W”) on the student’s transcript regardless of the reason for the drop. A “W” is an appropriate registration status indicating that a student withdrew after the first week of the quarter. “Ws” are not factored into the student’s grade point average (G.P.A.).

### **Student Records**

Information the student provides to the University as part of the Mandatory Withdrawal process Updated August 2023 | 4 from classes will be considered protected by the Family Educational Rights and Privacy Act (FERPA).

### **Financial Obligations**

The student must meet all financial obligations to the University by published deadlines. Failure to do so could mean that the student would not be eligible to register upon return to the University.

### **Health Insurance Information**

All degree-seeking students enrolled for one (1) or more hours of graded credit and who are actively attending classes or completing other required course work toward a degree are eligible to enroll in the DU Student Health Insurance Plan. However, students must actively attend classes for at least the first thirty-one (31) days after the date for which coverage is purchased. Students subject to mandatory withdrawal from classes in the first thirty-one (31) days of class are not eligible for Student Health Insurance Plan coverage. If the Student Health Insurance Plan provider discovers that a student has not met the eligibility requirements, their only obligation is to refund the premium.

## **Student Outreach & Support (SOS) Referral System**

### **Student Outreach & Support (SOS) Referral Process**

The Student Outreach & Support (SOS) referral is a process to submit information about a student who may be experiencing a challenging situation and needs help to connect to the appropriate resources. Each referral is reviewed and then assigned to a Case Manager to outreach to the student and develop a support plan. This referral activates the appropriate University protocol to support both the individual and the campus community in maintaining their safety, health, and well-being.

For examples of indicators of concerning behavior. Please also always err on the side of submitting a referral. It is important for our students and campus community that we receive this information in a timely manner.

Additional signs include:

- Difficulties with family/home environment
- Difficulties with food security and housing
- Difficulties adjusting to the college experience
- Financial Concerns
- Relationship Concerns
- Student being unresponsive to multiple outreaches
- Witness to an accident

If you know of a student who is experiencing a challenging time, we encourage you to submit a SOS referral through the online referral system.

A note about privacy:

As a part of this process, we work very hard to maintain privacy for students so they trust the work we’re doing. As a result, if you submit a referral, we do not generally report back or communicate with you about the details of how we’ll be working with individual students.

A SOS referral is not for emergencies. If there is an immediate threat to a student (either through self-harm or interpersonal violence) or the community, please call Campus Safety at 303-871-3000, or if dialing from a campus phone, 1-3000.

If you have a concern about our referral process, please email [sos@du.edu](mailto:sos@du.edu)

# Student Death Response and Notification Guidelines

## Life Threatening Injury or Death of a Community Member Student and Employee Guidelines for Non-Emergency Situations

The life threatening injury or death of a student or employee is a tragedy not only for family members and friends but also for the University community. The University of Denver strives to ensure that our responses are thoughtful, caring, professional, coordinated, and consistent. The notification of a tragic event sets in motion a range of protocols by Campus Safety, administrators, medical and mental health professionals, Student Life personnel, faculty, students, and others, depending on the circumstances. **In case of an immediate or continuing threat, call 911 and Campus Safety at 303-871-3000.**

### Notification

Any member of the university community who receives information regarding a life threatening injury or death of a DU community member should notify Campus Safety at 303-871-2334.

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- Anthropology (ANTH) (p. 1302)
- Art - Studio (ARTS) (p. 1308)
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## Accounting (ACTG)

### ACTG 4130 Accounting Process Technologies (4 Credits)

Accounting Process Technologies are a continually evolving discipline within the profession of accounting. Students are introduced to current and developing technologies used for process mining, automation, and analysis. Students will gain hands-on experience with various technologies as well as learn the accounting theories behind them.

**ACTG 4155 Accounting Data Skills and Concepts (4 Credits)**

This course is designed to give students an understanding of the technology underlying accounting information systems and help students develop more advanced data analysis skills. We will use the programming language Python to develop an understanding of the digital business logic that supports the operations of modern firms. We will learn to use Business Process Modeling Notation (BPMN) to graphically document operations and their underlying business logic. We will discuss and analyze a set of studies that use survey data from a global sample of executives and analysts to develop an understanding of the levels of technological sophistication in modern firms. We will also discuss and analyze distributed databases, information security, and eXtensible Business Reporting Language. Prerequisites: none.

**ACTG 4176 Accounting Data Analytics (4 Credits)**

In this course, students explore overarching trends in big data and the impact to accounting and auditing fields while also gaining hands on experience working with business data sets. In today's information world, accountants must be well equipped to understand and utilize the vast and varying data systems that feed a company's decision making process. This course allows students to develop big data skills by learning the SQL language to query data from mock clients. Students execute Computer Assisted Auditing Techniques (CAATs) using both the SQL language as well as the audit data mining tool, IDEA. Students simulate the process to request client data files, load complex data sets, design and execute query procedures and summarize results for management. Prerequisite: ACTG 4610.

**ACTG 4220 Financial Actg & Analysis (4 Credits)**

Cross-listed with ACTG 3230.

**ACTG 4222 Understanding Financial Statements (4 Credits)**

At the conclusion of this course the student should understand: (1) management decisions that impact published financial statements, (2) the fundamentals of interpretation and analysis of financial statements, (3) economic and ethical issues relating to financial reporting, and (4) management attempts to enhance reported operating results. The course addresses the needs of managers and analysts, hence does not cover promulgated financial reporting rules in depth. The financial reporting topics expand on material presented in introductory Accounting and Finance courses. The focus is on the substance of the reported information. This course is not an approved elective for the MACC degree. Cross listed with ACTG 3220.

**ACTG 4240 Topics & Cases in Financial Accounting (4 Credits)**

This course develops a greater awareness of contemporary accounting issues, focusing on financial reporting. The course is designed to enhance each student's ability to identify, discuss, and resolve open-ended problems (i.e., those having no single "correct" answer) faced by accounting professionals. Each student must commit to being an active participant in the class discussions. Through the use of numerous cases involving all aspects of financial reporting, students identify issues, conduct authoritative research, then present and defend their conclusions using both oral and written presentation formats. Students also write an original research paper on a topic of their choice.

**ACTG 4281 Intermediate Financial Accounting I (4 Credits)**

The focus of this course is the foundation and content of published financial statements. Specifically it covers the following broad topics: (1) Conceptual Framework of Financial Reporting; (2) Financial Statements and Related Disclosures; (3) Assets: Recognition and Measurement; and (4) Liabilities: Recognition and Measurement. Common to each of the topics is an emphasis on reading GAAP and applying GAAP guidance to fact patterns. At the conclusion of the course, students should be aware of the proper accounting treatment for many common situations; moreover, students should be fully comfortable interpreting GAAP literature to address scenarios involving assets, liabilities, and income that were not specifically covered in the class.

**ACTG 4282 Intermediate Financial Accounting II (4 Credits)**

This course is a continuation of Intermediate Financial Accounting. The focus of this course is the application of Generally Accepted Accounting Principles to complex business transactions. In this final course of the sequence, we finish our examination of the balance sheet by exploring the issues involved with stockholders' equity, followed by in-depth study of some of the most complex accounting issues, including revenue recognition, accounting for income taxes, pensions and post-employment benefits, leases, and accounting changes and errors.

**ACTG 4284 Consolidated Financial Statements (2 Credits)**

This course introduces the student to the preparation of financial statements in compliance with GAAP when the reporting entity has investments in other entities that are other than passive investments. This module explores the financial reporting issues relating to partial or full ownership of one business entity by another. It includes use of the equity method as well as issues involved in reporting the financial results of consolidated entities, both at and subsequent to acquisition or formation.

**ACTG 4285 Accounting for Foreign Operations (2 Credits)**

Topics covered in this course include the financial statement impact of doing business in a foreign currency, having foreign subsidiaries or operations, and certain hedging activities.

**ACTG 4290 Financial Accounting Theory (4 Credits)**

This course introduces financial accounting theory with a focus on the application of accounting information as a tool for decision makers for firm valuation, contracting, executive compensation, enhancing corporate governance, and assessing earnings quality. The course draws from basic theories in economics, finance, and psychology to understand and predict accounting choices of firm managers and reactions of investors, lenders, auditors, and regulators to accounting information. The main objective is to foster conceptual, critical, and creative thinking about implications of accounting in the marketplace. Prerequisite: ACTG 4281.

**ACTG 4340 Topics & Cases in Managerial Accounting (4 Credits)**

Topics & Cases in Managerial Accounting focuses upon contemporary methodologies used by managerial accountants. Such methodologies are examined through classroom discussions of case studies and related articles. The course is designed to develop and enhance skills that are essential for the long-term success of career in accounting and finance.

**ACTG 4354 Cost Accounting (4 Credits)**

Accounting information in manufacturing enterprises, standard costs, and budgets. Open to students not having ACTG 3354 or equivalent.

Prerequisite: MBA 4110, MBA 4111, or equivalent.

**ACTG 4400 Taxation for Business and Investment Planning (4 Credits)**

This is an introductory tax course that emphasizes a conceptual approach to learning the income tax framework applicable to common business and investment transactions. It is designed to sensitize students to the tax implications of business decisions and to cultivate the student's ability to ask good tax questions. This course will illustrate that effective business planning depends on an accurate assessment of relevant tax factors.

**ACTG 4410 Federal Income Taxation (4 Credits)**

The course is designed for graduate accounting students that wish to study federal income taxation. This is the first course in taxation, which introduces the federal taxation system, the importance of tax authorities, the concepts of gross income and tax deductions and the tax implications of common property transactions. The course generally focuses on property transactions, but the taxation of individuals is emphasized with an objective of students being able to properly prepare complex individual tax returns.

**ACTG 4462 Corporate and Partnership Taxation (4 Credits)**

The course is designed for graduate accounting, finance or other business students in their study of advanced topics in federal income taxation.

This is the second course in taxation which concentrates on taxation of corporations, limited liability corporations, S corporations and partnerships.

Prerequisites: ACTG 3440 or ACTG 3036 or ACTG 4400 or ACTG 4410 or ACTG 3461.

**ACTG 4520 Forensic Accounting and Auditing (4 Credits)**

Students will have an opportunity to learn, study, and discuss practical aspects of accounting as it is used to detect and prosecute fraud. Students will be exposed to improprieties, common fraud schemes, illegalities, and harassments. Prerequisites: ACTG 3551 or ACTG 4551 (Concurrent enrollment allowed).

**ACTG 4530 Business Advisory and Internal Audit (4 Credits)**

In today's business environment, a given company's "internal audit" function is asked to not only help keep the business out of trouble (control risks), but also help make the business better (leverage risk management to make better business decisions). In this course, we will "reimagine" internal audit with a heavy focus on the business advisory aspects of audit. Topics specifically covered in this course include risk appetite and tolerance, risk culture and an array of cutting-edge audit and advisory topics (cybersecurity, data privacy, social media, to name a few). Students experience "real life" examples and case studies to truly experience the role of an auditor as business advisor. Prerequisite: ACTG 3551 or ACTG 4551.

**ACTG 4551 Auditing (4 Credits)**

This course is designed to provide you with a thorough understanding of auditing and related attest services. This includes gaining requisite knowledge about AICPA (U.S. GAAS) and PCAOB auditing standards and how they are applied in conducting a financial statement audit. Application of these standards applies to planning an audit, the risk assessment process including gaining an understanding of internal control, gathering and evaluating evidence, sampling, and issuing an audit report.

**ACTG 4552 Advanced Auditing (4 Credits)**

This course is designed to build on the foundation of auditing knowledge developed in ACTG 4551 and apply that knowledge to specific accounts and assertions in a financial statement audit. Students also examine selected SEC enforcement actions and discuss what audit procedures may have been beneficial to prevent the misstatement. Prerequisite: ACTG 4551 or ACTG 3551.

**ACTG 4575 Accounting Information System Risk, Control and Audit (4 Credits)**

An auditor cannot just "audit the numbers" without strong consideration to the IT systems that generate those numbers. Today's accounting professionals must possess a strong understanding of accounting information system risks and controls. Topics specifically covered in this course include IT security controls, datacenter controls, data backup and disaster recovery planning, SDLC and change control processes. Students perform hands on simulated audit exercises and case studies to truly experience the role of an IT auditor. Prerequisites: ACTG 3551 or ACTG 4551 or test score AC51=1.

**ACTG 4610 Financial Accounting and Reporting (4 Credits)**

In this course, students will gain a strong understanding of corporate financial statements that are consumed by parties such as managers, shareholders, creditors and financial analysts. The course covers the fundamentals of accounting from recording individual business transactions through the preparation of a company's summarized financial statements. The course closely examines how economic events and business decisions impact the three main financial statements – Income Statement, Balance Sheet and Statement of Cash Flows. Students gain significant experience analyzing Form 10-K annual reports of publicly traded companies.

**ACTG 4620 Accounting Ethics (4 Credits)**

This course focuses on the idea of community and the ethical and social relationships of accounting leaders and business organizations in their communities. The course focus is on the role of the accounting professional and the unique and special responsibilities associated with that role. This is examined by analyzing a variety of issues that students will face during their careers. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that emerge directly relate to the state Code of Professional Conduct applicable to CPAs, the Code provisions are discussed and analyzed. Prerequisites: None.

**ACTG 4660 Strategic Cost Management (4 Credits)**

Course description: Strategic Cost Management (SCM) will teach students how to use accounting information to make correct decisions within their firms. These decisions will include costing, pricing, strategy, and performance management. SCM articulates how to use accounting information in order to properly price goods and/or services, how to decide between alternative strategies, and how perform relative performance evaluation among employees and/or departments within the firm. The focus is on interpreting accounting information and making business decisions. Topics in the course include cost behavior, activity-based costing, cost-volume-profit analysis, short-term decision-making, balanced scorecard, and management control. The course will enable students to apply strategic thinking to management planning, decision-making, and management reporting. Prerequisite: ACTG 4610.

**ACTG 4661 Strategic Accounting for Managers (4 Credits)**

Management accounting is in transition, moving from a quantitative procedural focus to include a qualitative strategic focus that uses accounting to facilitate the organization's success. Changes include a renewed focus on the customer, aggressive cost reduction, and increased use of information technologies, among others. Motivation for the changes in management accounting are driven by evolving business processes in response to increased competition, both global and domestic. The management accountant is no longer a reporter and analyzer of financial facts only, but a business partner – developing the financial and non-financial information the organization needs to be successful. The concepts of management accounting are used in manufacturing and service organizations and are increasingly applied to government and not-for-profit organizations to help them succeed in their service missions and to be responsible to the citizens and funding agencies. In this course, students will learn how the management accountant plays a strategic role in the organization, developing and presenting the information that is critical for the organization's success. Students will use higher order thinking to apply accounting information to the types of strategic decisions organizations make for long-term sustainability. Prerequisites: ACTG 4610.

**ACTG 4700 Graduate Seminar in Accounting (1-17 Credits)****ACTG 4701 Special Topics in Accounting (1-5 Credits)****ACTG 4702 Special Topics in Accounting (1-5 Credits)****ACTG 4703 Special Topics in Accounting (1-5 Credits)****ACTG 4704 Special Topics in Accounting (1-5 Credits)****ACTG 4705 Topics in Accounting (1-4 Credits)****ACTG 4710 Managing the Family Business (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**ACTG 4730 International Accounting - London (4 Credits)**

This course is designed for students to study international accounting from both academic and practical perspectives. The main objective of this course is to develop a greater awareness of contemporary accounting issues faced in the international marketplace. This course will consist of two components: pre-departure classes designed to provide the student with knowledge of issues experienced in a global economy; a ten-day international travel experience which includes experiential learning exercises, group discussions and presentations, and seven visits to international companies and CPA firms. Prerequisite: Instructor Permission.

**ACTG 4735 Accounting for ESG -- Eastern Europe (4 Credits)**

This course is designed to give students an introduction to ESG accounting measurement and reporting issues from the perspective of multiple players in this arena (companies, accounting firms, standard setters, regulators etc.). This course juxtaposes US ESG accounting standard setting, measurement issues and best practices with Eastern European viewpoints on the same issues. With that in mind, this course will provide participants with the ability to be able to research, obtain and interpret current information on ESG accounting rules and standard setting.

**ACTG 4740 Valuation and Modeling (4 Credits)**

The ultimate purpose of the course is to improve professional decision-making skills. Professional decisions are made using a combination of judgment and analysis. Even skilled professionals (in any field) will make incorrect decisions when working with incorrect or insufficient information. Thus, one key to improving decision-making is improving analytical insights and skills. This course emphasizes the definition, construction, uses and limitations of popular financial models and instruments. Further, the class focuses on how the instruments are used, why they are used and how decisions to use such instruments and tools/techniques to value them are made. Prerequisite ACTG 4610 or test code AC10 >=1.

**ACTG 4750 Valuing a Business (4 Credits)**

This course explores all major aspects of business valuation. Students not only study valuation theory, they appraise an actual business and draft a valuation report in compliance with the American Institute of Certified Public Accountants Statement on Standards for Valuation Services (SSVS) and Reporting Standards of the National Association of Certified Valuation Analysts (NACVA). Prerequisite: ACTG 4740.

**ACTG 4760 CEOs and Corporate Governance (4 Credits)**

This course examines the current and pressing issue of corporate governance, in its ethical, legal, and social dimensions. Students read the latest views of scholars and experts and gain the perspectives of corporate CEOs and other organization leaders. Topics explored include the history of various governance models, public policy on corporate governance, corporate board functions and responsibilities, the dynamics between CEOs and boards, ethical leadership and corporate culture, ethics and compliance programs, executive liability, nonprofit corporate governance, board and audit committee responsibilities, restructuring and governance, executive compensation problems and solutions, shareholder activism, and corporate governance reforms. Cross-listed with LGST 4760.

**ACTG 4795 Graduate Research Sem-Actg (1-17 Credits)****ACTG 4880 Internship - Graduate (0-4 Credits)**

Hours and times arranged by student.

**ACTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**ACTG 6300 Behavioral Research in Accounting Seminar (4 Credits)**

This seminar will provide students with the tools needed for educated consumption of behavioral research in accounting. We will focus on the theoretical and methodological issues faced by those who conduct this research, as well as the practical implications of the research for business leaders. Students should leave the course with a basic knowledge of behavioral research in accounting and be better able to create, analyze and critique such research.

## Anthropology (ANTH)

**ANTH 3001 Race, Sex and Evolution (4 Credits)**

The course examines the paleoanthropology of race and sex. Our focus is on the nature and evolution of human racial differences, sexual anatomy, reproductive strategies, and gender roles. We will consider the history of thinking about race and sex in anthropology and related disciplines, and the uses to which particular conceptions have been put in our culture. We will discuss and evaluate alternative models for explaining the evolution of alleged biological and behavioral differences between racial groups and between men and women. Evaluation will proceed in light of evolutionary theory, comparative primate anatomy and behavior, the human fossil record, and general anthropological knowledge. Our aim is to examine myth and reality in popular and scientific understandings of these aspects of the human condition and, in the end, the social and political (i.e., policy) consequences of this knowledge. Enforced Prerequisites and Restrictions: ANTH 2105.

**ANTH 3020 Native Religions (4 Credits)**

A cross-cultural survey of concepts used to understand and talk about "religion," "the supernatural," and associated behavior among Native peoples of Turtle Island. Topics include healing and techniques of controlling and channeling supernatural power; sacred places and their significance; myths and symbols in their cultural contexts; initiation rites; conceptualizations of male and female deities; and responses of indigenous people to attempted missionization.

**ANTH 3030 Digital Anthropology (4 Credits)**

Digital Anthropology introduces students to computer technology used in anthropological research. Students study and then produce a number of digital products useful in the analysis and interpretation of museum collections, for archaeological mapping and research, and for the dissemination of anthropological knowledge online. This process covers the use of Geographic Information Systems (GIS) for spatial analysis, three-dimensional imaging programs ranging in scale from broad landscape mapping to detailed digital artifact analysis. In addition, the use of geophysical methods for imaging what is below the surface allows students to produce images of what lies below the ground in archaeological contexts.

**ANTH 3040 Anthropologies of Place (4 Credits)**

This class is an exploration of the relationship between people and places from an anthropological viewpoint. We concern ourselves with a variety of ideas about place, emphasizing not just how places are used, but how they infuse themselves into the lives, histories and ethics of those who interact with them. The course readings include book-length anthropological case studies interspersed with interdisciplinary readings about place and landscape. The course includes seminar-style discussions of readings, workshops and observations in the field. On several occasions, we take our class on the road, working together to think about how people and place interact. By the end of the class, each student creates his or her own anthropology of a place. Must be junior standing or above.

**ANTH 3060 Cultural Narratives (4 Credits)**

Human beings are natural storytellers. Whether reciting oral traditions or recounting personal experience, people everywhere use narratives as a way to express and to understand themselves. This course approaches cultural narratives from two angles. First, it explores the ways that anthropologists, usually trained in the social sciences, make use of and study narratives, whether through ethnographic observation, conducting an interview, gathering folklore or archaeological interpretation. Second, the class investigates narratives that, although produced by non-anthropologists, engage with anthropological issues such as kinship, gender, work, tradition and identity. The narratives range broadly from fiction, to poetry, to film. These two approaches are framed by theoretically informed readings about narrativity, both from the social sciences and the humanities. The class involves intensive reading and writing, as it makes use of both discussion and workshop formats. Each student in the course completes a research and writing project culminating in his or her own cultural narrative. Must be junior standing or above.

**ANTH 3070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Prerequisite: introductory social science course. Cross-listed with ANTH 4070.

**ANTH 3080 Memory and Memorialization (4 Credits)**

The course focuses on how social groups represent, experience and commemorate the remembered past; it explores issues of construction of memory, particularly how representations of the past- and its materialization through monuments, ruins, and landscapes- are connected with issues of institutionalized perceptions of national, ethnic, racial and religious identity. Furthermore, it discusses concepts such as "authenticity," "tradition," and "modernity" in the interpretation of cultural heritage and how the interpretation of the past and of culture depend on context (political and historical), experience and point of view. The course aims to develop an interdisciplinary approach to memory and to methodologies and empirical research.

**ANTH 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and RLGS 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**ANTH 3130 The Archaeology of Gender (4 Credits)**

This course examines the ways archaeology can contribute to the study of gender through investigations of the deep through recent past. The class will include readings on gender theory, the uses of archaeological data and specific case studies of engendered lives in the past. Cross listed with GWST 3130.

**ANTH 3135 Feasting, Fasting and Food: The Anthropology of Food (4 Credits)**

Feasting, Fasting and Food focuses on foodways and food culture. Food and its acquisition and preparation are tied to the historical, social and cultural lives of all peoples. By drawing on historical sources, ethnography and a number of anthropological perspectives, we look at foodways as symbols of identity, culinary tourism, food work as trade or profession, the study of food as art and theater, and food and memory. Prerequisite: ANTH 2010.

**ANTH 3155 Native American Resistance in the Digital Age (4 Credits)**

Since Europeans first made contact with the Americas five centuries ago, depictions of indigenous peoples have largely been created by and for the colonizers. Only recently have native activists begun to take back control of their image. The course begins with the premise that indigenous peoples have been active producers of their own cultural heritage both before and after European expansion into the Americas. A postcolonial approach will be used to evaluate resistance from a historical standpoint, starting with the colonial period and into the twenty-first century. Primary attention will be placed on the late twentieth century and twenty-first century to better understand how indigenous filmmakers, curators, scientists, healers, artists, and scholars use indigenous knowledge systems to contest Western conceptions of authority. Specific topics include indigenous film and media; indigenous feminisms; the use of indigenous perspectives in natural resource management; indigenous voices in the decolonization of museums; and the role indigenous communities play in educating the public of long-lived environmental contamination of water and other natural resources. The course will be designed to explore the voice and agency of indigenous peoples in each of the aforementioned fields, and to teach the validity of indigenous perspectives. While students will be introduced to indigenous case studies from around the world, primary attention will be given to Native American tribal groups in the United States. Prerequisite: Any ANTH 1000-level course.

**ANTH 3170 Applied Heritage Management (4 Credits)**

Considers the role of archaeology in preservation and the management of cultural resources in terms of legislation, ethics and practical application, with emphasis of the utility, necessity and reality of doing archaeology today in the public sector. Site report writing, governmental regulations and the business side of archaeology are stressed. Archaeological information from site reports and artifact analysis are compiled and presented in a digital format. Prerequisite: ANTH 2310.

**ANTH 3200 Human Origins and Evolution (4 Credits)**

Examines the fossil record for human evolution from 6 million years ago to the origin of modern Homo sapiens, including current theories, evidence and controversies. Considers the historical and sociological contexts of human evolutionary studies, popular myths and misconceptions, and alternative scenarios for the future evolution of the human species.

**ANTH 3225 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we will explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.



**ANTH 3255 Ancient North America (4 Credits)**

This course examines the history of American Indian cultures from their earliest archaeological traces on this continent up to and including contact with European explorers and colonists.

**ANTH 3290 Art and Anthropology (4 Credits)**

Study of the concept of art and its multiple roles in society from a cross-cultural and historical perspective. Commodification of culture through tourism and the global art market; arts of resistance and survival; and cultural expression and community development.

**ANTH 3310 Indigenous Environment (4 Credits)**

The purpose of this course is to introduce students to particular environmental issues that affect indigenous peoples, including subsistence and economic issues; sacred lands; cultural property dilemmas; and the impact that use of traditional cultural properties by others—including nation-state governments, corporations and tourists—have on indigenous peoples' cultural and social integrity. Particular focus is on one of these issues—travel and particularly "ecotravel" and "ecotourism."

**ANTH 3320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 3330 Human Rights of Indg Peoples (4 Credits)**

This course introduces students to the concept and definition of "indigenous peoples." It covers the history of resistance, revitalization, and assertion of sovereignty by Indigenous peoples, and why the United Nations felt it necessary to adopt a "Declaration on the Rights of Indigenous Peoples" in 2007. It covers how indigenous identities and indigenous rights issues do or do not "fit" with internationally accepted definitions of human rights. The course will concentrate on the intersection of indigenous autonomy with globalization, neo-liberal ideologies, and nation-state policies. Case studies focus on Iroquois, Crees, Mayans, Mapuche, Zapatistas, Maoris, and Sami.

**ANTH 3350 Latin American Archaeology (4 Credits)**

Covers the prehistory of the Western Hemisphere south of the Mexico-U.S. border, from initial colonization of the hemisphere by Paleo-Indian people, to the origins of agriculture and the rise of civilization. Olmec, Mayan, Aztec, Chavin, Moche and Inca cultures are covered in detail.

**ANTH 3370 Social Inequalities and Social Justice in Latin America (4 Credits)**

This course uses an intersectional approach to the study of gender, class and ethnicity in Latin America. Intersectionality aims at understanding the interlocking relation between these and other variables, how they are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. The course aims at understanding history, culture and peoples with a special emphasis on examining their heterogeneity, and how such heterogeneity is also related to social inequality. It examines contemporary issues such as women and LGBTQ+ rights, Indigenous movements, human rights, migrations, and economics from the perspective of intersectionality.

**ANTH 3390 Geoarchaeology (4 Credits)**

Use of geological methods to interpret archaeological sites, ancient landscape reconstruction, study of environmental change and habitation.

**ANTH 3470 Applied Anthropology (4 Credits)**

The practical application of cross-cultural knowledge and awareness to the solution of social and cultural problems. Ethnographic methodologies, a review of the history of applied anthropology and a consideration of the ideological and ethical components of applied anthropology are covered.

**ANTH 3500 City and Society (4 Credits)**

Examines the recent past and future of the city as a human built environment that reflects and reproduces social, political, economic, and cultural forces and ideals. Begins with the origin of 'modern' cities in the 19th century and ends with contemporary urban landscapes. Analysis is focused on both the technologies (physical qualities) and aesthetics of urban form. Emphasis is on re-imagining urban design to meet the social equity, cultural diversity, and environmental sustainability challenges of 21st century city life.

**ANTH 3510 The Ancient City (4 Credits)**

The archaeological study of ancient cities around the world is a booming and controversial area of research. This course investigates what we know about the nature of the earliest cities in the great original cradles of civilization: Mesopotamia, Asia, Africa, and the Americas. Our focus is on how the first cities were planned, built, and experienced by citizens.

**ANTH 3540 The Nature of Language (4 Credits)**

Language as social, psychological, cultural phenomenon; relationship between cultures, semantics; language as medium of cultural unification; relationship between dialects, social structure.

**ANTH 3620 Ethnoarchaeology (4 Credits)**

Ethnography has often been used as an illustrative device to animate archaeological remains, or to develop models of human behavior, regardless of the geographic and chronological distance between the ethnographic and the archaeological data. This course addresses different perspectives and theories concerning the use of ethnoarchaeology to complement archaeological information. It aims to define the role of ethnoarchaeology in the study of human past; to establish an agenda of issues to which their use is relevant; and to provide a critical overview of major approaches to the use of ethnographic analogies and historical information in archaeology.

**ANTH 3630 Archaeological Method and Theory (4 Credits)**

This class presents methods for gathering archaeological data in the laboratory and then using a variety of theoretical approaches in its interpretation. Students gather archaeological data using museum collections from a variety of sites. Those artifacts include stone tools and ceramics as well as other environmental data and architectural information in a variety of environmental and landscape contexts. For each site studied students are presented with a body of theoretical literature from which to interpret these data. A variety of interpretative methods can potentially be chosen for each site, and in most cases there is no right answer, only answers that can be supported by the data collected and interpreted using the theoretical constructs read. All students are required to write up complete site reports for each project including all raw data collected in the analysis and theoretical approaches used in interpretation.

**ANTH 3640 Race and Human Evolution (4 Credits)**

Examines the history of thought about the nature and evolution of human racial differences and sexual characteristics, from the mid-19th century to the present day. Considers scientific and popular models for explaining the evolution of racial differences, male-female reproductive behavior and gender roles. These models are examined in light of comparative primate data, ethnographic data and the material record of human evolution. Prerequisite: ANTH 2010.

**ANTH 3655 Indigenous Feminisms (4 Credits)**

This course examines a wide array of Indigenous feminisms. Rather than think of Indigenous feminisms as one static thing, we will inspect the field from multiple viewpoints and perspectives. We will draw from various thematic and transnational contexts across the Americas and Native Pacific in order to analyze the scope and significance of such knowledges, particularly as they relate to broader theories and practices of decolonization. We will begin by examining the foundational inquiries and methods of Indigenous feminist scholarship. Is gender a useful category of analysis? How have Indigenous women thought of gender? How have Indigenous women thought about, and responded to, feminism? With an emphasis on Indigenous scholars and feminists, we will cover a range of topics including (but not limited to) how Indigenous feminism fits into the feminist project, the connection between colonization and violence against Native women, the reclamation of women's initiations, gender and sovereignty, queer indigeneity, Indigenous feminist allies, and decolonial love. We will draw from readings across feminist movements, and as feminist Kanaka Maoli Professor Lani Teves says, we will attempt to "make links between Indigenous feminisms and Latinx feminisms, Black feminisms, and transnational feminisms. Rather than shy away from the tensions that emerge between multiple feminisms, instead we will attempt to cultivate nodes of alliance and solidarity to diversify our feminist tactics."

**ANTH 3660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographical research.

**ANTH 3661 Museums and their Visitors (4 Credits)**

This course is designed to be a comprehensive introduction to museums and their approaches to serving visitors, primarily through exhibitions and education. It examines current research and museum practice as it relates to the museum as an environment for meaningful visitor experiences and learning. The course is organized around the following core issues: (1) What do visitor experiences look like in a museum context? (2) How do museums design for different audience types? (3) What do we learn from assessing visitors' experiences? (4) How do objects, ideas and spaces affect visitor learning and experiences? Cross listed with ARTH 3661.

**ANTH 3680 Quantitative Methods-Anthropology (4 Credits)**

The use of statistics in all branches of anthropology; data screening; parametric and nonparametric statistics. Prerequisite: any course in basic statistics.

**ANTH 3701 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit.

**ANTH 3702 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3703 Topics in Anthropology (4 Credits)**

Specialized topics in anthropology. Check with the Department of Anthropology or the Schedule of Classes for further information; open to students who are non-majors; may be repeated for credit. Prerequisite: ANTH 1010.

**ANTH 3742 Museum Exhibit Development (4 Credits)**

Introduces general principles of planning, development, production and evaluation of museum exhibits. Explores design elements and methods of evaluation. Students have the opportunity to do exhibit mockups and exhibit evaluation.

**ANTH 3743 Managing Collections (4 Credits)**

Principles and methods regarding acquisition, documentation, conservation and accessibility of collections. Law, registration methods, computerization, policy, development, ethics and preventive conservation are also discussed.

**ANTH 3750 Ethnographic Methods (4 Credits)**

In this course, students study the art and science of ethnographic research methods, conduct quarter-long field research projects, and write practice ethnographies. The course requires students to apply the American Anthropological Association's Code of Ethics in their research and to write Institutional Review Board applications for their projects. Course readings include texts on ethnographic methods as well as controversial and exemplary ethnographic publications for student dissection and debate.

**ANTH 3790 Field Methods in Archaeology (4 Credits)**

The purpose of this class is to introduce students to archaeological field methods through a combination of readings, lecture, discussion, and hands-on experience. Training begins with issues of archaeological ethics, legal mandates, and research designs. Students then transition to learning skills and methods both in the classroom and in the field. Methods you will learn will include the basics of site survey and mapping, testing, excavation, artifact recovery and field processing, and data recording in the field. Cross-listed with ANTH 1790. Prerequisite: ANTH 2310.

**ANTH 3791 Critical Perspectives in Museum Studies (4 Credits)**

This course critically explores museums and heritage complexes as sites of cultural production and consumption at different historical moments and in diverse cultural and national settings. Special attention is given to contemporary issues, debates, and approaches in the context of museum anthropology and heritage studies. The term museum is used to include a wide range of heritage projects that do not rely only on the traditional institution established to collect, conserve and exhibit material culture, but includes intangible heritage, historic built environment and event natural environment that was used and marked by human action.

**ANTH 3850 We are Family: Anthropological Perspectives on Kinship and Relations (4 Credits)**

Anthropologists have long been fascinated with defining who is related to whom. In the first half of this course, we will read works by leading historical anthropologists in order to gain an understanding of the various ways kinship has been defined in anthropology and defined in a diversity of cultures. These works will help us understand various kinship systems throughout the world and explore how anthropologists have worked with the concept of relatedness. This course will then turn to contemporary issues and we will devote our time to investigating current kinship studies of relatedness and how this applies to new reproductive technologies (like surrogate mothers, IVF, etc), and adoption.

**ANTH 3875 Research Methods in Anthropology (4 Credits)**

This course offers an in-depth introduction to anthropological research methods with the aim of providing students with the tools necessary to design a coherent research proposal. Starting with the notion that anthropological research is a scientific endeavor, the course offers knowledge and skills that allow for a systematic application of qualitative and quantitative methods to respond to research questions. Students will learn when and how to use one method, as well as the implications of doing it. Students will also learn how to critically read research reports that use qualitative, quantitative, or mixed methods. The course is organized in two portions. The qualitative portion will focus on a detailed exploration of the continuum that goes from posing a research question, choosing a methodology, carrying it on, and reporting the results. The quantitative portion is concentrated on collecting numerical data, methods of which are often based on a qualitative understanding of people. Quantitative analysis will present tools used to take readings, acquire data, observations, and other information necessary to test hypotheses about people, cultures and how we can understand them from their material remains. The purpose of the quantitative part of the class is to determine what is statistically significant and what ideas about people are supportable using the scientific method. This course is required for all anthropology graduate students, and suggested for advanced undergraduates who are working on senior theses, and have an interest in anthropological research. The course is also open to non-anthropology students interested in anthropological research.

**ANTH 3880 Culture, Ecology, Adaptation (4 Credits)**

This course is organized around these concepts: "ecology," "adaptation," "landscape," "technology," "artifact," and "architecture." The course focuses on defining and examining adaptation and the role of culture and technology in achieving adaptations, or in not achieving them. This focus will be especially pursued with respect to the concept of landscape—that is, culturally defined physical space—and the cultural artifacts that interpret and modify it in the course of human adaptation to its ecological components.

**ANTH 3890 Context of Material Culture (4 Credits)**

Examines how material culture both reflects and actively structures political, economic and cultural life. Considers the relationship between people and their material culture (portable objects, non-portable objects, buildings, socially-created landscapes) in Western, non-Western, ancient, and contemporary cultural contexts. Reading materials draw from the fields of ethnology, archaeology, folklore, geography, history, art and architecture.

**ANTH 3981 Museum Internship (1-6 Credits)****ANTH 3990 Summer Field School-Archaeology (4-6 Credits)**

Archaeological excavation, survey and recordings; analysis and conservation of artifacts in the field.

**ANTH 3991 Independent Study (1-15 Credits)****ANTH 3995 Independent Research (1-10 Credits)****ANTH 4000 Advanced Anthropology (4 Credits)****ANTH 4040 Historical Archaeology: Theory and Method (4 Credits)**

Because it is the archaeology of periods for which there is also written history, historical archaeology is a dynamic and interdisciplinary field. It also has a distinct set of concerns and methods that builds upon, but does not replicate, those of prehistoric archaeology. This course is designed to engage students in the practice of historical archaeology through readings, discussions, and the hands-on analysis of archaeological materials. The first class of each week is a discussion of readings in historical archaeology. The readings introduce students to theoretical and methodological issues in the discipline, as well as important case studies. Many of the readings have a North American focus, but address international practice. The second class of each week has a hands-on focus. Backed by readings on historic materials analysis, we discuss and practice the types of research historical archaeologists perform on actual materials, focusing on different material types each week. Students in the course each process and analyze a set of materials excavated from a historic site. Cross-listed with ANTH 2040.

**ANTH 4070 Folklore and Cultural Heritage (4 Credits)**

Folklore and Cultural Heritage is the study of the expressive behaviors and practices that constitute the ordinary, everyday life of communities. Folklore includes the intangible cultural heritages of all peoples, for example, the artistic expression reflected in stories and storytelling, music, dance, legends, oral history, proverbs, jokes, popular beliefs, customs, dialects and ways of speaking. Everyone has folklore and participates in the "folklore process." Cross-listed with ANTH 3070.

**ANTH 4200 Native North America (4 Credits)**

Native American cultures north of Mexico. Cross-listed with ANTH 2200.

**ANTH 4220 Human Rights in Latin America (4 Credits)**

This course aims to provide students with an overview of human rights issues and how they have evolved in recent Latin American history, from the military dictatorships of the authoritarian period to contemporary challenges faced in the region's democracies. It also aims to place human rights concerns in a broader sociopolitical context. Many of today's human rights issues are rooted in the past, but others respond to new and emerging challenges. In this class, we explore the roots and contemporary realities of human rights movements in Latin America. The examination of these topics should allow us to pose broader questions about the meaning of human rights in a globalized world, the efficacy of international instruments for rights enforcement, and the complex challenges that linger in the aftermath of authoritarianism and state-sponsored terror.

**ANTH 4290 Art and Anthropology (4 Credits)**

This class introduces students to anthropological approaches to the study of art and visual culture. The first part of the course covers foundational work in the field, introducing key concepts as well as methods for viewing and understanding art from a cross-cultural/comparative and interdisciplinary perspective. We examine the relationships among art, technology and the environment, as well as the importance of form, function, style, meaning, and aesthetics in the study of art. The second part addresses issues of contemporary concern in art and anthropology, such as the influence of market forces and tourism on artistic traditions and cultural expressions; the intersection of art and identity; the politics of cultural representation. The course also explores the ethnographic turn in some forms of contemporary art as well as doing ethnography as art.

**ANTH 4320 Medical Anthropology (4 Credits)**

This course is an introduction to medical anthropology. As a professional and academic field, medical anthropology provides conceptual and analytical tools for a comprehensive understanding of health, illness and healing. It is concerned with the ways in which individual experience is inserted in social and historical contexts and it explores ideas and behaviors related to health in different societies and social groups, as well as the ways in which different groups organize their resources to face health-related needs in the context of their social and economic realities.

**ANTH 4360 Cross-Cultural Perspectives of Women (4 Credits)**

Cross-listed with ANTH 3360.

**ANTH 4370 Sex, Class and Race in Latin America (4 Credits)**

This course uses an intersectional approach to the study of sex, class and race in Latin America. Intersectionality aims at understanding the interlocking relation between sex, class, race and other aspects, and how these are rooted in historical and social structures, and are reproduced and resisted through individual and collective experience. In this course we will aim at understanding such history, culture and peoples with a special emphasis on examining their heterogeneity, and aiming at understanding how such heterogeneity is also related with social inequality. We will also examine some contemporary issues such as women's rights, indigenous movements, human rights, migrations, and economy with an emphasis on their manifestations at the intersections of sex, class, and race.

**ANTH 4660 Anthropological Theory and Context (4 Credits)**

History and development of particular schools of thought, paradigms, methods and methodologies that characterize contemporary anthropology. Intellectual, artistic developments, world-wide sociopolitical and economic processes that shaped much of anthropological thinking of the times. Research methods in reconstruction of human history and qualitative ethnographic research.

**ANTH 4700 Readings in Anthropology (1-5 Credits)**

Directed readings in anthropology under faculty supervision. May be repeated for credit.

**ANTH 4701 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4702 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4703 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4704 Special Topics in Anthropology (1-5 Credits)**

**ANTH 4740 Perspectives-Museum Studies (4 Credits)**

**ANTH 4744 Museum Anthropology (4 Credits)**

This course introduces students to museum anthropology and the ethnography of museums as well as the theoretical and practical sides of museum studies. The course is based on the following premises: Museum anthropology is a form of applied anthropology in which museums are a venue for making anthropological insights and knowledge accessible and relevant to the public; Museums, as institutions of public culture, are a forum for exploring contemporary social issues and concerns; The role of museums in society and civic engagement is at the core of contemporary museum anthropology and Museology.

**ANTH 4745 Museum Practicum (2 Credits)**

Individually designed practicum in student's area of interest.

**ANTH 4981 Museum Internship (1-6 Credits)**

**ANTH 4991 Independent Study (1-17 Credits)**

**ANTH 4995 Independent Research (1-17 Credits)**

## **Art - Studio (ARTS)**

**ARTS 3055 Advanced Drawing (4 Credits)**

Working with a variety of materials and techniques, students hone their drawing skill and at the same time create finished drawings defined by content. Problems posed encourage independent thinking, experimentation and the development of a personal technical base. Lab Fee. Prerequisite: ARTS 2045 or ARTS 3065 or permission of instructor.

**ARTS 3065 Life Drawing (4 Credits)**

An intensive course in drawing the human figure, clothed and unclothed, to explore the human form in terms of proportion, movement, light and shadow, composition, color and personal expression. Students experiment with a range of materials. Lab Fee. Prerequisite: ARTS 1250 or permission of instructor.

**ARTS 3125 Figure Painting (4 Credits)**

An intensive course in painting the human body--the most timeless subject of art. Students work mainly in oils and experiment with a variety of surfaces and techniques. Students also investigate line, proportion, light and shadow, composition and color. Final project: life-size painting of two figures. Lab fee. Prerequisite: ARTS 2115 or ARTS 3065 or permission of instructor.

**ARTS 3145 Painting Workshop (4 Credits)**

Concentration on selected techniques and approaches to painting. Topics change. Course may be repeated to a maximum of 12 credits. Lab Fee.

**ARTS 3452 Photography and Society (4 Credits)**

This course celebrates the enduring tradition of social documentary photography and visual storytelling. Participants will practice basic principles of photography, such as; camera, lighting and composition. Basics of Adobe Photoshop and Lightroom will be presented as post-production editing tools. Contemporary Social Documentary Photography practice will be positioned within the context of the history of photography. Emphasis will be on the production of socially engaged photography projects, from conception to print. Creation of a final portfolio will be required, either as an edited selection of prints, or published online. Creation of a personal website will be required. Community engaged collaboration will be a component of this course. Collaboration with another DU class may also be a component. No prerequisites. This course may satisfy one requirement for a Photography and Society Certificate. "Photography and Society." Students must have a digital camera with manual metering capability; contact the professor if you cannot meet this requirement.

**ARTS 3555 Ceramic Workshop (4 Credits)**

Concentration on selected techniques and experimental approaches to ceramics. Topics change. Course may be repeated to a maximum of 12 credits. Lab fee. Prerequisite: ARTS 2515 or approval of instructor.

**ARTS 3655 Sculpture Workshop (4 Credits)**

Concentration on selected techniques and experimental approaches to sculpture. Topics change. Course may be repeated to a maximum of 12 credits. Lab fee.

**ARTS 3701 Topics in Studio Art (4 Credits)**

Selected topics in advanced studio art research. Course may be repeated to a maximum of 12 credits. Lab fee. Prerequisite: instructor's permission.

**ARTS 3966 Studio Art Travel (1-4 Credits)**

A travel course to selected locations to visit galleries, museums and artists' studios. Location and content of course change. Variable credit. May be repeated to a maximum of 12 credits. Lab fee.

**ARTS 3980 Studio Art Internship (1-4 Credits)**

The student is responsible for locating the internship and gaining approval for it, using the internship guidelines and contract form in the art office. Typical internships have been located in commercial galleries, fine art printmaking houses, professional artists' studios and non-profit arts organizations.

**ARTS 3991 Independent Study (1-6 Credits)**

Supervised studies not addressed in this catalog of classes. Advanced projects must be faculty approved. Permission/registration form is available from the Office of the Registrar.

**ARTS 4991 Graduate Independent Study (1-12 Credits)**

This course is for MFA candidates who wish to pursue graduate-level independent work under the guidance of a studio art faculty member. Permission of the student's graduate advisor and the studio art instructor must be obtained before enrolling. May be repeated to a maximum of 12 credits.

## Art History (ARTH)

**ARTH 3656 Curatorial Practicum (4 Credits)**

Students will work in curatorial teams to plan and execute an effective exhibition of contemporary art. This process may include choosing a theme and selecting works of art, researching artists and themes, budgets, scheduling, developing an exhibition checklist, modeling the gallery, visual exhibition design, conservation and collections management factors, shipping, installation, educational outreach to the public, publicity and other issues related to exhibition planning.

**ARTH 3661 Learning in Museums (4 Credits)**

Comprehensive introduction to museum education. Examines informal education, learning theories, interactive education, exhibits and programs. Cross-listed with ANTH 3661.

**ARTH 3701 Topics in Art History (1-4 Credits)**

Selected themes and topics from the history of art. Content changes and course may be repeated to a maximum of 12 credits.

**ARTH 3702 Topics in Contemporary Art (4 Credits)**

This course offers an in-depth exploration of contemporary art and critical theory from a cross-disciplinary, global perspective beginning in the 1960s. We couple intensive reading and writing assignments to meetings with guest creatives and thinkers, visits to local art spaces, and roundtable discussions about new research. The particular art historical topic varies from year to year.

**ARTH 3813 Arts of the American West (4 Credits)**

This class covers a wide range of art objects and styles from the 17th century to the present in the West of the United States, from buffalo robe paintings and baskets to cowboy art and contemporary abstract landscapes. Particular attention is paid to the diversity of art traditions—Native American, Spanish and Mexican, European, Asian and Latin American—as they converge in this geographic space.

**ARTH 3815 Puritan, Shaker, Hindu: Material Religion in North America (4 Credits)**

The diversity of religious experience and spirituality is emphasized in this historical examination of image and artifact in North America. Beginning with sacred indigenous arts and including Puritans, Shakers, Judaism, Mormons, Ghost Dance religion, Buddhists, Hindus, and others, this class considers the ways in which different spiritual worldviews are expressed through and shaped by the art and objects people create and the environments they build. It looks at the encounters between cultures in colonial and post-colonial contexts that result in ever changing material forms of religion. Students learn through slide-lecture-discussions, reading, small group discussions, research papers or presentations, and field trips.

**ARTH 3817 Gothic Art (4 Credits)**

This course examines the art of the Late Middle Ages in Europe, from roughly 1140 to 1400. Gothic architecture, sculpture, painting, stained glass and the sumptuous arts (metal, textiles) are examined within their broader social, political and religious contexts. Particular attention is paid to the Gothic Cathedral - that quintessential window into the medieval world—its beliefs, aspirations, social and political realities.

**ARTH 3818 Art of Renaissance Europe (4 Credits)**

This course provides an examination of the artistic cultures in Europe during the Renaissance (15th and 16th centuries). Depending upon the quarter, this course will be a general survey of European art during the Renaissance or a more focused exploration of a sub-period, such as painting in fifteenth-century Italy. Chronological and geographic factors determine the overall theme and structure of the course. Students gain both a sound knowledge of key artistic monuments of the period, as well as a conceptual framework according to which they may organize their knowledge. This class may be repeated for a maximum of 8 credits.

**ARTH 3822 Northern Renaissance Art (4 Credits)**

This course explores the dramatic developments in the arts (particularly panel painting, manuscript illumination and sculpture) in Northern Europe from around 1350 to 1550. From lavishly decorated Books of Hours and the development of stunningly naturalistic oil paintings on panel in the early 15th century through the development of printing and the rise of self-portraiture, genre and landscape depictions, this class traces the important role played by Dutch, Flemish, German and French artists in the transition from late medieval to early modern artistic forms and practices. The role of art in shaping and expressing religious, civic, political and economic concepts are explored, as well as the rise of the social and intellectual standing of the artist. Among the artists examined include Jan van Eyck, Rogier van der Weyden, Albrecht Dürer, Hieronymus Bosch and Pieter Bruegel the Elder.

**ARTH 3823 17th-Century European Art (4 Credits)**

This course considers European arts of the 17th century. Depending upon the quarter it may be a general survey of European art during the seventeenth century or a more focused exploration of a sub-period, such as Italian Baroque or the Old Dutch Masters: Rembrandt, Vermeer and Frans Hals. This class may be repeated for a maximum of 8 credits.

**ARTH 3825 Abstract Expressionism (4 Credits)**

In the years immediately following World War II, American art flourished through a generation of artists whose work successfully moved beyond (and at its best, matched) the substantial innovations of modern artists working in Europe around the time of World War I. From richly varied backgrounds and equipped with a deep understanding of art history, these artists forged careers during the Depression and, though fiercely independent, united in the late 1940s with the goal of establishing a new American modern art. Their monumental, highly singular, expressive abstractions (and near-abstractions) gave rise to the movement called Abstract Expressionism, which dominated American painting in the 1950s and beyond.

**ARTH 3832 19th-Century Art (4 Credits)**

This course surveys the major art movements in Europe from the late 18th century to the end of the 19th century. Major painters, sculptors, printmakers and architects of the following movements will be presented: Neo-classicism, Romanticism, Academic Painting, Realism, the Pre-Raphaelites, Impressionism, Post-Impressionism, Symbolism and Art Nouveau. Their works will be studied in light of the social, political and cultural milieu in which they appeared. Special attention will be paid to representations of race, class, gender and colonialism.

**ARTH 3834 Global Contemporary Art (4 Credits)**

This class explores contemporary art, including but not limited to painting, sculpture, performance art, installations, and new media, through the lenses of identity, the body, time, place, language, and spirituality. These narratives provide threads of continuity across time and place, but we will also focus on individual artistic interpretations as we delve deeper into cultural specificities and audience reception around the world. We will identify and analyze connections between recent art theoretical perspectives and the emergence of various art trends. This course considers the role of the international art market, global art fairs, artist retrospectives, and recent museum and gallery exhibitions as participatory elements in the construction and discussion of contemporary art.

**ARTH 3838 Connoisseurship (4 Credits)**

In this class the historical roots, theoretical and philosophical underpinnings, and actual practice of connoisseurship are studied using objects from the museum's collection.

**ARTH 3839 Topics in Modern Art (4 Credits)**

Selected themes and topics from the 18th century to the present. Topics change, and the course may be repeated to a maximum of 12 credits.

**ARTH 3840 Sacred Arts of Asia (4 Credits)**

This course explores the sacred art and architecture of Asia, including but not limited to India, China, and Japan. Major religious traditions, including Buddhism, Hinduism, and Islam, are viewed through the lens of artistic development; indigenous religious traditions and philosophical constructs, including Shintoism, Daoism, Confucianism, and Bon are also explored for their influence in art, architecture, and visual culture more broadly in and between Asian regions.

**ARTH 3862 Olmec to Aztec: Mesoamerica (4 Credits)**

This course is an introduction to the art and archaeology of the indigenous peoples of Mesoamerica from about 2000 BC to AD 1521. The course explores the early royal art of the Olmec, the colossal pyramids of Teotihuacan, the manuscripts of the Mixtec, and the imperial power of the Aztecs. This class presents a timeline of Mesoamerica and investigates how the various civilizations of Mesoamerica shared aspects of world-view, cosmology and daily life. Students will be able to identify and discuss how these elements manifested in the art and architecture of Mesoamerican cultures. Furthermore, the course investigates issues of shamanism, kingship and power, warfare, gender, and human sacrifice.

**ARTH 3863 Kings and Cosmology: Maya Art (4 Credits)**

This course is an introduction to the art and archaeology of the Maya from about 300 BCE to 1200 CE, although the beliefs and traditions of the living Maya will inform this study of the past. The Maya are perhaps the most famous of the several cultures comprising what is known as Mesoamerica. A highly advanced culture, they built soaring temples, carved elaborate portraits of their kings and developed a complex writing system including a calendar. The course explores these things with a constant eye to understanding the Maya worldview, cosmology and daily life. By the conclusion of the class, students should be able to read their intricate pictures, discuss the strategies of powerful Maya rulers and understand how Maya art and architecture reflect their concepts of time and the cosmos.

**ARTH 3864 Buddhism(s) and Arts (4 Credits)**

This survey examines the history, practices, ritual contexts, aesthetics and artistic traditions of Buddhism including architecture, calligraphy, sculpture and painting, in terms of its social and historical context, political and religious functions, as well as issues including artistic production, changing techniques and symbols, and the market/audience. The primary goal is to understand Buddhism as reflected in art and culture.

**ARTH 3867 The Circle and the Four Corners: Native North American Art (4 Credits)**

This course is designed as an introduction to the art and architecture of the native peoples of North America from the earliest signs of humans in North America to the present. Cultures covered include those from the Southwest, the Northwest, the Southeast Ceremonial Complex, the Plains and contemporary Native American artists. By the conclusion of the class, students will understand the cultural sequence and geographic dispersion of native North America. Students will also understand how the various civilizations of North America shared aspects of world-view, cosmology and daily life, and be able to identify and discuss how these elements manifested in the art and architecture of native North American cultures.

**ARTH 3868 Art of the Andes (4 Credits)**

This course is designed as an introduction to the art and architecture of the native Pre-Columbian peoples of the Andes. Cultures covered include Chavin, Nasca, Wari and the Inca.

**ARTH 3871 Women in Art (4 Credits)**

This course considers the roles of women in art and explores the impact of race, class and gender on art produced from the Middle Ages to the present with discussions of women artists, women patrons and images of women. Cross listed with GWST 3871.

**ARTH 3872 Introduction to Conservation (4 Credits)**

This lecture course familiarizes the student with the concepts and challenges of conservation, its role in museums and the care of collections. Specific emphasis is given to the materials, structure, deterioration and preservation of material culture. Field trips to various museums and/or workshops to make appropriate display mounts and storage containers enhance the understanding gained from readings and lectures.

**ARTH 3875 History of Collections (4 Credits)**

This course traces the history of collections from the Renaissance to the present, addressing the interconnections between artists, patrons, dealers, art markets, provenance, connoisseurship and the historical development of museums and private collections. Each week's readings of journal articles and chapters focus on different types of collections or themes, including royal and imperial collections, cabinets of curiosities, excavating and transporting antiquities, British country estates and the Grand Tour, the establishment of national museums, the relationship between American collectors and dealers, ethnographic objects in Western collections, Nazi looting, restorers and forgers, and artists' collections, to name a few.

**ARTH 3880 Mosques and Aniconism: Islamic Art and Architecture 650-1250 (4 Credits)**

What is 'Islamic' in Islamic art? An introduction to art and architecture in the Islamic lands from the days of the Prophet Muhammad in the 7th century until the Mongol conquest of the Middle East in the mid-13th century. The course surveys mosques, palaces, madrasas, and tombs, and also calligraphy, sculpture, ceramics, and painting in historical and literary contexts. It covers a vast geographical area, from Spain in the west to Iran and Central Asia in the east, and discusses both common and unique characteristics of architecture and figurative representations in these regions. Emphasis will be given to the early Islamic period in Greater Syria and to artists' response to Byzantine and Sassanid (pre-Islamic Persian) art and architecture.

**ARTH 3881 Dragons and Sultans: Islamic Art and Architecture 1250-1600 (4 Credits)**

Art and architecture in the Islamic lands from Genghis Khan in the 13th century to the Ottoman Sultan Suleyman the Magnificent in the 16th century. The course consists of three parts. First, it examines the changes that occurred in Islamic art as a result of artists' acquaintance with East Asian art and culture (14th century). Second, it discusses art and architecture in Central Asia and Afghanistan under Timurid rule (late 14th-15th century), followed by an overview of the artistic achievements in the Early Modern Islamic lands under the Ottomans, Safavids, and Mughals (16th century). The course explores works of art in historical, cultural, and literary contexts, and points to the unique characteristics of each geographical region, as well as to pan-Islamic form and content. Among the topics that will be discussed: the architect Sinan and his legacy, the response of Islamic painting to European art, and representations of royal and religious concepts.

**ARTH 3910 Art History Travel (4 Credits)**

A travel course to selected locations to study major monuments and collections of art and architecture. Location and content change. This class may be repeated for a maximum of 8 credits. Prerequisite: instructor's permission.

**ARTH 3991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4301 Seminar in Art History Methods (4 Credits)**

This seminar considers the history of art history and the development of various methods that art historians use to interpret and understand art. Required of all MA candidates in art history.

**ARTH 4302 Research Practicum (4 Credits)**

The major goal of this course is to learn methods and resources for doing primary research in the history of art. In this practicum, students will gain practical research experience by carrying out original research on two projects: research on an object from the DU collection and research on a contemporary artist. Students will learn to track down biographical information, locate and examine works of art, and reconstruct historical context using archival, material, human, and electronic sources. Students will learn to develop research questions, create and follow through on a research strategy, organize research data, and document the research process. This course will help you prepare for many aspects of your graduate papers, including the Master's Research Paper. Required of all MA students in art history.

**ARTH 4312 Seminar: Indigenous American Art (4 Credits)**

Selected topics in Indigenous American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4313 Seminar in Islamic Art (4 Credits)**

Selected topics in Islamic Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4314 Seminar in Medieval Art (4 Credits)**

Selected topics in Medieval Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4321 Seminar in Renaissance Art (4 Credits)**

Selected topics in Renaissance Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.



**ARTH 4333 Seminar in 20th Century Art (4 Credits)**

Selected topics in 20th century Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4334 Selected Topics in Contemporary Art (4 Credits)**

Selected topics in contemporary art. Advanced research papers and presentations. Content changes. May be repeated for a maximum of 8 credits.

**ARTH 4336 Seminar in American Art (4 Credits)**

Selected topics in American Art. Advanced research papers and presentations. Content changes. May be repeated to a maximum of 8 credits.

**ARTH 4651 Museum Methods and Principles (4 Credits)**

This class surveys the major activities, goals, and organization of the art museum within today's world. Students meet with a variety of museum professionals to discuss the changing dynamics within art museums, as well as ethical and practical issues of museum work. The class reads both classic and current literature on museum issues and practice, and participates in research, collection, and exhibition projects. Required of all M.A. art history students pursuing the Museum Studies option.

**ARTH 4652 Museum Internship (0-10 Credits)**

Arranged internship in student's area of specialization. Students should take ARTH 4651 Museum Methods and Principles first. Prerequisite: instructor's permission.

**ARTH 4801 World Art I for Graduates (0 Credits)**

Survey of World Art Prehistory-1000 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4802 World Art II for Graduates (0 Credits)**

Survey of World Art 1000-1700 for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4803 World Art III for Graduates (0 Credits)**

Survey of World Art 1700-present for graduate students who are required to take this course due to performance on the art history Qualifying Exam.

**ARTH 4991 Independent Study (1-10 Credits)**

This class should be used for individual study of a special topic that is not offered in the art history curriculum described in this catalog. Permission/registration form is available from the Office of the Registrar.

**ARTH 4995 Independent Research (4 Credits)**

Students should see their advisor for guidelines regarding the Master's Research Paper class.

## Biology (BIOL)

**BIOL 3005 Science Communication (4 Credits)**

Science communication has shaped, and continues to shape, the world in which we live (e.g., why you wash your hands, why we don't feed bears in U.S. national parks anymore, and why some students imagine themselves becoming scientists or not). Sharing how science is conducted and how new knowledge is generated through the scientific method also plays a critical role in our future: creating engaged citizens, shaping the next generation of scientists, increasing diversity and diverse perspectives in the sciences, informing policy-makers and lawyers, combatting misconceptions, increasing trust of scientists, and guiding our own individual behaviors. But, like any other complex skillset, science communication takes practice. This course provides students with a range of resources and skills for effective, ethical, and evidence-based communication of complex socio-scientific issues. It provides a supportive environment in which students will practice and refine their science communication through peer feedback and engagement with real audiences. The focus is on cultivating practical communication skills, with emphasis on effective speaking, writing and exhibition of scientific topics with the variety of audiences students will encounter in their future careers. Course readings, activities, and final projects also examine how identity shapes both the science we do and the lenses we and other stakeholders bring to communication tasks. The course is hybrid, highly interactive, and writing-intensive. This course is restricted to Junior or Senior Standing UG majoring in the College of Natural Sciences and Mathematics.

**BIOL 3025 Science and the Law (2,4 Credits)**

This course will focus on the intersection of science and US law. Four major areas of focus that will be covered are the admissibility of expert witnesses / scientific evidence in court; how advances in forensic genetics and national DNA databases raise legal issues pertaining to expectations of privacy and the standards for reaching a verdict; the impact of US Supreme Court opinions on the patenting of genes used as diagnostic markers for human disease and the legal landscape surrounding issues of evolution and creationism/intelligent design. Students will then explore how the law impacts their own areas of scientific interest. The goal of this course is to increase our understanding as scientists of how advances in science impact and are impacted by the US judicial system. PREREQUISITES: BIOL 1010 AND BIOL 1011.

**BIOL 3035 Invasive Species Ecology (4 Credits)**

This course investigates those plants and animal species that have dramatically expanded their ranges and cause ecological harm. Topics covered include the mechanisms of ecological impacts across the globe, how invasive species are used to test basic ecological theory, the application of this research for managing real species, and related issues such as the debate within the scientific community about the term "invasive." We use a case-study approach, and students have the opportunity to go into the field as a class to observe the real invasions and learn sampling methods.

**BIOL 3044 Coral Reef Ecology (3 Credits)**

Ecology of coral reefs; organization and distribution of reefs; review of reef organisms and their interactions with each other and their physical environment; threats to coral reef conservation. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisite: (BIOL 2010 or BIOL 2050) OR (GEOG 1201, GEOG 1202, and GEOG 1203).

**BIOL 3045 Coral Reef Ecology Lab (1 Credit)**

Ecology of coral reefs laboratory to supplement lecture material; travel to the Caribbean over spring break to observe coral reefs firsthand; introduction to research methods. SCUBA certification and permission of instructor required. A travel and dive fee is associated with this course.

**BIOL 3055 Ecology of the Rockies (4 Credits)**

A week in residence at the Mt. Evans Field Station prior to the start of fall quarter includes field projects dealing with ecology and environmental issues. On campus classes involve data analysis and interpretation and formal scientific communication. Themes include terrestrial and aquatic ecosystems, taxonomic groups ranging from conifer stands to aquatic insects and mountain goats. Lab fee associated with this course. Prerequisite: BIOL 2010 or permission of instructor.

**BIOL 3070 Ecological Field Methods (4 Credits)**

Series of field exercises for students to learn principles and procedures of field methodology, data analysis and technical writing in ecology; problems drawn from population, community and ecosystem ecology. Lab fee associated with this course. Prerequisite: BIOL 2010.

**BIOL 3074 Forest Ecology (4 Credits)**

This course provides an overview of the distribution, structure, function, and dynamics of forest ecosystems. Topics include: paleoecology, ecophysiology, disturbance, succession, community analysis, forest hydrology, primary productivity, and nutrient cycling. Throughout, we maintain an emphasis on the scientific process and how it is used to study the controls on the distribution and abundance of organisms.

**BIOL 3085 Insect Ecology (4 Credits)**

A general introduction to insect biology and the science of entomology. Arthropods are the most diverse group of animals on Earth and insects account for more than half of all known living organisms. This course explores the biodiversity of insects on Earth, insect morphology and physiology. The evolutionary history and taxonomy of key orders of insects is emphasized as well as the importance of insects to our everyday lives. This course counts as a category elective for Ecology and Biodiversity majors. Prerequisites: BIOL 1010, BIOL 1011, and BIOL 2010.

**BIOL 3090 Microbial Ecology (4 Credits)**

Interactions among microorganisms and their environment. Impact of ecological principles on microbial diseases, pollutant degradation, nutrient cycles and global change. Prerequisites: BIOL 1010, BIOL 1020, AND BIOL 2510.

**BIOL 3095 Global Change Ecology (4 Credits)**

Over the past century, the mean surface temperature of our planet has increased slightly less than 1°C. While this may seem like a small increment, this change is already profoundly affecting Earth's organisms and ecological communities, and predictions for the impacts of continued change range from severe to catastrophic. Humans are also changing the environment through alteration of nutrient and water regimes. Topics include cause of climate change, comparison to past climatic change, human contribution to change and effect on organisms, communities and ecosystems. Prerequisites: BIOL 1010, BIOL 1011, AND BIOL 2010. RECOMMENDED PREREQUISITES/COREQUISITES: BIOL 2090.

**BIOL 3110 Special Topics: Biology (1-5 Credits)**

Topics of special interest to teaching/research faculty of department presented as needed to complement and expand existing curriculum. May be repeated for credit. PREREQUISITES: BIOL 1010.

**BIOL 3120 General Microbiology (4 Credits)**

Fundamental principles of microorganisms in the world and in disease; role of bacteria in biological phenomena. Includes laboratory. Lab fee associated with this course. Counts as a category elective for Ecology and Biodiversity majors. Prerequisite: BIOL 2120.

**BIOL 3145 Cellular and Molecular Biology of Cancer (4 Credits)**

This course examines the mechanisms that underlie the development and progression of cancer. The cellular and molecular events that drive uncontrolled cell proliferation and eventual metastasis of tumors are discussed. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3150 Intracellular Dynamics (4 Credits)**

Focuses on spatial and temporal control of intracellular processes with an emphasis on neuronal and endocrine cells. Topics include vesicular traffic, protein targeting, dynamics and spatial organization of signaling complexes. Emphasis on modern techniques of cell and molecular biology with examples from primary literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3160 Biophysics: Ion Channels & Disease (4 Credits)**

Examines ion channel structure and function and the ways in which this information provides insight into human disease. The focus is on the use of biophysical techniques in combination with molecular and genetic analysis of channel genes. General Physics recommended. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3230 Nutrition (3 Credits)**

Investigation of metabolism, all nutrients and various applications of nutrition to sports and healthy living. Prerequisite: BIOL 3250.

**BIOL 3241 Anatomy and Physiology of the Skeletal, Nervous and Muscular systems (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Skeletal, Muscular, and Nervous system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3242 Human Anatomy and Physiology - Systems of homeostasis (0-5 Credits)**

This course is designed to introduce students to the fundamental concepts, content and scientific bases of Cardiovascular, Respiratory, Urinary, Digestive, Immune and Reproductive system anatomy and physiology at both macroscopic and microscopic levels. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. The course will utilize diverse resources, exercises, and activities to engage you in the learning process, including, text, video, animations, models, dissections, inquiry-based learning, and a variety of assessments. Please note that the lab portion of this course does require dissection. Prerequisites: BIOL 2120.

**BIOL 3251 Exercise Physiology (4 Credits)**

This course will cover exercise physiology topics included but not limited to: energy systems, physiological response to exercise/training, and exercise programming. A strong background in human physiology is recommended. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 1010.

**BIOL 3252 High Altitude Physiology (4 Credits)**

This course is an advanced course in physiology for those interested in both the impacts of altitude exposure on health and athletic performance. We live at altitude in Denver, and in fact there are many factors affecting our bodies (which we may or may not realize) that impact our daily lives. This course aims to provide insight on the acute and chronic physiological responses of altitude as well as to provide a deeper understanding into the use of hypoxic environments for improving health and benefiting athletic performance. We will explore the physiological mechanisms related to these reduced oxygen environments as well as develop projects that contribute to the understanding of using this environment as a stimulus. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 3242.

**BIOL 3253 Environmental Physiology of Animals (4 Credits)**

By studying species across the animal kingdom, we will learn about the vast array of physiological strategies that have evolved to help animals maintain homeostasis in the face of varied environmental challenges. We will cover foundational principals of animal physiological ecology and evolution, as well as new and exciting discoveries through weekly discussions of primary literature. We will focus primary literature discussions on "extreme environments," as Earth's harshest landscapes provide exciting and powerful examples of adaptations of physiological systems. This course will be delivered through a combination of lectures, active learning assignments, readings from the scientific literature, and group discussions. By the end of this course, you will develop a new perspective on the ecological and evolutionary factors that shape physiological similarities and differences among the animals of our planet (including humans). This course counts as a category elective for the Ecology and Biodiversity major and Physiology in Health and Disease major. Prerequisites: BIOL 1010 and BIOL 1011.

**BIOL 3256 Advanced Human Anatomy & Physiology (0-5 Credits)**

This one quarter course is intended for advanced biology and physiology majors with an interest in the anatomical structure and physiological functioning of body systems. This course builds upon the Human Anatomy and Human Physiology courses that are prerequisites. This advanced course will explore in greater depth understanding mechanisms of action of major body systems and elaborate on the relationship between structure and function. In addition to didactic content, students will complete evaluation of primary literature and design laboratory experiments to test hypotheses of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, models, dissections, inquiry-based learning, experimentation and a variety of assessments. The course consists of both lecture and laboratory sessions each week and requires attendance and participation in both. Please note that the lab portion of this course requires dissection. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisites: BIOL 3241 and BIOL 3242.

**BIOL 3260 Nutritional Physiology (4 Credits)**

This course is designed to introduce the fundamental concepts, content and scientific bases of nutritional physiology at the levels. This course will examine the scientific structure and properties of carbohydrates, proteins and lipids as the major macronutrients required for human health. In addition, it includes exploration of the digestion, absorption and metabolism of both macronutrients and micronutrients. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 2120.

**BIOL 3280 Intro to Pathophysiology (4 Credits)**

This course is designed as an introduction of the mechanisms and consequences of disease based on physiological dysfunction in the major organ systems. The course will focus on the fundamental concepts and processes of human pathophysiology through exploration of the unique physiological roles of several body systems, how these systems have important integrative relationships that underlie the overall physiological functioning of healthy humans, and how system function is altered in disease and the clinical manifestations of these changes. This course counts as a category elective for the Physiology in Health and Disease major. Prerequisite: BIOL 2120. A course in human physiology is recommended.

**BIOL 3410 Animal Behavior (4 Credits)**

This class examines animal behavior from an evolutionary and ecological perspective. The course provides the background needed to understand behavioral evolution, including a focus on the inheritance of behavior, natural selection, sexual selection, and kin selection. This class studies the evolution of a variety of behaviors, including communication and displays, mate choice, parental care, cooperation, mating systems, social behavior, habitat selection, foraging, and anti-predator behavior. The emphasis is on theoretical principles, design of experiments, and interpretation of data. This course counts as a category elective for the Ecology and Biodiversity major. Prerequisites: BIOL 1010 and BIOL 1011, and BIOL 2010. Recommended Prerequisite: BIOL 2090.

**BIOL 3560 Molecular Biology Laboratory (4 Credits)**

Laboratory based course that covers techniques in gene excision, cloning and reinsertion and gene sequencing. Lab fee associated with this course. Prerequisite: BIOL 2510, or permission of instructor.

**BIOL 3570 Proteins in Biological Systems (4 Credits)**

Proteins considered in their biological setting; protein synthesis and degradation; survey of protein functions in vivo; introduction to protein biotechnology. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3610 Developmental Biology (4 Credits)**

Processes and mechanisms of development, exemplified by higher animal embryogenesis, with consideration of microbial model systems. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120 and 2510.

**BIOL 3615 Blood Vessel Development and Disease (4 Credits)**

This course details the underlying biological programs during blood vessel development and mechanisms that lead to vascular pathologies. The class will incorporate aspects embryology, signaling transduction, and genetics as well as current techniques in developmental biology to comprehensively cover how blood vessels are formed embryonically. Additionally, we will discuss in detail how defects in blood vessel-related signaling programs later manifest into disease. Prerequisite for this course is Cell Structure and Function (BIOL2120/2121).

**BIOL 3630 Cell Biology of Development (4 Credits)**

Every organism has a stereotypical shape, but how does this shape arise? This course examines the cellular and molecular mechanisms that direct the forming of body and tissue shape. This course counts a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3640 Introductory Neurobiology (4 Credits)**

Organization and function of vertebrate central nervous system; nature of action potential, biochemistry of neurotransmitters, neuropeptides, functional anatomy of nervous system, phylogeny of nervous system. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3641 Systems Neuroscience (4 Credits)**

Structure and function of the brain and spinal cord, emphasis on functional systems including sensory perception, motor control and consciousness. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 3640 or 3241.

**BIOL 3642 Neuropharmacology (4 Credits)**

How psychoactive drugs exert their effects on the nervous system; drugs of abuse and drugs used in the treatment of psychotic and neurodegenerative disorders. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120. Recommended prerequisites: BIOL 3640.

**BIOL 3644 Neuromuscular Pathophysiology (4 Credits)**

Cellular and molecular basis for normal nerve and muscle functions and the alteration of these functions by toxins, trauma and diseases of the brain, nerves and muscles; how specific insults produce clinical symptoms and pathology. Prerequisite: BIOL 2120.

**BIOL 3646 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is the capstone course for the neuroscience portion of the cognitive neuroscience program. Seminar topics include but are not limited to neurological disorders, model systems in neuroscience and sensory systems.

**BIOL 3647 Neuroscience of Movement (4 Credits)**

Producing the vast array of movements that humans (and many animals) use everyday represents one of the body's greatest challenges and greatest successes. These various movements require that the nervous, muscular, and skeletal systems work in concert to achieve a common goal. This course will explore the scientific basis of movement production, with particular emphasis on the neuroscience of motor control. We will explore how the nervous system drives the development of movement strategies at an early age, modifies movement strategies to adapt to changing demands throughout life, and how injury, dysfunction, and/or aging can lead to movement challenges. This course counts as a category elective for the Physiology in Health and Disease major and Cognitive Neuroscience concentration. Required prerequisite: Cell Structure & Function (BIOL 2120); Recommended prerequisite (1 or more of the following): Introduction to Neuroscience (BIOL 3640) or permission of instructor.

**BIOL 3648 Molecular Mechanisms of Neurological Disease (4 Credits)**

This course will be an in-depth study into some of the key molecular mechanisms involved in the pathogenesis of human neurological disease. A particular emphasis will be placed on the role of RNA regulation and metabolism. The primary focus will be on five devastating diseases: 1. Spinal Muscular Atrophy (SMA) 2. Fragile X Syndrome (FXS) and Fragile X Tremor Ataxia Syndrome (FXTAS) 3. Myotonic Dystrophy type 1 and 2 (DM1 and DM2) 4. Spinocerebellar Ataxia type 2 (SCA2) 5. Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal Dementia (FTD) This course will cover a variety of topics including disease pathophysiology and pathogenesis. However, readings will be assigned from the recent primary literature discussing cellular and molecular mechanisms. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2510 Genetics.

**BIOL 3649 Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics (4 Credits)**

Neurodegeneration and Neurotrauma: Mechanisms and Therapeutics covers the following disorders: Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxia, Creutzfeldt-Jakob disease, multiple sclerosis, traumatic brain injury and spinal cord injury. Course literature includes primary journal articles and review papers describing the etiology and pathophysiological mechanisms of these disorders. Potential therapeutic approaches to treatment are also investigated. The course format typically includes a lecture reviewing the basic biology, symptoms, and current treatments for each disorder, followed by a thorough analysis of primary research papers focused on novel molecular mechanisms and new targets for therapeutic development. Grading is based on 3 exams throughout the academic quarter and participation in discussing journal articles in class. This course counts as a category elective for the Cognitive Neuroscience concentration. Prerequisite: BIOL 2120 Cell Structure and Function. Recommended: BIOL 3640 Introductory Neurobiology. For Graduate Students: an additional term paper is required with the exact topic to be agreed upon by the student and instructor.

**BIOL 3650 Endocrinology (4 Credits)**

Mechanisms of hormone action, evolution of vertebrate endocrine systems, analysis of function integration of hormonal responses in maintenance of homeostasis. This course counts as a category elective for the Molecular Biology major and Cognitive Neuroscience concentration. Prerequisite: BIOL 2120.

**BIOL 3656 Cellular Aspects of Diabetes and Obesity (4 Credits)**

This course focuses on specific cellular and molecular events key to the understanding of the pathological conditions of diabetes and obesity. Topics include the endocrine pancreas, adipose tissue and neuroendocrine control energy expenditure and feeding behavior. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2120.

**BIOL 3670 Molecular Immunology (4 Credits)**

The ability to distinguish self from non-self is crucial to all organisms. In humans Organs, cells and other higher animals, this task fall to the immune system. Suppression of this system is key to numerous pathogenic viruses including Ebola and human immunodeficiency virus. The failure to adequately regulate immune response underlies allergic reactions, arthritis and diabetes. This course will introduce students to the organs, cells and molecules that underlie mammalian immune response; immunogenetics and the fundamental mechanisms of cell mediated and humoral immune response; and the relationship of immune system to human disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510.

**BIOL 3675 Virology (4 Credits)**

Viruses are the ultimate cell biologists. They usurp essential cellular components to create new virus progeny leading to pathological cellular physiology. This course will delve into the genetic and cellular principles that govern virus entry, replication, and assembly and cover a broad range of DNA and RNA-based virus families. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3700 Topics in Ecology (1-4 Credits)**

Topics vary; may include plant, animal, biochemical, alpine or aquatic; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: one quarter of undergraduate ecology and/or instructor's permission.

**BIOL 3701 Topics in Genetics (1-4 Credits)**

Topics vary; may include genetic methods, molecular genetics, human genetics, chromosomes or population genetics; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510 and/or instructor's permission.

**BIOL 3702 Advanced Topics in Regulatory Biology (1-4 Credits)**

Topics vary; may include endocrinology, physiology or immunology; one topic per quarter. May be repeated for credit. Taught from original literature. Prerequisite: varies with topic and instructor; instructor's permission usually required.

**BIOL 3703 Advanced Topics in Developmental Biology (1-4 Credits)**

Topics vary; may include gene expression in development, developmental immunogenetics, developmental biochemistry or aging; one topic per quarter. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: instructor's permission.

**BIOL 3704 Advanced Topics in Cell Biology (1-4 Credits)**

Topics vary; may include supramolecular structure, microscopy, membranes and techniques. May be repeated for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisites: BIOL 2120.

**BIOL 3705 Advanced Topics in Molecular Biology (1-4 Credits)**

Topics vary, but may include biochemistry, supramolecular structure and function, molecular genetics, membrane biology. May be taken more than once for credit. Taught from original literature. This course counts as a category elective for the Molecular Biology major. Prerequisite: varies with course and instructor; instructor's permission usually required.

**BIOL 3706 Topics in Evolution (1-4 Credits)**

Topics vary, but may include molecular evolution, plant evolution and animal evolution. Prerequisite: BIOL 2120 and BIOL 2510.

**BIOL 3707 Advanced Topics in Conservation Biology (1-4 Credits)****BIOL 3708 Topics in Integrative Physiology (2-4 Credits)**

Topics for this course include, but are not limited to, human physiology and disease, integrative physiology, environmental or social impacts on human physiology and health, and comparative physiology. Students will gain knowledge of a specific topic in physiology and/or pathophysiology through discussion of current literature and research. May be repeated for credit. Prerequisite: BIOL 2120.

**BIOL 3800 Human Molecular Biology (4 Credits)**

Medical Genetics is the 24th member of the American Board of Medical Specialties. This course will introduce students to the fundamentals of molecular biology with an emphasis on understanding of how the field is applied in the context of medical diagnostics, personalized/precision medicine and other commercial applications. Students will be introduced to published research reports and provided with opportunities to critically examine the application of molecular biology to central questions in such areas as oncology, inherited diseases and genetically engineered organisms. Prerequisite: BIOL 2510.

**BIOL 3850 Genetic Engineering (4 Credits)**

This course will cover principles in gene manipulation and its application in research, medicine and industry. More specifically, this course will explain emerging technologies in genetic engineering and its practical and ethical implications. Topics will incorporate historical and emerging aspects of developmental biology, chemistry, and genetics as well as current techniques in genetic manipulation that are related to genomic editing. Additionally, students will be trained to interface with genomic databases and employ DNA sequence editing software to manipulate DNA sequences to achieve novel cloned products. This course counts as a category elective for the Molecular Biology major. Prerequisite for this course is Genetics BIOL 2510.

**BIOL 3855 Genetic Model Organisms in Health & Disease (4 Credits)**

This course is focused on how basic science studies using genetic model organisms have had a major impact on human health and disease in addition to helping us understand fundamental aspects of biology. We will cover clinically relevant recent advances from bacterial studies (i.e. CRISPR/Cas9-mediated genome editing) to how studies in fruit flies revealed insights into immune disease. Students will gain a better appreciation for why researchers using model organisms were awarded Nobel prizes as well as why major medical funding organizations like the National Institutes of Health, American Cancer Society, and American Heart Association support research using non-human systems. This course will prepare students to understand health-relevant research from varied model systems. Students will learn practical aspects for determining which model systems are best suited to answer which types of questions. They will also practice designing experiments and defending their importance in grant abstract-style essays. Prerequisites: BIOL 2120 and BIOL 2510.

**BIOL 3910 Viruses & Infectious Human Diseases (4 Credits)**

From sexually transmitted viruses to bacterial pneumonia, infectious pathogens are the number one threat to human health. This course will introduce students to prions, viruses and bacterial pathogens with an emphasis on those commonly encountered in clinical medical practice. Through the use of technical/scientific research journals students will be encouraged to investigate the etiology, pathogenesis and treatment of human infectious disease with an emphasis on the clinical, molecular diagnostic and therapeutic aspects of the disease. This course counts as a category elective for the Molecular Biology major. Prerequisite: BIOL 2510. Recommended prerequisite: BIOL 3800.

**BIOL 3950 Undergraduate Research (1-10 Credits)**

Participation in faculty research programs by agreement between student and faculty member. Maximum of 5 quarter hours of BIOL 3950 and/or BIOL 3991 may be applied to the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3991 Independent Study (1-10 Credits)**

Topic in biology studied under faculty supervision. Student's responsibility to identify faculty supervisor before registering for class. Maximum of 5 quarter hours of BIOL 3991 and/or BIOL 3950 may be applied toward the 45-quarter-hour requirement for a major in biological sciences.

**BIOL 3995 Independent Research (1-10 Credits)****BIOL 4050 Topics in Plant Biology (2 Credits)**

Varying topics; areas of plant-animal interactions, co-evolution, plant ecology, plant biochemistry/physiology.

**BIOL 4085 Accelerated Biostatistics (2 Credits)**

This is an accelerated online statistics course for graduate students in Biology. Basic probability and hypothesis testing is the foundation of teaching applied statistics, including simple statistics (t-tests, F-tests, and chi square) and more advanced procedures (regression, correlation, analysis of variance). In addition, students learn more complex tools (multiple regression, multi-classification ANOVA, Student-Newman-Keuls tests), including non-parametric Tests (Mann-Whitney U, Sign test, Wilcoxon Rank Sum).

**BIOL 4090 Biostatistics (4 Credits)**

Statistic on biological research; emphasis on procedures, applications of regression, correlation, analysis of variance, and nonparametric tests. Include instruction on computer aided (Mac and PC) statistical analysis and presentation of results. Cross listed with BIOL 2090.

**BIOL 4095 Research Methods and Analysis (4 Credits)**

The purpose of this course is to introduce you to topics of applying statistical knowledge to real data, including specific tests/models as well as issues related to project design such as adequate sample size, avoiding confounding variables, unexplained error, and other common challenges. It is geared toward both field and lab-based projects, but the topics covered are relevant to research generally. Each week we will discuss the reading for that week with the objective of clarifying points and where possible, applying the concepts to real data from our own work. Prerequisites: BIOL 4090 or permission of instructor. Prerequisites: BIOL 4090.

**BIOL 4150 Special Topics in Adv Biology (1-4 Credits)**

Topics of special interests to teaching and research faculty presented as needed to complement and expand existing curriculum. May be taken more than once for credit.

**BIOL 4155 Leadership in Science (1 Credit)**

This course addresses the basic leadership skills necessary to succeed in the dynamic professional environment of the biomedical sciences. Topics covered include leadership strategies and professional negotiation, conflict resolution, and team-building. Students will determine leadership strengths and weaknesses and use case studies to strengthen their leadership practices.

**BIOL 4211 Advanced Cell Biology (4 Credits)**

Students study the subcellular structure and organization of the cell. Organelle structure and function are examined in detail as well as biogenesis and degradation (turnover) of these subcellular structures. Cytoskeletal dynamics are also a major focus. Specific topics covered include cell division, macromolecular synthesis, membrane transport, cell-matrix and cell-cell communication, cell migration, cell differentiation, and mechanisms of cell death. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students. Cross listed with BIOL 4150.

**BIOL 4212 Advanced Molecular Biology (3 Credits)**

This course focuses on a detailed analysis of regulated gene expression. The topics include lectures and readings of relevant literature in areas covering gene regulation at multiple steps, including transcription, RNA processing, and translation. In particular, the logic of experimental design and data analysis are emphasized.

**BIOL 4213 Advanced Cell Signaling (3 Credits)**

Students in this course investigate a large array of cellular signal transduction cascades. Specific signaling pathways to be covered include growth factor receptors, cytokine receptors, steroid receptors, integrin-extracellular matrix, heterotrimeric G-protein coupled receptors, monomeric G-proteins, transcription factors, lipids, cytoskeleton, cell cycle, and apoptosis. Each of these topics is examined in the context of normal cell physiology as well as their roles in specific disease processes. The course follows a lecture format in conjunction with selected journal article presentations and discussions by the students.

**BIOL 4220 Grad Sem: Ecology & Evolution (2 Credits)**

A series of student presentations focusing on varied topics involving ecology and evolution. May be taken more than once for credit.

**BIOL 4231 Responsible Conduct in Rsrch (1 Credit)**

This course covers several topics regarding guidelines for ethical practices in research. Topics include: data ownership, conflict of interest and commitments, human subjects, animal welfare, research misconduct, authorship, mentoring, peer review, and collaboration. The course includes an online training component and meets one hour each week to discuss these topics.

**BIOL 4310 Foundations in Literature: Cell and Molecular Biology (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Cell and Molecular Biology.

**BIOL 4330 Foundations in Literature: Ecology (2 Credits)**

Students participate in a weekly discuss group that focuses on recent papers from the primary literature in Ecology.

**BIOL 4331 Foundations in Literature: Evolution (2 Credits)**

Students participate in a weekly discussion group that focuses on recent papers from the primary literature in Evolution.

**BIOL 4500 Clinical Exercise Physiology (5 Credits)**

This graduate course in clinical physiology will provide an understanding of fundamental practices and assessments within clinical settings. We will combine knowledge from various backgrounds in physiology and tie theoretical and practical concepts together for assessing body function and developing methods for improving health and performance. We will connect the physiological concepts related to the cardiovascular, respiratory, and muscle systems as well as develop projects that require combining knowledge of the assessment skills and evaluation for clear communication and exercise prescription to special populations.

**BIOL 4510 Exercise Testing & Prescription (4 Credits)**

The purpose of this graduate course is to develop knowledge combined with hands-on skills for integration of exercise testing and prescription concepts. Material in this course will be applicable for performance as well as clinical considerations. This is an active course which will require your participation as both the subject and technician, giving perspective and understanding of methods and protocols along with their justification for various purposes. Prerequisite: BIOL 4500.

**BIOL 4515 Research Techniques in Exercise Physiology (4 Credits)**

This graduate level course is designed to provide exposure to several methods of research within the area of exercise physiology. This is a hands-on course that combines theory and literature with practical research experiences in physiology. In this course, students will perform data collection and analysis of differing topics. These may include the following topics: pulse and tissue oxygenation, signaling (heart rate variability, oxygen kinetics), respiratory loops, Doppler ultrasound (blood flow and tissue structure), etc. Our aims will focus on understanding how and why the method works, how to collect data, as well as the analysis and reporting of variables for proper interpretation.

**BIOL 4520 Advanced Nutrition and Exercise (4 Credits)**

This is a one quarter course intended for graduate students and advanced biology and physiology majors. This course builds upon the prerequisite introductory nutrition course. The course will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of nutrition related to exercise, physical activity and health. Starting with a review of nutritional biochemistry and exercise, major macromolecule and micronutrient metabolism will be addressed in depth. Applications of nutritional science to various types of exercise (endurance, power, speed) will be explored, as well as nutrition and exercise specific to age and sex across the lifespan. In addition to didactic content, students will complete evaluation of primary literature and propose a nutritional program for a specific population of interest. The course will utilize diverse resources, exercises, and activities in the learning process including text, video, animations, inquiry-based learning, experimentation and a variety of assessments. Prerequisite: BIOL 3260 Nutrition or the equivalent.

**BIOL 4530 Advanced Cardiovascular and Pulmonary Physiology (4 Credits)**

This course is developed to provide a deeper level of physiological knowledge of the cardiac, vascular, circulatory, and pulmonary systems and their functions. With both lecture materials as well as in-class discussion of concepts and research articles, we will go deep into the basic levels of composition and function and facilitate the understanding of mechanisms that limit disease populations, elderly, etc. How can we adapt our lifestyles to improve our cardiovascular health? Prerequisite: BIOL 3250.

**BIOL 4540 Electrocardiogram Interpretation (2 Credits)**

This course is an advanced course in cardiac physiology for those interested in understanding principles associated with cardiac function, electrical physiology of the heart, and interpretation of the electrocardiogram. As the functions related to our heart drive our cardiovascular system, we will find ways to relate our experiences of daily life to the concepts and principles learned throughout this course to deepen our knowledge and retain this information. We will explore the physiological mechanisms related to the cardiac system as well as develop projects that require combining knowledge of the electrical pathways and of use of electrocardiography for proper interpretation.

**BIOL 4550 Cardiopulmonary Rehabilitation (2 Credits)**

This course focuses specifically on cardiopulmonary rehabilitation. Students will gain an understanding of (1) the impact of lung and heart disease on daily physical activity levels, (2) common mechanisms limiting exercise tolerance, and (3) risks and benefits of exercise for patients with lung and heart disease. Students will learn guidelines for exercise prescription and rehabilitation programs for patients with cardiovascular and pulmonary diseases. Practical application of knowledge and skills gained in BIOL 4530 will be emphasized. Prerequisite: BIOL 4530 Advanced Cardiovascular & Pulmonary Physiology.

**BIOL 4570 Advanced Human Pharmacology (2 Credits)**

This class will focus on how drugs and other therapeutics can be used to treat and prevent diseases. Students will develop a deep understanding of pharmacokinetics/ pharmacodynamics, the major classes of drugs, how and why they are used, drug side effects, and drug interactions. Specific emphasis will relate to effects of drugs utilized for disease prevention or treatment on physical activity and exercise.

**BIOL 4580 Physical Activity for Management of Chronic Diseases (3 Credits)**

This one quarter course is intended for graduate students in the clinical exercise physiology program or other related programs. This course builds upon previous coursework in clinical exercise physiology. It will focus on understanding, evaluating and implementing the fundamental principles and evidence based best practices of exercise management for persons with chronic diseases and disabilities. Starting with an overview of the concept of "exercise as medicine," the principles of safe exercise as a method for improving health outcomes will be applied to individuals with chronic diseases. Various chronic disease states and their associated medical challenges will be explored, and the recommendations for modified exercise activities, durations and outcomes to support healthy and safe outcomes will be addressed. In addition to didactic content, students will complete evaluation of primary literature in the field. Prerequisite BIOL 4500/4510 Clinical Exercise Physiology I and II.

**BIOL 4870 Medical Ethics (4 Credits)**

This course presents knowledge and discussion of ethical issues that arise from advances in the biomedical sciences and medicine. Several specific ethical issues and policies related to methodologies and procedures, emerging medical technologies, treatment decisions, doctor-patient relationship, informed consent, medical experimentation/clinical research, and health care reform.

**BIOL 4880 Capstone in Biomedical Sciences (4 Credits)**

This is the capstone course for students enrolled in the Professional Science Master's program. In this course, students integrate advanced knowledge in science and math along with courses taken outside traditional science and math courses as their electives. This course incorporates lectures, guest speakers, and class discussions focusing on current issues or concerns in the chosen concentration. PSM students only. Requires instructor approval.

**BIOL 4980 Internship in Biomedical Sciences (1-4 Credits)**

The internship course provides individualized opportunities to gain experience and professional skills. This course includes a structured practical and productive internship experience that allows for the integration and application of disciplinary knowledge in a professional setting. The internship can be administrative, clinical, programmatic, or research focused. Students will work with a professional from healthcare, pharmaceutical and biotech companies, or private and public health services to identify the student's specific project focus.

**BIOL 4991 Independent Study (1-17 Credits)****BIOL 4995 Independent Research (1-8 Credits)****BIOL 5991 Independent Study (1-17 Credits)****BIOL 5995 Independent Research (1-8 Credits)**

## Biophysics (BIOP)

**BIOP 4100 Foundations in Biophysics (3 Credits)**

Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibria and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with PHYS 4100.

**BIOP 4150 Cellular Biophysics (4 Credits)**

Biophysical approaches to understanding cell function. We emphasize the various experimental approaches that biophysicists use to study basic cellular processes, including a variety of fluorescence images, optical and electrophysiological techniques. Cross listed with BIOL 4211.

**BIOP 4210 Current Topics in Biophysics (2 Credits)**

This is a seminar course that focuses on current primary literature in the fields of molecular and cellular biophysics. This is the first of a three course, year-long sequence.

**BIOP 4993 Lab Rotation (2-9 Credits)**

Lab rotation in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.



**BIOP 4995 Independent Research (1-9 Credits)**

Independent research in Molecular and Cellular Biophysics before students pass the first phase of their qualifying exam.

**BIOP 5991 Independent Study (1-10 Credits)****BIOP 5995 Independent Research (2-9 Credits)****BIOP 6991 Independent Study (1-10 Credits)****BIOP 6995 Independent Research (1-10 Credits)**

## Business Core (BUS)

**BUS 4105 Masters in Digital Leadership Capstone Course (4 Credits)**

What makes a good Digital Leader. It's the ability to lead organizations using emerging technologies and possessing a data-driven mindset in efforts to digitally transform organizations and industries. This course gives the student an opportunity to apply the knowledge and skills learned in this program to a real-world problem that affect them and their organizations. Students take a business problem from problem definition to digital transformation. This isn't a course where students write about a problem, but rather work with mentor to create value for themselves and their organization. Prerequisites: All other Digital Leadership courses.

**BUS 4132 Mobile Technology (1 Credit)**

You've probably heard about the 5th Generation of mobile technology (5G), but have you heard about the 6th (6G)? Consumers are increasingly becoming more mobile and are demanding more data be delivered to them more quickly. It seems now that the value of mobile technology is centered around increasing demand. This puts an enormous strain on organizations as they begin to digitally transform their organizations. Conversely, for the informed digital leader, this pattern of rapid mobile technology is an opportunity to provide newer and better value for their stakeholders. This class will explore these challenges and opportunities and will provide learners with an insight into the emerging ethical challenges that are related to the use of mobile technology.

**BUS 4133 Analytics (4 Credits)**

Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision-making and performance improvement. 2. Data management in organizations. 3. Organizational transformation based on data-driven insights.

**BUS 4134 Customer Experience (2 Credits)**

As the rate of technology increases and more products and services transition to the virtual realm, organizations need to ensure that both their internal and external customers are included. This course helps digital leaders understand, use, and apply the customer experience construct. It will help them create an experience for customers that goes beyond customer service for external customers and actively involves internal customers in the co-creation of value that supports their business's digital transformation.

**BUS 4135 Agile Development (2 Credits)**

It is estimated that 70% of all projects fail. This course will help project owners and team members increase their chances of success by introducing and reinforcing the agile development process method. Students will learn what it means to lead these types of projects and how they might be used for the benefit of their organizations.

**BUS 4136 Robotic Process Automation (1 Credit)**

Robotic Process Automation (RPA) is an emerging technology that is changing the way businesses process data. RPA allows many business processes to be automated and remove the human from performing repetitive tasks. This course will teach the basics of the technology using one of the most popular RPA software programs.

**BUS 4137 Intrapreneurship and Leading Change (4 Credits)**

As businesses begin to transition from the physical to the digital realm, their ability to strategically manage this change is directly tied to their future success. The challenges facing leaders of these organizations include how to empower employees to be innovative how to gain stakeholder buy-in, and ultimately how to manage the process of change. This course will help leaders become better change agents within their organizations by helping them understand the sources of change, designing a plan for it, and ultimately, leading the change process. Change is constant in a business and the better-prepared organizations are to deal with it, the more likely they will be able to continuously create value for their company's stakeholders.

**BUS 4138 Artificial Intelligence (2 Credits)**

Hollywood has taught us that artificial intelligence (AI) involves robots that want to take over the world in some fashion. While this notion is both terrifying and fascinating to watch, it fails to portray how AI is being used successfully by businesses to create value for stakeholders. This course will help inform your perspective on how AI is helping businesses by giving you insight into how its currently being used by businesses. Included in this is developing your understanding of how organizations develop their AI capabilities, a look at various AI techniques including machine learning, and a discussion on the ethical challenges raised by using AI in business. The ability to understand and use AI in business could transform the way business is done by equipping organizations with the ability to reimagine what is possible and simultaneously deliver it.

**BUS 4139 Augmented/Virtual Reality (1 Credit)**

What is reality? Is it what we experience through our five senses and then process through our understanding, or is it putting on a virtual reality headset and interacting with others in another world? With the growing popularity and applications around augmented and virtual reality, the line between real and virtual reality is becoming blurred. This course operates from the blurred space and starts by helping students understand what extended reality is how its application can be used in business. Students will explore the emerging capabilities of organizations that are using virtual reality and will be empowered to make recommendations of their own as to how this technology may further transform other organizations. As this course operates in the space between realities, numerous ethical issues have arisen surrounding extended reality and students will be given insights into what they are and how to navigate them.

**BUS 4141 Cybersecurity (1 Credit)**

You are under attack! Cyberattacks are on the rise and they can be catastrophic to a business resulting in downtime, lost profits, and growing distrust from stakeholders. While there isn't a perfect solution to stopping cyberattacks, this course is designed to help leaders become better equipped to mitigate these threats by improving their understanding of the current state of cybersecurity, how it's being used by businesses, and what they can do to better protect themselves from cyberattacks. In addition to learning the application and outcomes of cybersecurity, learners will be exposed to the growing ethical debates surrounding cybersecurity in efforts to be better prepared to make security recommendations for their organizations.

**BUS 4142 Business Model Innovation (2 Credits)**

If companies don't innovate, they evaporate. This is especially true as an organization begins the digital transformation process. In this class, students will be taught how to evaluate an organization's business model to facilitate its transition to the digital realm. The idea is to transition a business model into something that creates value by way of leveraging emerging technologies, analytics, and digital leadership for all stakeholders.

**BUS 4143 Digital Ethics & Privacy (2 Credits)**

Do individuals have a right to digital privacy and what are the ethical ramifications that support our virtual existence? In this class, you will explore the idea of digital privacy and how businesses are balancing the need to make a profit while simultaneously safeguarding their stakeholder's data. In addition to digital privacy, students will develop the ability to evaluate emerging technologies through varying ethical lenses and begin to explore the future directions of digital ethics.

**BUS 4144 Blockchain (2 Credits)**

In this course, students will understand how blockchains operate as decentralized ledgers and how businesses can begin to leverage the opportunities these types of technologies afford to them. With an understanding of blockchain, the course will transition to cryptocurrency and discuss the emerging values proposition these new types of currencies provide to businesses. From digital currencies, the course will instruct students on the emerging concept of non-fungible tokens (think digital art) and will conclude with an investigation into the ethical challenges related to blockchain technology.

**BUS 4145 Cloud/Edge Computing (2 Credits)**

Is it more accurate to say the digital cloud is above us, or all around us? In this class, students will learn to distinguish between cloud and edge computing and will be able to articulate the value of each to their organization. Students will also become familiar with the major cloud providers (e.g., Google, AWS, and Azure). Equipped with knowledge students will be able to create a cloud transformation plan that highlights their organization's cloud journey and transformational process to the cloud.

**BUS 4146 Internet of Things (1 Credit)**

Can you see the value of a drone being connected via the internet to a warehouse, or your car connected to your refrigerator? The Internet of Things (or IoT) is the emerging technology of connection. It's the ability to connect virtually everything via the internet. In this course, students will be given the opportunity to explore the value this type of technology provides to their organization. It will also enable them to create strategic recommendations using IoT for their business and ways it can ethically be used to satisfy its stakeholder's needs and wants.

**BUS 4147 The Foundations of Digital Transformation (1 Credit)**

What does it mean for a business to digitally transform? Even as more businesses say they are "digitally transforming", it is still largely unclear what this process means, and perhaps more importantly, how it can be successfully achieved. This course is designed to provide students with clarity around these topics by first examining the foundations of digital transformation (emerging technology, leadership, and data) and analyzing their impact on the business. After developing this foundation, students will then work to diagnose a firm's ability to transform by evaluating its digital capabilities to produce stakeholder value. Once students have gained insights into the context and capabilities of digital transformation, they will explore the potential ethical challenges and issues raised by moving their organization to the digital realm.

**BUS 4310 Business Communication for Accounting Professionals (4 Credits)**

This course emphasizes critical communications skills for future accounting, tax, auditing and consulting professionals. The course develops written communication skills including but not limited to technical writing, reporting the results of research and explaining complex issues. Oral communication assignments include formal presentations, development of debate skills and boardroom presence. Assignments incorporate business etiquette and teambuilding.

**BUS 4350 Overview of Outdoor Recreation Industry (1 Credit)**

This course is a survey of the outdoor recreation industry, providing an overview of the size, growth, sectors and economic impacts of the industry. This course will lay the foundation for the LORI Program, as the remaining courses will dive deeper into the topics. This course will also begin to examine external drivers for the industry, including the connection between policy and outcomes, the inherent tension between access and conservation, as well as economic trends driving the industry. Students will also set up an exploration of the industry's role and relationship with challenges such as climate change, globalization, and technology as well as the critical role of Environmental, Social and Governance (ESG) issues within the industry. We will also spend time discussing the role of diversity, equity and inclusion in the outdoor recreation industry and examine what our role can be to change.

**BUS 4353 Business Models in the Outdoor Industry (1 Credit)**

This course introduces students to the concept of a business model canvas, what goes into the revenue and cost streams, and the necessary factors that need to be controlled in order to sustain a business. Students will be introduced to emerging models in the retail and hospitality sectors, and will learn how to differentiate between business models in the product based vs. services based industries. They will also get an appreciation of capital structure needed to keep a business going, and the implications of capital intensity for business models.

**BUS 4355 Sustainability and Markets in the Outdoor Recreation Industry (1 Credit)**

This course provides an overview of sustainability issues through a business lens, and shares insights on corporate sustainability risks, strategies, and market-based drivers of change. This sprint will review sustainability business risks and opportunities, ESG reporting frameworks, and how integrating sustainability into strategy can create enterprise value. As part of the Outdoor Industry Leadership program, students will gain an overview of the theory, practice, and challenges of corporate sustainability, learn strategies and tools to lead organizational change. The course will deepen student understanding of sustainability trends, perceived ESG risks, approaches to carbon management, and how ESG reporting frameworks can improve sustainability management, collaboration, and communication. Corporations will increasingly focus on creating sustainable and inclusive growth that adapts to climate-related risks, competes effectively for limited resources, and addresses community and social challenges in a sustainable way.

**BUS 4360 Leading Self: Leadership in Outdoor Recreation Industry (1 Credit)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual/social interaction. This course will provide students the critical skills to "lead the self" towards personal/professional goals in the outdoor industry. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. As part of this process, students will learn necessary skills for leading others and working effectively in teams.

**BUS 4365 Leading Teams in the Outdoor Industry (1 Credit)**

"Leading teams" is a graduate course to prepare you for formal and informal leadership of a team. You will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams face. You will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. In addition, we will cover current topics, including virtual teams, team creativity and team-based innovation.

**BUS 4367 Leading Organizations in the Outdoor Industry (1 Credit)**

How do companies develop a sustained competitive advantage? In highly competitive industries like the Outdoor Industry, creating an "edge" is not a due to luck or single solutions. In this course, we will examine the components of developing a successful strategy. We will examine: 1. Do we have a strategy? 2. What business are we in? 3. What are we as a company good at? 4. How do we "win"?

**BUS 4370 Principles of Management in the Outdoor Industry (1 Credit)**

This course will help students understand the major functions of management (planning, organizing, leading, and controlling) and the significance of each function in relationship to the existence of the company. This course describes how companies use management to set and accomplish goals through individuals, groups, and other types of resources. It also analyzes communication and ethics in the organization. Major topics include decision making, change, employee development, organizational structures, management control, and leadership.

**BUS 4375 Taking a DEI centric approach to Talent Management in the Outdoor Industry (1 Credit)**

This course will guide students through the foundations of Talent Management with a DEI lens. Talent Management is top of mind for many Outdoor companies. In order to ensure there is the right talent at the right time in the place with the right skills, leaders prioritize talent management frameworks to unlock the potential of their teams. DEI is fundamental to strengthening the talent pool and ensuring business growth, relevance and longevity. Over the course of a few weeks, we will first establish an understanding of what Talent Management is and how to build programs that resonate with the businesses and the culture. During that time, we will also examine how DEI perspectives can become effective strategies in creating an environment where everyone can thrive.

**BUS 4380 Regulatory Environment in the Outdoor Industry (1 Credit)**

This course provides an overview of the regulatory environment surrounding liability in the outdoor recreation industry, with a particular focus on ski resorts. The course introduces students to state-level "ski safety acts," to the interplay between legislatures and courts, and to emerging developments in the law.

**BUS 4383 Public Policy Challenges in the Outdoor Industry (1 Credit)**

This course explores the myriad public policies that affect the outdoor industry, one of the nation's largest industry sectors. The class will evaluate federal, state and local legislative and regulatory actions that affect the ability of the economic considerations of the outdoor industry, and how the industry has engaged in the public policy process to ensure its ability to grow.

**BUS 4385 Environmental and Social Governance in Outdoor Industry (1 Credit)**

Industry today is responding to calls for more accountability to its numerous stakeholders. ESG is becoming an important measurement tool for assessing the performance of companies in addressing stakeholder concerns of Environmental, Social (internal and external), and Governance issues. This course will be an overview of the current practice of ESG reporting and ratings by numerous third-party organizations, the ways ESG factors are measured, the steps companies are taking to meet ESG standards, and the success of companies that have adopted ESG programs. Further, some companies have elected to become B-Corps to demonstrate their commitment to being a sustainable business and devoting part of their profits to social causes.

**BUS 4387 Supply Chains in the Outdoor Industry (1 Credit)**

In this course, students will learn about the supply chain system through the University of Denver's Six Pillars of Supply Chain model. It is essential for business leaders to first understand the supply chain system as a holistic end-to-end model that will be introduced at the beginning of the course. By understanding a comprehensive supply chain from product design to retail to post-use, the student can better understand a product lifecycle from a tactical to a strategic perspective. The student can gain a more in-depth understanding of important topics within the supply chain and how they are emerging in the 21st century. Students will leave this course with a starting point understanding of the role of the supply chain in the outdoor industry, its role in sustainability initiatives, economic policy, and business strategy. The course also pays special attention to globalization, which is not only a critical factor in supply chain management but will have far-ranging impacts on the future of the outdoor industry in the US.

**BUS 4389 Enterprise Risk in the Outdoor Industry (1 Credit)**

As in any business, risks unfortunately exist and must be identified, managed, and mitigated to the extent possible. Businesses in the Outdoor Industry are not immune to these risks – and have additional industry-specific risks that are unique to them. A sound risk management program is paramount to success in the Outdoor Industry. This course introduces students to the concepts of risk identification, risk management and risk mitigation measures. It will cover what goes into the enterprise risk management process, and the key legal and business factors that need to be identified, managed and controlled in order to sustain a business. Specific topics to be covered include liability waivers/releases, signage, preventative measures (avalanche mitigation and patrolling, e.g.), insurance, compliance, workers compensation and internal auditing. Students should leave this course with a greater appreciation for the outdoor industry and the many methods involved in the management of risk to ultimately help drive the success of a business.

**BUS 4390 Land Use in Outdoor Industry (1 Credit)**

By its nature, the outdoor recreation industry depends on reliable access to land and water. Using a selection of case studies, this course examines access to national forest lands, private landholdings, and bodies of water.

**BUS 4395 Service Excellence & Guest Experience in Outdoor Industry (1 Credit)**

In this course you will gain the exclusive Forbes Five Star Certification that will provide the tools to luxury service excellence and the delivery execution of outstanding guest experiences. This course will explore service experience in the context of the service delivery systems and will provide students with the tools to troubleshoot, produce continuous improvement, and create outstanding guest experiences.

**BUS 4397 Access in the Outdoor Industry (1 Credit)**

"Access in the Outdoor Industry" is a transformative course designed for leaders and aspiring change-makers within the dynamic realm of outdoor recreation. This course is meticulously crafted to equip industry professionals with the knowledge, skills, and strategic acumen necessary to dismantle barriers and champion inclusivity, ensuring equitable access for all individuals, irrespective of their backgrounds, abilities, or socioeconomic status.

**BUS 4400 MBA@Denver Capstone (4 Credits)**

The MBA@Denver Capstone Course enables the practical application of key management and leadership competencies, skills and knowledge and is designed to integrate core course learning outcomes. You will integrate what you have learned in the MBA@Denver program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. You are strongly encouraged to work with a small business or not-for-profit organization, completing a social capital project with that enterprise. You will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within an organization. You will work in teams and will select an organization of your choice to work with as the client. The project will end with an oral presentation and written proposal that is delivered to the client organization and the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. You are required to identify linkages between an organization's external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization's ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate. Enforced Prerequisites and Restrictions: MBA@Denver student must be within one quarter of graduation or have the Director's permission to take the class. This course is open only to MBA@Denver students (MBA-DEN).

**BUS 4435 Digital Transformation: Design and Execution (4 Credits)**

As a business, it is better to be the disruptor than to do be disrupted. Since 2020, this fact is easy to see as businesses have rapidly accelerated their plans to digitally transform. The success of these transitions has been largely underwhelming as organizations have failed to leverage the right technologies to create better processes that support customer's current and future needs. This course is designed to help students increase their ability to drive digital transformation by focusing on both the design and execution of digital transformation. After taking this course, students will be able to assess current digital transformation design practices that will strategically fit their business and create a plan to increase success in executing it.

**BUS 4444 Global Bus, Governance & CSR (4 Credits)**

In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. Instead, these issues require collaboration and coordination across a variety of actors spread around the globe. Within this framework, businesses are aware of increased pressure to behave responsibly and adopt a corporate social responsibility (CSR) approach to their conduct. Yet, businesses are unsure how to integrate these goals into their business strategy and engage meaningfully with stakeholders. Likewise, governments recognize the importance of having business at the table, but do not have a clear understanding of how to best engage with the private sector. The response to this conundrum is a focus on global governance, which refers broadly to the way in which global affairs are managed. After a brief overview of economic trends and trajectories around the globe, the course will focus on global governance as a mechanism for change. The class will first explore the opportunities and shortcomings of global governance efforts. The class will build on this scholarship by discussing the role business plays in global governance mechanisms. As society has become aware of, and is acutely concerned with, business conduct, the role of the manager and business strategy in these realms has also changed. Students will analyze these trends and study their implications for government, business, or civil society strategy and practice. The final portion of the course will focus on specific issue areas, including: human rights, labor standards, the natural environment, corruption, and microfinance.

**BUS 4445 International Business: Strategy and Practice (4 Credits)**

This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc. This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

**BUS 4450 Developing an Entrepreneurial Mindset (4 Credits)**

Have you ever heard the quote, "Find a job you enjoy doing, and you will never have to work a day in your life?" This course is designed to help you align your purpose in life with your organization's purpose (your own organization or an organization for which you work). There are multiple parts to bringing this alignment about, which will comprise the foundation for this course: (1) (re)evaluating your purpose in life, building on what you have learned about your leadership style, ethical orientation, values and beliefs, and so forth from your earlier courses; (2) developing an entrepreneurial mindset, useful for starting your own organization or a new venture within the organization in which you already work; (3) exploring the Triple Bottom Line perspective of business in society; and (4) applying the core concepts of systems thinking to identify potential business ideas that align with your purpose. The course will culminate with the creation of a business idea and business model canvas that aligns your purpose in life with a compelling business purpose. The business idea may involve creating your own business/organization or proposing the idea within your current organization.

**BUS 4530 Data Visualization in the Outdoor Recreation Industry (1 Credit)**

Data visualization can bring data to life, making the user the master storyteller of the insights hidden within the numbers. Through live data dashboards, interactive reports, charts, graphs, and other visual representations, data visualization helps users develop powerful business insight quickly and effectively. This course introduces students to the disciplines related to data visualization as it relates to the Outdoor Industry.

**BUS 4535 Data Analytics in the Outdoor Recreation Industry (1 Credit)**

Data can help businesses better understand their customers, improve their advertising campaigns, personalize their content, and improve their bottom lines. The advantages of data are many, but you can't access these benefits without understanding the value of data analytics. Data's value as a strategic asset is often lost as companies are unsure how to analyze the data, use insights for decision making and measure the impact of data-driven outcomes. This course is not a "stats" class. Rather it introduces students to the foundations of data analytics, the scientific process of transforming data into insights for making better decisions as it relates to the Outdoor Industry.

**BUS 4540 Data Management in the Outdoor Recreation Industry (1 Credit)**

Data management has been a critical and common practice employed across industries for many years. At its core, data management encompasses all disciplines related to managing data as a strategic and valuable resource, including collecting, processing, governing, sharing, and analyzing data — and doing it all in a cost-efficient, effective, and reliable manner. Given the changing work environment, with more remote workers and new channels, we are seeing greater importance placed on data management. This course introduces students to the disciplines related to managing data as a strategic and valuable resource as it relates to the Outdoor Industry.

**BUS 4575 Accounting I in Outdoor Industry (1 Credit)**

Accounting is a core skill that helps ensure success in all business environments, including the outdoor industry. During this course, students will be introduced to accounting and its relevance to the business world. Students will learn how to analyze transactions, determine how they would appear on financial statements, and understand related management disclosures.

**BUS 4580 Accounting II in Outdoor Industry (1 Credit)**

During this course, students will learn how to analyze financial statements for competitive analysis and predict a business' cash flow. The focus of this course will be on key performance indicators and sources/uses of cash.

**BUS 4600 Professional MBA Capstone Project (4 Credits)**

The Capstone Project enables the practical application of key management and leadership competencies, skills and knowledge designed to integrate core course learning outcomes. You will integrate what you have learned in the PMBA program to analyze a client problem and provide appropriate recommendations and conclusions prepared for and presented to the client. The course integrates Daniels' multi-disciplined learning outcomes and experiences to achieve this goal. The course is a combination of site-based practicum, field project and classroom experiential learning. Through these activities, you will gain an in-depth exposure, perspective and understanding of strategic business processes, opportunities and challenges within a non-profit organization. You will work in teams (4-5 individuals) and will select a non-profit organization of your choice to work with as your client. The project will end with an oral presentation and written proposal delivered to the client and to the instructor on an assigned date. Project assignments will emphasize the integration of knowledge from multiple academic disciplines and functional business activities. Students are required to identify linkages between an organization's external and internal organization environments in the context of its organizational strengths, weaknesses, opportunities and threats (SWOT). Projects may include new product or technology development, restructuring, relocation, expansion, downsizing, acquisitions, mergers and acquisitions or joint ventures, and/or other relevant operational performance issues. The goal is to increase the organization's ability to sustain and thrive. The final plan/proposal should include an implementation timeline for the proposed solutions as appropriate.

**BUS 4610 Business Ethics for the Public Good (2 Credits)**

A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional, social and legal responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of "community" and the ethical and social relationships of business leaders and business organizations in their communities. A particular focus will be the role of the business manager and executive as a professional with unique and special responsibilities. These roles will be examined by analyzing a variety of issues and situations that students will likely face during their careers. The goal is to provide students with perspectives, intellectual frameworks, and skills that will be useful in their business careers. The Daniels PMBA "core" not only strengthens foundational business and management skills, but also provides a broader orientation, purpose and direction for exercising and executing foundational skills to achieve enterprise and personal success. Personal and organizational success is a function of technical "know-how," leadership intelligence, and competence in execution. The assumption of this course is that all of these competencies must be grounded in a solid ethical and social commitment to community values and principles. This course will explore these values and principles in various business contexts, using the shared personal experiences of business professionals who will present their own stories for us to examine.

**BUS 4611 Leading Self & People (2 Credits)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual/social interaction. This course will orient the student towards gaining the most out of their education by focusing on learning as the cornerstone of development. It will provide students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. As part of this process, students will learn necessary skills for leading others and working effectively in teams. Lecture / Off-site will include a required intensive three-day exercise in self-awareness, outdoor leadership, team-building, problem solving, and critical thinking. This outdoor experiential includes an intellectually rigorous component, which is designed to enhance the classwork in which you engage, and is intended to enhance the experience students have in their life outside of the academic environment. The outdoor experiential will be leverage in the on-campus course which provides insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. The premise of the course is that leading others first requires a keen sense of self leadership. Students will revisit assumptions about themselves as they develop intentional approaches to identify learning and career opportunities in their selected fields and lead themselves towards the accomplishment of professional objectives. Online/Distance and Combined/Hybrid Methodologies will include an optional outdoor immersion that involves an intensive three-day exercise in self-awareness, outdoor leadership, team-building, problem solving, and critical thinking as outlined above.

**BUS 4612 Business Domestic Immersion (0 Credits)**

MBA@Denver students are required to take two immersion experiences. BUS 4620-X includes domestic experiences, held in a U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the immersion course at the same destination more than once.

**BUS 4614 Business International Immersion (0 Credits)**

MBA@Denver online students are required to take two immersion experiences. BUS 4614-X includes international experiences, held in a non-U.S. city, generally including visits with business leaders on various topics, experiential experiences, and/or specific topic discussions led by qualified faculty. Students may not take the same section number (X) more than once, though they may take the course more than once.

**BUS 4620 Ethics for the 21st Century Professional (4 Credits)**

A fundamental purpose is to engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders. Of particular emphasis are the ethical, professional and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders and communities. This course focuses on the idea of "community" and the social relationships of managers and business organizations in their communities. Roles and responsibilities of managers and business firms are examined by analyzing a variety of issues that managers will face during their careers. These specific issues will be examined in terms of their legal, public policy, and ethical dimensions. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. Cross-listed with ACTG 4620.

**BUS 4675 Talent Management (2 Credits)**

In 2020, the concept of talent management changed dramatically. Since that time, employees have begun transitioning away from the office, the great resignation has occurred, and managers are now dealing with the emerging phenomenon of quiet quitting. This course will prepare students for this new era of talent management that focuses on the employee and works to empower them in the emerging digital age. Students will learn how to reinforce the company's culture by working with employees to create change, invest in culture, and work in becoming future leaders of the organization.

**BUS 4690 Leading Digital Teams (2 Credits)**

Nearly 90% of businesses have reported that they are pursuing some sort of digital transformation project that will partially or fully change their business. With this much emphasis being placed on organizational change, leaders of organization will need to be acutely aware of how to manage the process and especially the employees who are at its core. In this course students will understand what effective leadership is and what it means for the strategy of the firm. They will examine the importance of leading digital teams through a top-down and bottom-up approach that applies a global and culturally sensitive paradigm to each. Students will leave with the skills able to lead a diverse digital team as they work to transform and create new value for their organizations.

**BUS 4700 Special Topics in Business (0-8 Credits)****BUS 4701 Special Topics in Business (1-6 Credits)****BUS 4704 Topics in Business (1-6 Credits)****BUS 4705 Topics in Business (1-6 Credits)****BUS 4810 The Head and Heart of Leadership: Neuroscience and Emotion Regulation (4 Credits)**

Neuroscience may be the next great frontier of leadership learning. Admired and respected leaders understand both the "heart" of leadership, the harnessing and leveraging of emotions to inspire others, as well as the "head" of leadership, how the workings of our brains impact our ability to lead. This course incorporates content from the latest research in the fast-moving fields of neuroscience, emotional intelligence and mindfulness. Students will develop highly-relevant leadership skills, strategies and tactics that will make an immediate impact on your ability to successfully lead others.

**BUS 4820 Leading and Developing Others for Success (4 Credits)**

Successful leadership does not occur without successful followers. This exciting course explores the elements of how great leaders enable the success of others. We begin by exploring several well-known theories of leadership, including servant, authentic, and values-based leadership, as a means for students to formulate their own personalized framework of what great leadership look like to you. We will learn how to hire, understand, inspire, coach, mentor and sponsor a diverse and inclusive team. We will also explore storytelling, one of the hottest topics in leadership. Students will create a personal development plan that ensure the ability to incorporate the elements of this course into successful leadership.

**BUS 4830 Leading Change and Building an Agile Culture (4 Credits)**

The capacity to lead highly change-capable, agile organization is critical in today's VUCA world – volatile, uncertain, complex and ambiguous. Foundational to leadership success at every level within an organization is the capacity to build a change-ready, agile culture and successfully execute sustainable change. By exploring and evaluating the latest thinking on leadership and change, this course arms leaders with the strategies and tactics necessary to; 1) create teams and organization with high levels of change-capability and agility; 2) motivate followers and overcome resistance to change; and 3) successfully achieve both incremental and transformative change.

**BUS 4840 The CEO Toolbox (4 Credits)**

Strategy is integral to a successful organization. But without strong execution, even a well-defined strategy can fall apart. Executive teams/leaders that combine actionable strategy with operational depth are the ones most likely to stay the course and deliver long-standing results. They understand the need to align strategy and operations to deliver on their objectives. After taking courses on Strategic Management, Leadership, Leading Change, Culture, etc., you too understand the need for aligning strategy and operations, yet, in practice it's often more difficult to do. Through this course, students will hone their skills by developing and using practical tools to deal with shifts and changes along their strategic journeys. This course will allow you to put theory into action.

**BUS 4980 Internship (0-10 Credits)**

Faculty supervised Internship.

**BUS 4991 Independent Study (1-10 Credits)****BUS 4995 Independent Research (6 Credits)****BUS 6000 Research Methods in Business (4 Credits)**

Business Research Methods introduces students to the nature, scope, and significance of research and research methodologies. Additionally, the course studies primary and secondary research methods with applications to specific problems, using qualitative and quantitative designs for individual investigation on current problems within a student's area of interest. Topics covered include research design, sampling strategy, data types and collections, measurement approach, testing procedures, ethics in data collection and interpreting findings, and the Institutional Review Board (IRB) process.

**BUS 6001 Qualitative Research Methods (4 Credits)**

Qualitative methods are important for exploring complex social phenomena and developing theories for understanding dynamic relationships and change. This course is designed to help students develop an understanding of the methods and process for conducting qualitative research in general, and case study research in particular. Students will learn to use qualitative methods to develop theories and managerial solutions for current and future business problems.

**BUS 6002 Quantitative Methods I- Making Discoveries with Data (4 Credits)**

As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. Specifically, you will become familiar with several of the internationally utilized statistical software packages and with the array of statistical analysis techniques. You will understand which statistical analysis technique to use in which situation, and how to interpret the output from your statistical software packages. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. You will also gain skills in understanding how data collection and analysis will benefit your research.

**BUS 6003 Quantitative Methods II - Making Discoveries with Data (4 Credits)**

As a PhD student you will do original research ... making discoveries that nobody else has made before. Data analysis is a key tool that facilitates that. Data analysis tools help you unlock the hidden treasures within your data set. These treasures are knowledge and information that is waiting to be discovered and utilized for your benefit. These skills support managers for better decision making. Managers in business and industry have the resources to accumulate data, and this course develops the techniques to discover the information that your data provides. In this course you will learn how these data analysis tools are used for research, and you will plan how you will use your data analysis skills to perform your own research for your doctoral degree.

**BUS 6004 Data Analytics (4 Credits)**

The main objective of this course is to provide students with a well- grounded understanding and appreciation of the contemporary methods, tools and techniques used to make evidence-based managerial decisions. As managers and practitioners in business, industry and government, you have made substantial investments in putting in place the means to collect and store data, but may not have the basic technical or analytical understanding necessary to chart a road map to discover the full potential of your data. This course intends to provide you with such an understanding and hence help you become a better manager/decision maker.

**BUS 6005 Behavioral Research Design and Execution (4 Credits)**

The first purpose of this course is to prepare doctoral students with the ability to design, implement, and test the results from an experiment or survey. This includes operationalizing independent and dependent variables, rooted in definitions of terms and theory, in a manner that allows for quality statistical testing. Students will also learn manipulation of independent variables, including manipulation checks, and the basics of survey design. Lastly, analysis of existing data sets will round out the learning. This course builds on the previous research and statistics coursework in the program with a focus on practice and application. Multiple actual studies will be replicated as part of the course with the final project being a replication of a study of the student's choosing.

**BUS 6300 Seminar in Cross Disciplinary Decision Making Research (4 Credits)**

Leaders are often faced with difficult decisions and the result of these decisions determines their future success. It is important for leaders to understand the cognitive processes which underlie the decision-making process. For example, what factors cause a leader to choose the wrong investment, hire the wrong employee, or select the unethical alternative? This course will provide students with a foundation of seminal theories rooted in Economics, Psychology and Sociology and a comprehensive perspective of organizational decision-making.

**BUS 6301 Research Seminar in Innovation and Creativity (4 Credits)**

This course is intended to be a multi-disciplinary doctoral seminar investigating the broad questions of innovation and creativity and its application to entrepreneurship. The course will start with an industry-level view of innovation and how technologies evolve and then move from the micro-individual level of creativity to the organizational level while considering the individual, dyadic and group levels.

**BUS 6302 Seminar in Verbal and Non-Verbal Research (4 Credits)**

This course is designed to provide you with knowledge on how to leverage verbal and nonverbal behavior to identify psychological states and traits, to predict social evaluations and organizational outcomes. Together we will review theory, methods, and findings pertaining to verbal and nonverbal behavior in the psychological literature. We will learn how to develop research questions and hypotheses, design research to test those predictions, develop behavioral coding schemes, and identify appropriate statistical analyses. We will also discuss the strengths and weaknesses of extant research to determine what can and cannot be concluded from the results. Overall, this course will provide you will techniques to quantify human behavior, identify ways to leverage these techniques to answer novel questions of organizational importance, and to appreciate the limits of behavioral analysis.

**BUS 6303 Launch your Doctoral Journey: Be Impactful (4 Credits)**

The seminar aims at providing Executive PhD students in Business a capstone experience, to build on the research knowledge and experience they have gained over the first two years of coursework, and to formulate and sharpen their vision for their chosen careers in academia, business or consulting. Specifically, the course attempts to provide an integrative framework to help them to emerge as an impactful scholar. Students systematically walk through different research designs, theoretical, qualitative, and quantitative frameworks. They learn to critically evaluate the designs, and apply the learning to their own research. The seminar culminates with a presentation of their vision statement for their scholarly journey ahead. Prerequisite: MGMT 6301.



**BUS 6400 Academic Skills for Doctoral Students in Business (2 Credits)**

The first purpose of this course is to prepare doctoral students with skills and knowledge that are not commonly part of the course requirements but are imperative for a successful navigation of the job market and a successful publication career. This includes managing the peer review process, navigating a conference to extract the most value, and managing co-author relationships. The second purpose of the course is to provide students with just-in-time data-analysis skills based on their identified path of research interest. Archival research in business requires a significantly different skill-set than behavioral research. Students will complete one of two tracks, archival or behavioral, in the form of an intensive two-day workshop where they utilize actual data to replicate a published research study.

**BUS 6500 Applied Research Practicum Series: I (4 Credits)**

ARP I will introduce students to their ARP Instructor's research area. As such students will work closely with their ARP instructor to begin to understand his/her research area and focus. This serves as the introduction for the three-part sequence of ARPs resulting in a completed research project. By the end of ARP I, students will complete a systematic review paper of a research area and a set of research questions of interest.

**BUS 6501 Applied Research Practicum Series: II (4 Credits)**

Students will work closely with their instructor to create a theoretically supported and actionable research proposal that uniquely contributes to our understanding of the larger business field. Proposals can be focused on qualitative and quantitative (or mixed) methods. This part of the ARP series will help students develop research questions into carefully crafted predictions grounded in theory while considering execution of the study.

**BUS 6502 Applied Research Practicum Series: III (4 Credits)**

Students will design an appropriate scientific method (e.g., survey, experiment or interview) including a data collection and analysis plan per the final proposal submitted in ARP II. Once appropriately designed, under the direction of their ARP professor, students will collect data appropriate to test the study's hypotheses. Institutional Review Board (IRB) approval must be received prior to data collection which should be of publishable quality (broadly defined).

**BUS 6503 Applied Research Practicum IV (4 Credits)**

Students, along with oversight and assistance from their respective ARP professor, will analyze data consistent with his/her research proposal (ARP II) and analysis strategy (ARP III). The students will then complete an entire research paper that is ready for presentation and/or publication at appropriate outlets.

**BUS 6900 Dissertation Research in Business (2-28 Credits)**

Dissertation Proposal Defense Following successful completion of the comprehensive exam, each student will prepare a dissertation proposal and defend the proposal to the dissertation committee. A successful dissertation defense qualifies the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor and should be available to all committee members at least two weeks prior to the exam. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the research question, motivation for pursuing the research, and the research method design that will be used to answer the research question. The dissertation proposal must be successfully defended within four quarters of passing the comprehensive exam. Successful defense of the dissertation results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The composition of the dissertation proposal committee must comply with the standards specified by the University of Denver Doctoral Degree Requirements and Standards. The dissertation proposal defense is an oral closed exam. If a student successfully defends the dissertation proposal but subsequently switches advisor and hence topic, the dissertation defense must be repeated within one year to ensure capability of the student and feasibility of the project. Dissertation Defense After the dissertation has been completed, the student must defend it in a final oral exam, as specified by the University of Denver Doctoral Degree Requirements and Standards.

## Business Ethics & Legal Studies (LGST)

**LGST 3030 The Supreme Court & Your Life (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3330 Advanced Constitutional Law (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution applies to each case and how the case makes its way to the Court, (2) each case is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion resonate in the business world. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3400 White Collar & Corporate Crime (4 Credits)**

This course offers an essential overview of corporate and “white collar” crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.

**LGST 3440 The Supreme Court & Your Life: Constitutional Law, Ethics & Policy for the 21st Century (2 Credits)**

This course evaluates the most critical ways in which the United States Supreme Court interacts with and affects an individual's life, career, education, freedom, and future. Over ten weeks, we analyze how: (1) each major section of the Constitution and how it makes its way to the Court, (2) is ultimately interpreted by each of the nine current Justices, and (3) the subsequent repercussions of the opinion. The primary vehicles used for this task are actual Supreme Court cases, federal circuit court opinions, and legal briefs filed by the parties and interest groups on both sides of each dispute. Each of these documents is part of the public record and easy to locate. Because many students are likely to hear, believe, and/or resonate with only one side of each politically-charged divisive case heard by the Court (perhaps because they listen to only one news source or affiliate primarily with people of the same ideological bent), this class will emphasize the importance of seeing both sides of important public policy, legal, and ethical issues before taking a position. This is a valuable skill that is often neglected in college courses but will take a student far in life.

**LGST 3450 Impact of Driverless Mobility: Business, Legal & Ethical Implications (4 Credits)**

Smartphones and personal computers have changed the world and how we live in it. Now, Driverless Vehicles are poised to profoundly reshape our transportation systems, real estate development, access to goods and services, and our collective ecological footprint. In our “Impact of Driverless Mobility” course, we will consider many of the broad implications of this disruptive technology, including, but not limited to, the many legal, ethical and business considerations. Prerequisite: LGST 2000.

**LGST 3540 Impact of Driverless Mobility (4 Credits)**

Smartphones and personal computers have changed the world and how we live in it. Now, Driverless Vehicles are poised to profoundly reshape our transportation systems, real estate development, access to goods and services, and our collective ecological footprint. In our “Impact of Driverless Mobility” course, we will consider many of the broad implications of this disruptive technology, including, but not limited to, the many legal, ethical and business considerations. Prerequisite: LGST 2000.

**LGST 4198 E-Commerce Law and Ethics (4 Credits)**

The changes in technology and business over the past 20 years have been dramatic and far-reaching. Navigating the even more astonishing changes in the future requires some perspective on the developments of the recent past. How did we get to where we are? What technological, economic and political forces have generated the current state of e-commerce? How are these forces likely to change into the future? What are the basic features of e-commerce as it exists today?.

**LGST 4400 White Collar & Corporate Crime (4 Credits)**

This course offers an essential overview of corporate and “white collar” crime. Through the use of real-world case studies, legal and ethical analysis, criminological research and cultural reference materials such as iconic films and books, this course offers insight into the types, causes, and effects of crimes committed by businesses, corporate officers and directors, professionals and public officials. It will foster critical analysis of contemporary efforts to address recurring problems of corruption, bribery, fraud, insider trading, money laundering, collusion and more through the enactment of criminal statutes, international treaties, regulatory disclosure requirements, investigative methods, and litigation. Prerequisite: Undergraduates registering for this cross-listed course must complete LGST 2000. Graduate students are strongly advised to have successfully completed a course in business law.

**LGST 4550 Business Law for Accountants (4 Credits)**

This course provides students with a detailed review of the legal considerations in forming, operating, and dissolving the most common forms of business entities: partnerships, limited liability companies, and corporations. The rights, duties and liabilities of the managers, owners and accountants (internal and external) of these entities are extensively examined. The course also provides an overview of federal securities laws impacting these organizations. Prerequisite: ACTG 4620 or BUS 4620 or LGST 2000 (concurrent registration OK).

**LGST 4700 International Law (4 Credits)**

Offers both an introduction to public international law (the rights and duties of states and intergovernmental organizations [IGOs]) and to private international law (the rights and duties of individuals, businesses, and non-governmental organizations [NGOs] in their international affairs). Majority of course devoted to key international issues of business law and public policy such as alternative dispute resolution (ADR), privatization, intellectual property, international sales, the Foreign Corrupt Practices Act, trade (GATT and WTO), and the international facilities that deal with the adjudication and resolution of legal issues related to business.

**LGST 4701 Topics in Ethics & Legal Study (1-5 Credits)**

This course examines complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. At the heart of Great Leadership one finds a values base. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants gain a deep understanding of - and practical experience with - Values Based Leadership in today's world.

**LGST 4730 Values Based Leadership in Practice (4 Credits)**

The course examines the complexities, paradoxes, and dangers of leadership. The platform for the course is a Core Leadership Model (and logical deviations from it) which can result in Great Leadership. Through in-depth analysis of the key dimensions of the Core Model and its accompanying deviations, participants will gain a deep understanding of - and practical experience with - Values-Based Leadership in today's world.

**LGST 4740 Science & Mgmt. of Org. Ethics (4 Credits)**

This course examines our knowledge regarding ethical decision making and behavior in organizational contexts. The course also explores the implications of such knowledge for effectively creating and managing ethical organizations. The course will be conducted as a graduate seminar with students playing a central role in identifying topics, researching content areas, and deciding on course outcomes. We will examine conceptual and theoretical models of ethical behavior in organizations, research empirical studies, and develop managerial implications. The overarching goal is to increase knowledge and understanding so as to strengthen capacities to be ethical leaders and managers. Prerequisite: BUS 4100. Non-business students may take the course with permission.

**LGST 4760 CEOs and Corporate Governance (4 Credits)**

In the wake of the Sarbanes-Oxley and Dodd-Frank laws, corporate governance has become a compelling issue for business students and executives. Corporate board members and leaders of institutional investors share their insights concerning corporate governance from strategic, financial and legal perspectives. CEO/board dynamics are explored, along with leadership development and executive succession policies. The roles of major board committees, such as the audit, compensation, nominating, and legal compliance committees are given special emphasis. Board responsibilities in corporate crises and re-structuring are examined, along with the legal liabilities of executives, board members, and the corporation. Public policy pressures on corporate governance, including the roles played by the Securities and Exchange Commission and other regulatory bodies are discussed, along with the responses by business organizations, political interest groups, and self-regulatory bodies. Shareholder activism and litigation, along with pressures from other corporate stakeholders are also emphasized in the course. Examples of topics include corporate scandals, executive compensation, global corporate governance systems, and governance reforms. Students engage in a number of case analyses over the course of the quarter, produce a four-part case study, and discuss actual real world solutions with business leaders who have been involved in the issues. Cross-listed with ACTG 4760.

**LGST 4780 Leadership, Teams & Values (4 Credits)**

This course is designed for Daniel Scholars (who have completed the first quarter of their MBA program including Value Based Leadership) to provide both challenging intellectual discussion and physical engagement around the fundamental ethical dilemma of competition and/or cooperation. The venue for the course is Harbor Island, San Diego, California, and the adjacent waters of San Diego Bay and the Pacific Ocean. Both traditional classrooms and the untraditional learning environment of the off-shore sail boat provide the context of dynamic learning about values, teams and self. Prerequisite: BUS 4100.

**LGST 4790 Entrepreneur & Family Business-Organization, Governance Ethics & Leadership (4 Credits)**

This course covers the most current legal and ethical issues involving the creation of value, strengthening and growing family businesses through the process of best practices in business governance, coupled with ethical conduct and values based leadership, and legal compliance. Cross listed with LGST 3790. Prerequisite: BUS 4100.

**LGST 4960 Employment Law & Ethics (4 Credits)**

This course will introduce students to the key laws, rules and regulations governing employment in the United States. The course will explore workplace issues that arise because of the intersection of the hierarchical nature of organizations and the diversity of employees. As such, we will discuss workplace policies, practices and operations and their interactions with employment laws. This is an interactive course that will address issues such as: What is work? How do we value it? Who is an employee? What are the rights of employers? What are the rights of individuals in the workplace? What are some of the ethical issues faced by employers and employees, and how can both groups successfully navigate them? Graduate students will be assigned an independent study project focused on issues(s) faced by the Chief Human Resources Officer of an organization - a leader and strategic business partner in the organization.

**LGST 4980 Internship (1-5 Credits)**

**LGST 4991 Independent Study (1-10 Credits)**

**LGST 4995 Independent Research (1-10 Credits)**

## Faculty

**Corey Ciocchetti**, Professor, JD, Duke University

**Paula Anne Holt**, Teaching Professor, JD, University of Denver

**Bruce William Klaw**, Associate Professor and Department Chair, JD, Harvard University

**Libbi Levine Segev**, Teaching Associate Professor, JD, University of Denver

**Donald O. Mayer**, Professor of the Practice, JD, Duke University

**Tricia D. Olsen**, Professor and Associate Dean, PhD, University of Wisconsin-Madison

**Kevin O. O'Brien**, Associate Professor, JD, University of Denver

**John Holcomb**, Professor, Emeritus, JD, Georgetown University

**R. Hutton**, Professor, Emeritus, PhD, University of Florida

**Buie Seawell**, Professor, Emeritus, JD, University of Denver

## **Business Information&Analytics (INFO)**

### **INFO 4000 Foundations of Business (4 Credits)**

The Introduction to Business course is an introduction to provides an overview of the business arena, how a business operates, and the supporting functions that are needed in any business enterprise. Students will identify forms of ownership and the processes used in operations, marketing, accounting, finance, personnel, information technology and general management. Moreover, students will learn about social responsibility and business ethics in concurrence with the Daniels College legacy.

### **INFO 4100 Survey of Business Analytics (4 Credits)**

This course provides an overview of business analytics: how business data are collected, processed, and analyzed to support decision making. It will address both how to assess and use data that is readily available as well as how to start with corporate strategy and determine what data is needed, how to generate and process it. The course will also explore how corporate culture, ethics, and globalization can affect data management and analytic decision-making.

### **INFO 4120 Python Programming (4 Credits)**

Python is a popular general purpose programming language which is well suited to a wide range of problems. With the right set of add-ons, it is comparable to domain-specific languages such as R and MATLAB. Python is a scripting language. The following topics will be covered: Importing data, Reading and writing files, Cleaning and Managing Data, Merging and joining DataFrame objects, Plotting and Visualization, Statistical Analysis, Fitting data to probability distributions and Linear models. Packages: Pandas, NumPy, matplotlib, statsmodels, Scikit-learn, and IPython. Principal Content Elements: 1. Introduction to Programming Logic and Design Using Python 2. Data Management 3. Statistical Analysis 4. Advanced Data Management and Statistical Analysis Prerequisites: STAT 4610.

### **INFO 4140 Business Databases (4 Credits)**

This is an introductory database course which covers enterprise database design, modeling and implementation.

### **INFO 4200 Business Analytics Capstone Planning (2 Credits)**

This course prepares the student for the Capstone course by identifying a faculty advisor, company, data, and a business issue to be addressed in the Capstone course in the final quarter. (Must be taken two quarters prior to INFO4400, with the exception of off-cycle students, who will take it the quarter prior to INFO4400.) This course may be taken by MSBA students only.

### **INFO 4240 Data Warehousing (4 Credits)**

This course introduces students to the main components of a data warehouse for business intelligence applications. Students will learn how a data warehouse fits into the overall strategy of a complex enterprise, how to develop data models useful for business intelligence, and how to combine data from disparate sources into a single database that comprises the core of a data warehouse. Students will also explore how to define and specify useful management reports from warehouse data. Prerequisites: INFO 4100, INFO 4140.

### **INFO 4250 Business Data and Analytics (4 Credits)**

Businesses make decisions and improve processes using their own and external data with a variety of data-driven and analytic techniques. This course introduces students to the business data landscape, data management in commercial organizations, and the data-driven decision-making process. Students explore the fundamental concepts behind how data and analytics can improve business performance, using their individual roles and companies as subject matter. Principal Content Elements: 1. Data-driven decision making and performance improvement. 2. Data management in organizations. 3. Hands-on experience creating visualizations for data-driven insights. INFO 4250 requires a Windows Operating System. MAC users will have to virtualize their machines, or have access to a PC for async, live session and graded assignments. The software used in this course is Power BI and Visio Pro, which are Windows-only applications. Power BI is free, and the Department of Business Information and Analytics will provide a license for Visio Pro.

### **INFO 4260 Data Management Platforms (4 Credits)**

This course introduces students to the variety of data management platforms being used across the business landscape, and develops skills in using those platforms to manage data and perform analytics. These include Hadoop distributed file systems, Amazon Web Services, Microsoft Azure, and/or other locally-hosted and cloud-based services. Other topics, such as Apache Spark and High-Performance Computing may be introduced using University and College resources. Learning Outcomes: 1. Students will create portals to data management systems and will run instances of these systems from their local environments. 2. Students will create file systems and load data onto local and cloud-based systems, and will query and manage data within these systems. 3. Students will leverage existing software packages (system-sourced and user-installed) in order to perform analytic modeling on the data in these environments. 4. Students will articulate the advantages and disadvantages of the various data management systems, and assess their utility for a variety of business applications.

**INFO 4281 Project Management (2 Credits)**

"Cheaper, better, faster" is the mantra of modern business. Innovation, providing new products and services or using improved business processes, has become a prerequisite for businesses to thrive and flourish. Project Management is a discipline which supports innovation by examining how to facilitate one time events such as constructing a building, installing a software system, taking a product to market, reengineering a marketing process, or merging an acquired company. In this course, we examine the science, practice the art, and discuss the folklore of project management to enable students to contribute to and manage projects as well as to judge when to apply this discipline. Prerequisite: INFO 4100. Co-requisite: INFO 4200.

**INFO 4300 Predictive Analytics (4 Credits)**

This course is designed to prepare students for managerial data analysis and data mining, predictive modeling, model assessment and implementation using large data sets. The course addresses the how, when, why and where of data mining. The emphasis is on understanding the application of a wide range of modern techniques to specific decision-making situations, rather than on mastering the theoretical underpinnings of the techniques. The course covers methods that are aimed at prediction, forecasting, classification, clustering and association. Students gain hands-on experience in using computer software to mine business data sets. Prerequisite: STAT 4610.

**INFO 4340 Data Mining and Visualization (4 Credits)**

In this course, students create business intelligence tools such as balanced scorecards, data visualization and dashboards to inform business decisions. The course will focus on the identification of metrics, measures, and key performance indicators for a variety of business operations, and will introduce numerous analytic methodologies to support the decisions made with regard to these metrics. The focus will be on the advantages and disadvantages of various modeling methodologies and implementations moving towards performance improvement and business understanding. Prerequisite: STAT 4610.

**INFO 4360 Complex Data Analytics (4 Credits)**

This course addresses the rapidly-growing demands on businesses created by the prevalence of big and unstructured data. These include management of big data, big-data analytics, analysis of unstructured data (to include text mining), and management and analysis of real-time (streaming) data. The focus will be on enhancing business decision-making in the presence of big data, and on how to create the greatest ROI with large data sets.

**INFO 4381 Decision Processes (2 Credits)**

The competency we want to begin to develop in this course is the ability to make sound business decisions. A quick Google search can reassure you that there is no lack of information about how to make good decisions. And much of that information is confusing, if not downright contradictory. Since you will be making the decisions which impact your business and your career, you will need to decide what constitutes a good decision as well as a good decision process. In this course, we will explore some of the voluminous material available, use it to make decisions, practice with useful tools, identify traps and pitfalls, assess results, and extract guidelines for a decision process. Then we will iterate to update and refine the process.

**INFO 4390 Advanced Predictive Modeling with R (4 Credits)**

This course serves as an introduction to advanced predictive modeling and statistical learning using the R statistical software. Specific topics include linear, non-linear, and logistic regression, classification, resampling methods, and non-linear regression, tree-based methods, and support vector machines. The students will learn how to communicate their results (business reports, dashboards, etc.) of the various modeling exercises and projects using RStudio and the RMarkdown suite of tools. Enforced Prerequisites and Restrictions: INFO 4100 and INFO 4300.

**INFO 4400 Business Analytics Capstone (4 Credits)**

This course gives students an opportunity to apply the knowledge and skills learned in this program to a real-world problem submitted by a partner business. Students take a business problem from model construction and data collection through an analysis and presentation of results to recommendations for specific business decisions. Prerequisite: INFO 4200.

**INFO 4401 Business Analytics Fundamentals (4 Credits)**

Business Analytics is a broad term that describes the process of using data to make business decisions. Data driven business decisions are both critical in modern business and hard to produce with reliable outcomes. This course introduces students to decision-making using probability and other statistical techniques to support and validate the chosen decision. Students will practice hands on business analytics skills for making data driven business decisions.

**INFO 4590 Optimization (4 Credits)**

This course introduces students to the basic optimization modeling techniques and tools as practiced by business analysts to help their enterprises make better-informed decisions. Applications will include mix, selection, assignment, distribution, transportation, financial management, planning, scheduling, and management implementations in a variety of business settings. The course will focus on problem definitions, problem configuration, spreadsheet solutions, LP Software (LINGO) solutions, and interpreting and implementing results.

**INFO 4610 Business Statistics and Analytics (4 Credits)**

Making high quality business decisions is hard. Using data to make business decisions makes the process better. This course introduces students to a variety of techniques in analytics and statistics that facilitate data driven business decisions. Time will be spent identifying appropriate techniques to apply in various scenarios, applying in detail some of the quantitative techniques, and using analytic outputs to inform business decisions. Both technical skills and clear communication of results and decisions will be covered. Choosing proper techniques, technical work using Microsoft Excel, proper interpretation of results, and decision making are skills practiced in this course.

**INFO 4700 Topics in Business Analytics (0-10 Credits)**

Exploration of current trends and topics in business analytics. Prerequisite: INFO 4100.

**INFO 4830 Executive Education – Data Analytics for Decision Making (2 Credits)**

In this Executive Education workshop, students will explore how companies organize around data and analytics and how leaders use data to make decisions. Every organization has data, but not every organization knows how to leverage it. This course focuses on the process of analyzing data so that you can discover what problems data can solve and what successes data can make possible. The course will also provide a focus on analytic modeling, using regression analysis and optimization to develop familiarity and skills in the analytic process, and will culminate with an opportunity to explore the challenges that participants' organizations are facing around their data-driven decision processes. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4855 Executive Education – Data Visualization Using Power BI (2 Credits)**

A picture is worth a thousand words—or a thousand spreadsheets. In today's complex business world, where the amount of data is overwhelming, being able to create and communicate through compelling data visualizations is a must-have skill for all business professionals. For too long data has been trapped behind scripts, wizards and code. That can change! This Executive Education workshop is a deep dive into the world of data and data visualization. You will learn how to create, analyze and evaluate large data sets that will enable you to turn mountains of raw data into meaningful stories that inform decisions and drive change. This is a software-heavy class where you will have the opportunity to practice technical skills in Microsoft Power BI, a free software application that lets users visualize data. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4875 Executive Education – Strategic Advantage Using Data Analytics (2 Credits)**

In today's business world, labor, capital, raw materials, and data are all essential to an organization's strategy. Many leaders have well-developed strategies for the first three, but they lack the understanding and direction to tackle the fourth: data. This Executive Education workshop focuses on how to build and implement a data strategy to improve organizational performance. Data and analytics programs offer great potential value, and to be effective they must align strategically across the business to deliver a positive return on investment. By understanding and integrating the five main components of a data strategy – Program, People, Process, Platform and Data – you will be able to grow your business and accelerate progress toward your organization's goals. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**INFO 4991 Independent Study (1-10 Credits)**

## Chemistry (CHEM)

**CHEM 3110 Chemical Systems I (3 Credits)**

Advanced discussion of modern concepts of organic chemistry; bonding, stereochemistry, reaction mechanisms. Prerequisites: CHEM 2453 and equivalent of one year of physical chemistry.

**CHEM 3120 Chemical Systems II (3 Credits)**

Interpretation of trends in the chemistry of the elements in terms of orbital interactions. Most examples will be taken from the third row transition metals and the boron and carbon groups. Prerequisites: CHEM 2131, CHEM 3310 and CHEM 3110.

**CHEM 3130 Chemical Systems III (3 Credits)**

Advanced-level physical biochemistry course intended for advanced-level undergraduates and graduate students. Focuses on kinetic, thermodynamic and dynamic aspects of biopolymers; delineates the relationship of these properties to the mechanism and function of biological macromolecules. Prerequisites: CHEM 3811, CHEM 3812, CHEM 3813, CHEM 3610 or the equivalent.

**CHEM 3220 Advanced Analytical Chemistry (3 Credits)**

Principles of chemical instrumentation applied to analytical measurements; principles, instrumentation and applications of spectrometric and chromatographic measurements. Prerequisites: CHEM 3210 and CHEM 3621, or the equivalent.

**CHEM 3310 Structure and Energetics I (3 Credits)**

Fundamentals of quantum chemistry, and introduction to symmetry and molecular structure of small and large systems. Prerequisite: one year of physical chemistry.

**CHEM 3320 Structure and Energetics II (3 Credits)**

Computational methods in chemistry. Prerequisites: CHEM 3310, one year of physical chemistry.

**CHEM 3410 Atmospheric Chemistry (3 Credits)**

The concepts of equilibrium thermodynamics, kinetics, and photochemistry will be applied to understanding atmospheric processes. Covers urban air pollution in detail with focus on primary pollutants. Also covers stratospheric chemistry with focus on ozone chemistry and the chemistry of climate change. Prerequisites: (CHEM 2270 and CHEM 2453) OR CHEM 2240.

**CHEM 3411 Aquatic Chemistry (3 Credits)**

The circulation of the oceans and their chemical make-up. 'Classical water pollution problems' like biological oxygen demand and turbidity are discussed. Also presented: aquifer structure and flow, ground water chemistry, pollutant partitioning between stationary and mobile phases, heterogeneous surface chemistry, and the detection of trace contaminants. Prerequisites: (CHEM 2270 and CHEM 2453) or CHEM 2240.

**CHEM 3412 Environmental Chemistry & Toxicology (3 Credits)**

A survey of environmental toxicology concepts: animal testing, dose-response data, epidemiology, risk assessment. The course includes ecotoxicology, focusing on the alteration of biological and chemical systems beyond the simple response of an individual to an environmental chemical. Prerequisites: CHEM 2270 and CHEM 2453.

**CHEM 3413 Aerosol Science (3 Credits)**

CHEM 3413 is an introductory course that presents fundamental concepts associated with atmospheric aerosols in both natural and human environments. The course will focus on the sources, behavior, and effects of atmospheric aerosols, or particulate matter (PM) within the contexts of the natural environment and climate, human health, and industrial applications. The course will provide an overview of the chemical and physical characteristics of particulate matter and measurement methods, including chemical reactions that lead to aerosol formation and transformation. Examples and demonstrations will discuss applications to medical science, public health, clouds and climate, air pollution, colors in the sky, the built environment, mechanical engineering, chemical industry, and many other topics that stimulate curiosity. Aerosols affect almost every aspect of the environment and human health and are an important part of countless industrial processes or commercial products. The course is designed to provide a background to students interested in further study or careers broadly in (a) the environmental sciences, (b) medical or health sciences, or (c) many chemical or other scientific or engineering fields where aerosol processes are involved. CHEM 3413 will be taught at an upper-division (3000) level, but with enough flexibility to expect all environmental science, chemistry, biochemistry, biology, ecology, or engineering majors with the prerequisite year of chemistry to have fun and be able to learn effectively and succeed. The course is lecture-only; no lab is required, although demonstrations and hands on activities will be involved. The course fulfills requirements for the Environmental Chemistry B.S. major or minor, elective credit toward the Environmental Science B.S. or B.A. majors, and elective credit toward graduate programs in Chemistry. Prerequisite: CHEM 2240 or CHEM 2131.

**CHEM 3610 Physical Chemistry I (3 Credits)**

Fundamentals of thermodynamics, including phase and reaction equilibria, properties of solutions, and electrochemistry needed for advanced study in life sciences and for Physical Chemistry II and III. May be taken for graduate credit by nonchemistry majors. Prerequisites: CHEM 2453, calculus and physics.

**CHEM 3620 Physical Chemistry II (3 Credits)**

Fundamentals of quantum chemistry, including theories of atomic and molecular structure and spectroscopy. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3610.

**CHEM 3621 Physical Chemistry III (3 Credits)**

Fundamentals of kinetic theory and statistical mechanics. May be taken for graduate credit by nonchemistry majors. Prerequisite: CHEM 3620.

**CHEM 3703 Topics in Organic Chemistry (3 Credits)**

May include organic photochemistry, organic synthesis, organic electrochemistry or natural products. May be repeated for credit. Prerequisites: CHEM 3110 or equivalent and others depending on topic.

**CHEM 3705 Topics in Biochemistry (3,4 Credits)**

May include physical techniques for exploring biological structure, biological catalysis, and selected fields within biochemistry taught from original literature. May be repeated for credit. Prerequisites: CHEM 3831 and 3813.

**CHEM 3811 Biochemistry-Proteins (3 Credits)**

Protein structure and function, starting with the building blocks and forces that drive the formation of protein structure and the basic concepts of protein structure, and continuing with enzyme catalysis, kinetics, and regulation. Prerequisites: CHEM 2453 or instructor permission.

**CHEM 3812 Biochemistry-Membranes/Metabolism (3 Credits)**

Membranes and membrane mediated cellular processes, energy and signal transduction, and metabolic/biosynthetic pathways. Prerequisite: CHEM 3811 or CHEM 3831.

**CHEM 3813 Biochemistry-Nucleic Acids (3 Credits)**

Molecular processes underlying heredity, gene expression and gene regulation in prokaryotes and eukaryotes. Prerequisites: CHEM 2453 and CHEM 3811.

**CHEM 3831 Advanced Protein Biochemistry (3 Credits)**

This course provides fundamental insights into the chemistry and physics of proteins. It investigates how amino acids form proteins with highly complex three-dimensional structures and how these structures mediate function. We examine key research articles and their contribution to our current understanding of proteins. Topics range from protein folding to enzyme kinetics and emphasize basic principles. Prerequisites: CHEM 2453 and instructor permission.

**CHEM 3991 Independent Study (1-10 Credits)**

May be repeated for credit.

**CHEM 3995 Independent Research (1-10 Credits)**

Research project conducted under guidance of a faculty member. Credit hours and projects arranged on an individual basis. May be repeated for credit.

**CHEM 4900 Chemistry Seminar (0 Credits)**

A weekly presentations of research in progress and of current literature by outside speakers. faculty and graduate students.

**CHEM 4980 Internship-Graduate (0 Credits)**

The work will have a well-defined chemistry or biochemistry component that will enhance the student's understanding of the field and provide hands-on real-world experience.

**CHEM 4991 Independent Study (1-10 Credits)**

**CHEM 4995 Independent Research (1-10 Credits)**

**CHEM 5991 Independent Study (1-10 Credits)**

**CHEM 5995 Independent Research (1-10 Credits)**

## **Child, Family & School Psych (CFSP)**

**CFSP 3991 Independent Study (1-10 Credits)**

**CFSP 4301 Professional, Legal and Ethical Issues in School Psychology (4 Credits)**

This course examines professional, legal, and ethical issues pertinent to working with birth to age 21 populations in school and community settings. Attention is focused on federal and state education legislation, special and regular education case law, and psychological practice case law. Professional issues and contemporary service models are reviewed, including an introduction to ethical issues, federal mandates, professional training, and roles and responsibilities. Students engage in casework discussion regarding delivery of assessment, intervention, and consultation services. Special emphasis is given to current mental health and education regulations and reforms. Differential issues facing school psychology professionals in urban and rural settings are discussed, and students become acquainted with a variety of legal and ethical issues affecting practice in public schools, private settings, and higher education. Students learn about ethical standards, reasoning processes, and conduct in applied settings. Prerequisites: None.

**CFSP 4302 Special Education & Gifted Education Legal Issues (3 Credits)**

This course is designed to provide students with foundational knowledge regarding the legal issues affecting special education and gifted education in early childhood and K-12 educational settings. Attention is focused on federal and state education legislation, special education case law and gifted statutes specific to Colorado. Consideration also is given to the interaction of ethical standards of practice as they relate to legal mandates and court decisions to meet the educational and psychological needs of all students, especially those with disabilities and twice exceptionalities. Students will be exposed to legal issues affecting practice in the public schools community agencies and early childhood environments. Prerequisites: None.

**CFSP 4303 Psychopathology: Prevention, Diagnosis, Treatment (4 Credits)**

This course is designed to provide students with knowledge of mental health disorders, the diagnostic criteria as well as culturally-relevant prevention and intervention strategies. Participants obtain practical information regarding the assessment, identification, amelioration, facilitative responses, and intervention in school and community settings. Using a strengths-based approach, prevention principles, curriculum, and policy agendas are discussed. Additionally, this course explores implications for school psychologists and other school-based practitioners working with those at risk for or suffering from mental health disorders. Prerequisites: CFSP 4322, 4323, 4324, 4340, 4343.

**CFSP 4304 Diversity in School and Community Settings (3 Credits)**

This course explores diversity in children and families, and the impact of culture on personal and family development. Emphasis is placed on the intersection of school and community settings' cultures and those of children and families, and how this affects learning and development for individuals and groups of children. Attention is given to students' cultures and cultural experiences, and how these affect the work they do with children and families in school and community settings. Prerequisites: None.

**CFSP 4305 Exceptionalities in Education: High Incidence in Disabilities (3 Credits)**

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports also are addressed. Prerequisites: CFSP 4310, 4311, 4312.

**CFSP 4306 Exceptionalities in Special Ed (3 Credits)**

This course provides a broad survey of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with disabilities who have exceptional educational needs. Biomedical and psychosocial etiologies are reviewed. Implications for child and family interventions and supports are also addressed.

**CFSP 4308 Early Academic Competencies and Interventions (3 Credits)**

This course provides an overview of early language and literacy development across diverse settings and stakeholders, such as families, teachers/providers, programs, and communities. A comparative analysis of evidence-based early literacy strategies, environments, curriculum, and a review of current evaluation and instructional language and literacy practices for working with teachers, families, and young children are undertaken. Play-based and other informal methods of assessment and intervention are covered, including the integration of technology and strategies to promote early language and literacy with infants, toddlers and preschoolers in natural environments. Prerequisite: CFSP 4310; None for ECSE CERT Students.

**CFSP 4310 Early Childhood Development (3 Credits)**

This course focuses on early childhood development during, from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized. Prerequisites: None.



**CFSP 4311 Child and Adolescent Development (3 Credits)**

This course provides an overview of growth and development from age five through 21 years of age. We will explore theories and research in developmental psychology to provide a context for typical child development. Attention will be given to the social, emotional, cognitive, and biological development of the child, with a particular focus on attachment as a framework for healthy development in these domains. Case studies will allow for the application and integration of child development theory and counseling practice. Prerequisites: None.

**CFSP 4312 Learning Theories & Behavioral Analysis (3 Credits)**

This course examines learning theories and applied behavioral principles. Students learn to apply theories to case studies and fieldwork relating to children along the developmental spectrum and across cultural contexts. Students work to investigate and analyze concepts relating to learning and behavior at home and school, and to develop positive behavioral support and effective learning plans. Prerequisites: None.

**CFSP 4315 Professional, Leadership and Ethical Issues in Special Education: Birth to 21 (3 Credits)**

This course provides students with an understanding of the roles & responsibilities of an Early Childhood Special Education Specialist and Special Education Generalist. This course serves as the foundation for students who are interested in pursuing a profession in special education and working with children with disabilities from birth to 21 years. This course includes the ethical and professional practice standards and understanding of the multiple roles and complex situations across wide age and developmental ranges. This course also briefly covers the historical laws and legal issues associated with the profession. The course also highlights why special educators engage in professional activities and learning communities that benefit individuals with developmental disabilities and their families, colleagues, and their own professional growth. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Prerequisites: None.

**CFSP 4316 Infant through Adolescent Development (3 Credits)**

This course focuses on early childhood development from the prenatal period to approximately five years of age. Major theories of early childhood development and research methods for studying infant and early childhood behavior will be discussed. Emphasis will be on the physical, cognitive, communicative, social, and emotional aspects of development, for children who are typically developing, at risk or with special needs. All-inclusive issues, as well as health, risk and protective factors will be addressed. The importance of investing in early childhood programs, fostering nurturing relationships during the early years, and addressing the diverse needs of families will be emphasized.

**CFSP 4317 Topics in Special Education: Learning Differences (1-3 Credits)**

This course reviews the challenges that arise in special education settings related to children who exhibit academic and behavioral differences and delays. Academic and behavioral interventions and differentiation strategies will be addressed. Additionally, the course will cover the approaches for addressing children who require additional academic and behavioral support in the classroom. Prerequisites: None.

**CFSP 4318 Pharmacology of Addictive Behaviors I & II - Applications for schools (3 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors with a focus on adolescent development. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors with an emphasis on adolescent development.

**CFSP 4319 Counseling Adolescent Addictive Behaviors (3 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and non-chemical addictive behaviors in adolescents. Gain familiarity with major addiction treatment models and their underlying assumptions in order to generate comparative critiques. Examination of the major treatment approaches to substance abuse and their accompanying theories of etiology with a focus on adolescence. Explore meaning of addiction and abuse in relation to related non-substance use compulsive behaviors. Develop basic assessment skills to identify and differentiate substance abuse from other clinical disorders within the school environment. Develop an understanding of the interpersonal function of substance abuse and related addictive behaviors as well as an understanding of the skills and attitudes that underlie effective addiction treatment in adolescents.

**CFSP 4320 Early Childhood Assessment: Formal & Standardized (3 Credits)**

This course is designed to teach students how to assess young children (birth to 5 years) using a variety of formal and standardized methods. Assessment will focus on normed-referenced, standardized measures of cognitive, communication, emotional, social, sensory and physical motor development. Students will gain experience in administering assessments to young children, interpreting assessment results, writing assessment reports, and reporting the results to families and professionals. A variety of assessment tools will be studied for their appropriate use with young children and their families. Prerequisite: CFSP 4310.

**CFSP 4321 Psycho-educational Assessment I (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of cognitive functioning in children and adolescents. This course will include (a) review of historical and current theories of intelligence, (b) review of psychometric constructs relevant to the measurement of cognitive functioning, (c) practice in the administration and scoring of widely used measures of cognitive functioning, (d) practice in the interpretation of test scores, (e) practice in the preparation of written reports summarizing test results, (f) exploration of multicultural issues related to assessment, and (g) review of the clinical application of psychological testing in school and clinical settings. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting cognitive measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. Learning to administer and interpret cognitive assessments takes many hours of practice. Students should be aware of this and budget their time accordingly.

**CFSP 4322 Psycho-Educational Assessment II (3 Credits)**

This course is designed for graduate students in school psychology to advance their knowledge of, skills in, and attitudes toward the assessment of academic functioning in children and adolescents. The course is designed to train students in identification and assessment for academic difficulties. Recent paradigm shifts in general and special education, fueled by federal and state law, are calling for school personnel, particularly school psychologists, who have the knowledge, skills, and leadership competencies necessary to promote better academic assessment and intervention practices for all students. The role of school psychologists is expanding and diversifying. In an era that emphasizes universal prevention and swift early intervention at the first sign of difficulty (i.e., MTSS), school psychologists may be among the best educational professionals for preventing and intervening when children experience academic difficulties. The course is a combination of lecture and lab intended to provide broad and specific instruction on the procedures and techniques for administering, scoring, and interpreting achievement measures with children, adolescents, and adults. Student knowledge, skills, and attitudes will be formally assessed through performance on mock examinations, administration of psychological assessments, written reports, and group presentations. Students will find that a large amount of time outside of class is required to successfully complete this course. The readings and the practical work assignments required to master the techniques covered in this course are time-consuming and demanding. Students will be expected to learn the formal scoring systems used for each instrument and the theory underlying the use of these techniques. Learning to administer and interpret academic assessments takes many hours of practice. Students should budget their time accordingly.

**CFSP 4323 Psycho-Educational Assessment III (3 Credits)**

This course is the second of two required courses designed to provide students in School Psychology with expertise in individual intelligence and achievement test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive and achievement measures, with particular emphasis on the Woodcock Johnson Scales. Nontraditional forms of assessment, as well as adaptive behavior measures, are also covered. Integrating results of assessments with other data to provide effective educational recommendations continues to be an emphasis. The focus of the class is on the assessment of school-aged children. Lab fee required. Prerequisites: CFSP 4312, 4322.

**CFSP 4324 Psycho-educational Assessment IV (3 Credits)**

This course is designed to provide students with knowledge of the major approaches to assess a school-aged student's social and emotional status. Instruction includes underlying theories, use and interpretation of interviewing techniques, observation methods, objective behavior ratings, self-report measures, sociometric procedures and selected projective measures. Emphasis is placed on the integration and interpretation of multimethod, multisource and multisetting data to improve diagnostic accuracy, and the use of assessment results in developing effective intervention strategies. Students learn to incorporate such assessment information using case studies. In addition, students develop skills in writing case reports and in making effective presentations of social-emotional assessment results. Consideration is given to contemporary issues in the assessment of children's social emotional functioning. Lab fee required. Prerequisites: CFSP 4310, 4311, 4322, 4323.

**CFSP 4326 Early Childhood Assessment: Informal & Play-Based (3 Credits)**

This course is designed for students to learn informal and play-based assessment processes for young children (birth-6 years) using a variety of non-standardized, informal and play-based assessment methods. The entire assessment process, including screening, evaluation, interpreting results, writing an integrated report, and providing feedback to families and professionals, will be the focus. Assessment measures will be examined with consideration for when and why specific instruments should be used, in addition to the benefits and disadvantages of the instruments. Students will be trained in-depth in the administration and interpretation of a variety of instruments for assessment of the whole child including the cognitive, language, social-emotional, and sensorimotor developmental domains. Prerequisite: CFSP 4310.

**CFSP 4330 Family-School Partnering and Consultation (3 Credits)**

This course is designed to familiarize educational, mental health, and early childhood service providers with essential attitudes, approaches, and actions necessary to form successful family-school-community partnerships that can foster development and learning, especially for children with disabilities. Ecological, family systems, and family-centered theory and principles serve as the foundation for working collaboratively with families from diverse cultural and social backgrounds within school and community settings. Students gain skills in family interviewing; consultation to identify family strengths, needs, and resources; collaborative problem-solving; and multi-systemic learning. Evidence-based family involvement, education, and intervention strategies contribute to positive family-school partnering relationships are reviewed within a multi-tiered, school-based service delivery framework. Prerequisite: CFSP 4332; None for ECSE Students.

**CFSP 4331 School and Organizational Consultation I (3 Credits)**

This course is designed to acquaint students with current directions in school and organizational consultation. Key principles of successful system-wide prevention, intervention and evaluation are covered. The importance of maintaining an ecological perspective in organization consultation activities is stressed.

**CFSP 4332 School and Organizational Consultation II (3 Credits)**

This course builds on content covered in School and Organizational Consultation I. It is designed to acquaint students with current directions in classroom management and school-based consultation. Covered are issues related to consultant and consultee characteristics, consultation practices and processes, models and stages of consultation, facilitating desired outcomes in consultation, and evaluation of consultation outcomes. Special emphasis is also given to problems of classroom management and collaboration with parents, teachers and other educational and community personnel. Case analysis and practice are required.

**CFSP 4335 Infant & Family Interventions (3 Credits)**

This course will describe various models for intervention with infants and toddlers with disabilities, emphasizing intervention within natural environments. Working with children and families in home, childcare, and other community settings will be emphasized and contrasted with intervention in more clinical settings. Students learn how to consult with parents and community professionals in providing coordinated transdisciplinary services when working with children in home and community settings. All areas of development will be addressed. Field experiences with children and families are expected to practice the skills addressed in class. Families will be asked to share their experiences to enable students to gain the "human" side of theory and practice. Prerequisites: None.

**CFSP 4336 Preschool Interventions (3 Credits)**

This course covers early childhood interventions applicable within community, preschool and home environments. A hierarchy of intervention strategies is addressed including universal, targeted, and intensive approaches. There is a focus on building supportive networks, routine-based intervention strategies, and collaboration to enhance family resources. Students review empirically validated early interventions and curriculum for young children exhibiting both normal and delayed development. Prerequisite: CFSP 4310, 4312; None for ECSE CERT Students.

**CFSP 4337 School Age Academic Competencies and Interventions (3 Credits)**

The purpose of this course is to review current theories of learning disability and practices that can support the diverse learning needs of school-aged students with and without disabilities. An integrated response to intervention model will be reviewed to identify difficulties, delays, and disabilities in the domains of literacy (oral, writing, speaking, listening), mathematics, and self-regulation. Students will learn to: a) evaluate differentiated instructional environments and adaptations that can support learning; b) employ focused assessments to identify academic strengths and weaknesses; c) formulate instructional hypotheses and learning goals; and d) link assessment results to evidence-based intervention approaches or instructional strategies designed to address phonemic awareness, decoding/phonics, reading fluency, listening/reading comprehension, spelling, written expression, vocabulary, mathematical calculation, mathematical problem-solving, and study/organization/test-taking skills. Effective practices will be reviewed to reduce learning barriers and increase learning supports across school, home, and community settings. Students will collaborate on the development of instructional hypotheses and learning goals that respect cultural diversity and language differences and will develop plans to monitor instructional fidelity and students' progress over time. These goals are accomplished through critical readings, classroom discussion, homework assignments, demonstrations, modeling, video analysis, and practice with hypothetical and authentic cases referred for learning and academic issues. Prerequisite: CFSP 4312.

**CFSP 4338 Exceptionalities in Education: Low Incidence Disabilities (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low incidence disabilities such as blindness/visual impairment, deafness/hearing impairment, deaf blindness, traumatic brain injury, Fragile X syndrome, Fetal Alcohol Syndrome, traumatic brain injury, and syndromes associated with chromosomal deletions. Implications for assessment and intervention will be outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology will be addressed. Community experts on specific disabilities will be used as guest lecturers. Prerequisite: None.

**CFSP 4339 Introduction to Play Therapy (3 Credits)**

This course examines the history and theoretical bases of major theories of play to enhance children's social-emotional and adaptive functioning. Child-centered, interpretive, and structured play therapy models are reviewed. Information is covered regarding preparation, selection of materials and toys, playroom characteristics, facilitative responses, and how to adapt play therapy in school, home and clinical settings. The play therapy process is illustrated from the initial referral and contact through termination, including observing and responding during sessions, facilitation and interpretation, therapeutic limit setting, and group play therapy strategies. Case studies, role play, video and script analysis are incorporated as is brief play therapy and applications with special populations. Efficacy, evaluation and future areas for professional development are reviewed. This course is designed as an introductory experience to prepare students for further supervised practica in play therapy. Prerequisite: CFSP 4310.

**CFSP 4340 School Mental Health Counseling I (4 Credits)**

School Mental Health Counseling I is designed as a foundational introduction to major theories behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn developmentally informed and empirically driven individual and group counseling theory. Ethical guidelines are reviewed. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling II, a theoretical class that incorporates in-depth analysis of counseling theories to individual and group cases and a integrative approach to bridge the research to practice gap.

**CFSP 4341 School Mental Health Counseling II (4 Credits)**

School Mental Health Counseling II is designed as an introduction to discrete techniques behind contemporary, evidence-based school mental health counseling approaches for children and adolescents. Students will learn research-based counseling techniques and practical skills within a multi-tiered system of support. Consideration is given to integrative counseling approaches and differences between individual and group processes. These goals are accomplished through instruction and experiences that include examination of research, analysis and transcription of case studies, demonstrations, modeling, in-vivo practice, self-reflection and evaluative feedback. This course and its contents are a prerequisite to prepare students for School Mental Health Counseling III, an advanced class that incorporates in-depth analysis of applying counseling theories to individual and group cases, as well as supervised counseling experience.

**CFSP 4342 Crisis Intervention and Prevention (3 Credits)**

This course provides knowledge about crisis prevention and intervention theory and effective strategies for use in direct and indirect services for children and staff in schools and in practice with children. Emphasis is on application to child-centered and school-based crises such as bullying, child abuse, death, loss and grief, trauma, community and school-based violence, threats, and suicide. The course provides students with basic knowledge and skills for crisis intervention in school settings. Prerequisites: CFSP 4301, 4304, 4310, 4311, 4340, 4343.

**CFSP 4343 School Mental Health Counseling III (2 Credits)**

School Mental Health Counseling III is designed as an advanced counseling application class that incorporates supervised counseling experiences to improve interpersonal, emotional, and social functioning in young children to adolescents. Students learn to design, deliver, and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support.

**CFSP 4349 School Psychology Practicum I (2 Credits)**

Taken during the first year of entry, the Practica is a supervised initial year field experience designed to expose students to a variety of home-, community- and school-based settings that serve families with children who have developmental and special needs, and in the CFSP Clinic. Each week for up to four hours, students are expected to attend, observe, and participate in a range of site-specific team meetings and services offered to families and children. For the MA in Educational Psychology degree, students, during the fall or winter quarter, identify, develop and initiate a research project with input from the faculty. The MA project culminates during the fourth quarter (summer) and serves as the final project in lieu of a comprehensive exam. Prerequisites: CFSP 4301, 4304, 4349 - Must pass all prior quarters as listed in the handbook.

**CFSP 4351 School Psychology Practicum: Clinic Assignment (1-3 Credits)**

CFSP Clinic is a supervised field experience in the Morgridge College of Education's Counseling and Educational Services Clinic. Through all experiences, Clinic students will work with students and families within the zero to college age range. Casework may include: interview, assessment, data analysis, report writing for different audiences, diagnostics, data presentation, intervention, and consultation for a variety of psychoeducational and developmental concerns of children and families. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4351 - prior quarters.

**CFSP 4353 School Psychology Practicum II (2 Credits)**

This is a 500 hour supervised field experience taken after the successful completion of core courses and Practica I experience. Practica is considered a critical professional transition year to help consolidate learning and professional competencies in preparation for a subsequent Internship. Students work throughout the year with Clinic Faculty and a licensed Field Supervisor within the University of Denver psycho-educational clinic and infant, preschool, elementary, middle or high school settings and also attend weekly Practicum seminars or individual supervision sessions with a University Faculty member. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, continued professional development pertinent to the successful practice of School Psychology in urban and rural settings. Prerequisites: All prior first year courses as listed in the handbook, CFSP 4353 - prior quarters.

**CFSP 4354 School Psychology Advanced Practicum (1 Credit)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisite: PhD students only; Pass first year courses and CFSP 4353.

**CFSP 4355 School Psychology Internship - EdS (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4356 School Psychology Pre-Doctoral Internship (4-8 Credits)**

Meets 12-month internship requirement in school psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CFSP 4357 Early Childhood Practicum (1-4 Credits)**

This course provides students with a field experience in an Early Childhood environment for students who are interested in pursuing a profession in Early Childhood Special Education. Field Practicum in Early Childhood Special Education is an off-campus, 600-hour minimum supervised experience taken throughout your coursework. Field Practicum is designed to broaden one's professional skills and is considered a critical transition of substantial growth. Each student is required to successfully complete 3 practica; an infant/toddler, (Birth to 3 years) a preschool (3-5 years) and an early elementary focused (Kindergarten through 3rd grade). Practicum seminar is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practice. The field practicum is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students work with a licensed Field Supervisor. Students will be placed in infant, preschool, elementary school settings. During practicum, students provide direct and indirect services that support children and/or families in a variety of settings. All students attend weekly practicum seminars facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that special educators are lifelong learners and regularly reflect on and adjust their practice. Restricted to ECSE students only.

**CFSP 4359 School Psychology Pre-Doctoral Internship (1 Credit)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 1200 clock hours of supervised field experience across an academic year. The student will be closely supervised by a licensed school psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisite: Must have passed all other courses in degree plan.

**CFSP 4360 Doctoral Seminar in School Psychology (3 Credits)**

Current topics and/or controversies in the profession of Child, Family and School Psychology are addressed in an advanced seminar format. Topics vary by instructor and year and may address current issues in research, theory, policy development, and/or clinical practice.

**CFSP 4361 Supervision in School Psychology (2 Credits)**

This is a supervised field placement in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. Advanced Practicum may extend beyond one term. (Repeatable). Prerequisites: PhD Students only; CFSP 4351, 4353.

**CFSP 4363 School Psychology Program Development and Evaluation (3 Credits)**

This course focuses on theory and practice of program development and evaluation in school and community agency settings. Both qualitative and quantitative methods of program evaluation are discussed. Students have the opportunity to collaborate on a comprehensive evaluation of a specific educational, health, or mental health program. Prerequisites: RMS 4910, CFSP 4332.

**CFSP 4365 School Psychology Terminal Internship - EdS (1-8 Credits)**

Meets 9-24 month internship requirement in school psychology. Prerequisites: Completion of all Practica and Program Permission. Students can only enroll in this course if they're also enrolled in CFSP 4355.

**CFSP 4369 School Psychology Pre-Doctoral Terminal Internship (1-8 Credits)**

This course is designed to provide the student with their final supervised experience prior to graduation. The student will complete 2000 clock hours of supervised field experience across an academic year in public and/or private school, clinical, or community mental health settings or related child agency for the purpose of psychoeducational evaluation and concomitant consultation with service components in the area of school psychology. The student will be closely supervised by a licensed psychologist in the field based setting. The student will participate in all aspects of the role of a school psychologist including assessment of cognitive, social-emotional, academic, and behavioral traits of a student in need; consultation with teachers on interventions to meet student needs; presentation of information at case conferences; consultation with parents regarding ways to assist their children's learning; developing programs to address school-wide needs, including crisis intervention; and sharing of new ideas with educational staff. Prerequisites and Restrictions: Students must be enrolled in the CFSP doctoral program. They must have successfully completed Practicum I, Practicum II and Advanced Practicum. Additionally, they must have successfully passed comprehensive exams and dissertation proposal. All other students must obtain instructor permission. Corequisite: CFSP 4359.

**CFSP 4991 MA Independent Study (1-10 Credits)**

This course allows MA or EdS Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 4995 Independent Research (1-10 Credits)**

This course is for students whose program requires completion of a masters level thesis.

**CFSP 4999 Advanced Seminar in School Psychology (1-3 Credits)**

This course is designed as an advanced topical seminar in which students will focus on the professional literature and research relevant to important topics in the field of School Psychology. There will be analysis and discussion of these advanced topics with consideration of the implications for research and practice in School Psychology. Required meeting time and assignments would be commensurate with number of credits (Repeatable). Prerequisite: Instructor Permission.

**CFSP 5991 PhD Independent Study (1-10 Credits)**

This course allows PhD Child, Family, and School Psychology students to study a specific topic area in detail in conjunction with a cooperating faculty member.

**CFSP 5995 Independent Research (1-20 Credits)**

This course is for PhD Child, Family, and School Psychology students engaged in completing their doctoral dissertation. Advisor permission required.

## Clinical Psychology (CPSY)

**CPSY 4000 Issues in Forensic Psychology I (2 Credits)**

This course is designed to incubate a new professional identity as an early career graduate student in forensic psychology. From the development of an expanded professional network to the careful cultivation of a professional persona, this class supports the transition from armchair psychologist to graduate student. Our guests will cover factual information about the structure and function of the American legal and legislative systems, assessment technologies including polygraph testing and investigations and related content including substance misuse, human trafficking, victim rights, media representations and more.

**CPSY 4010 Introduction to Statistics (3 Credits)**

General statistical principles and techniques and their application to psychological and psycho-legal issues. Students will develop computer analytic skills to assist in answering professionally relevant questions.

**CPSY 4020 Psychopathology and Diagnosis (3 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

**CPSY 4021 Intro to Clinical Interviewing, Psychopathology & Diagnosis, and Applied Case Conceptualization (5 Credits)**

The practice of therapy is at once an art, and a science. The process of becoming a therapist is both a process of learning and of experiencing. This course provides an overview of foundational interviewing, case conceptualization, and psychotherapy theory and practice, along with a thorough grounding in psychopathology and diagnosis. Categorical classification will be explored using the DSM and ICD frameworks, with a focus on major diagnostic categories. Students will recognize the strengths and limitations of formal diagnosis as a tool in clinical practice, as well as the importance of dimensional case conceptualization and seeing the person behind the label. Emphasis will be placed on understanding mental wellbeing in context, taking into account cultural relevancy and the evolution of diagnoses over time. In this hybrid course format, students will be challenged to integrate diagnosis, case conceptualization, treatment planning, and intervention through didactic learning as well as experiential exercises within the classroom and through quarter-long, small group projects.

**CPSY 4031 Supervision & Consultation (1 Credit)**

This course is designed as an introduction to theory and practice of clinical supervision and consultation within forensic contexts. Fundamental issues will be examined, including: models of supervision and consultation roles, the supervision relationship, basics of consultation, the impact of personal factors on supervision and consultation, supervision and consultation techniques and practices, evaluation, and legal/ethical issues in supervision and consultation. Students will begin to develop competence to support their roles in future supervisory and consulting relationships.

**CPSY 4040 Issues in Forensic Psychology II: Human Sexuality & Gender-Based Violence (3 Credits)**

This course takes a historical and contemporary psychological view on a wide variety of sexual behaviors; examines theory and research on biological, developmental, cultural, and psychological aspects of human sexuality and sexual behaviors; reviews political and social issues involved in current sexual norms and practices; and covers current topics related to gender-based violence and sexual offending.

**CPSY 4050 Research Methods (3 Credits)**

Examination of the research process, including the formulation of questions and utilization of various methodologies to answer hypotheses.

**CPSY 4060 Biological Bases of Criminal Behavior: Adult Psychopathology (3 Credits)**

In this course, students will develop an understanding of the biopsychosocial vulnerabilities to crime. This course will emphasize biological models but also the psychological, social, and environmental causes and correlates of violent and criminal behavior. Violence and criminal behavior will be viewed as an evolving construct that may begin in childhood and endure through adolescence and into adulthood. Contemporary issues including terrorism, racial profiling, and gender debates will also be highlighted. Students will be provided with the tools necessary to determine future directions for policy, prevention, and treatment to address the causes and outcomes of crime and violence.

**CPSY 4070 Trauma & Crisis Intervention (3 Credits)**

This course is designed to provide students with an overview of the key issues associated with trauma and crisis intervention, including how to conceptualize trauma and different approaches to treatment. Additionally, the course will address forensic and other special issues associated with the field of trauma.

**CPSY 4080 Issues in Forensic Psychology III (3 Credits)**

The intersection of criminal justice and mental health usually occurs at a variety of publicly-funded systems: police, jail, state mental health, probation, and others. How do these systems and agencies work, and how effectively do they handle persons with both criminogenic and mental health needs? This course will survey each component of the public forensic mental health system, paying particular attention to innovative programs that work and to potential employment settings for our graduates.

**CPSY 4081 Overview of Personality & Self-Report Assessment (2 Credits)**

The purpose of this course is to provide a foundation for approaching objective personality assessment in forensic practice. It will cover the underpinnings of objective assessment. It will also provide a broad survey of self-report measures, including the Minnesota Multiphasic Personality Inventory (MMPI#2), the most widely used personality inventory in the United States, the MMPI#A (adolescent version), the MMPI#2#RF, and other commonly-used instruments. Emphasis will be placed on understanding evidence-based, effective, and ethical objective personality assessment across various forensic contexts and populations.

**CPSY 4090 Issues in Measurement (3 Credits)**

Critical assessment of various psychological tests, with an emphasis on validity, reliability and issues of standardization.

**CPSY 4100 Mental Health Law (3 Credits)**

The goal of this introductory Mental Health Law course is to provide students with a general understanding of the laws impacting the field of mental health, including those involving professional responsibility and ethics; competency issues; court-ordered evaluations and testimony; family law issues; the rights of differently-abled and historically marginalized persons; and defenses based on mental state. Course Objectives include assisting students in locating and understanding how relevant statutes and cases may apply to the mental health practitioner; recognizing potential legal and ethical dilemmas and when to seek consultation; and applying the principles of mental health law to offer the highest standard of care in their clinical practices.

**CPSY 4105 Psychology, Public Policy, and Advocacy (2 Credits)**

This course is designed to provide students in clinical training with an overview of the political advocacy process in the United States, its potential impact on the practice of mental health, current issues in mental health policy, and opportunities for involvement in public policy, advocacy, and social justice discourse.

**CPSY 4106 Introduction to Animal Abuse Evaluation and Intervention (2 Credits)**

This graduate-level course will introduce the student to the concepts of animal abuse at the individual, clinical, and societal levels. The course covers animal welfare and cruelty issues; the assessment of abused animals; the populations (individuals and groups of all ages) and settings where animal abuse is most prevalent; the evaluation, sentencing, and treatment of perpetrators of violence toward animals; and the link between cruelty to animals and humans. Students will have the opportunity to tailor some assignments to their specific interest areas. The instructor will invite guest lecturers, such as judges and probation officers, with expertise in topics such as sentencing, misdemeanors vs. felonies related to animal abuse, etc.

**CPSY 4108 Special Topics in Forensic Psychology (1-2 Credits)**

This course is designed to address specialized topics in forensic psychology that are not adequately covered in existing required and elective courses. Topics are likely to center on professional development, such as professional identity, presentation, and communication. Topics may also be more specialized, depending on the expertise and availability of potential instructors or special topics of interest within MAFP. In the past, courses have been offered on police psychology and violence risk assessment, as well as the application of forensic investigative principles to cold case review. Additional topics might include psychology and race, immigration and refugee populations, neuropsychology in corrections, juvenile justice issues, outpatient competency restoration, and other topics at the discretion of MAFP faculty.

**CPSY 4110 Family Systems and Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory. Students will have an overview of historical and contemporary approaches to family therapy, including Bowenian, Structural, Strategic, Experiential, Psychoanalytic, and Multicultural. Students will practice rethinking interpersonal conflicts and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4112 Neuropsychological Screening (2 Credits)**

This course is designed for students who are interested in adding cognitive screening or brief neuropsychological screening tests to their practice. The course will briefly review the incidence of traumatic brain injury in criminal justice and the differences between comprehensive neuropsychological assessment batteries, brief neuropsychological screening batteries, and cognitive screening tests. The indications and the benefits of each test will be covered and students will learn test interpretation and report writing for a brief neuropsychological screening battery.

**CPSY 4113 Program Evaluation and Grant Writing (3 Credits)**

Those working with the criminal justice system, like other professionals in human services fields, need to provide effective programs and services that are suited to clients and their context. This course introduces students to evaluation and provides an overview of how forensic psychologists can use this discipline to benefit their clients, practice, and programs. The course will explore evaluation's relationship to research, evaluation theories and typologies, and the many evaluation approaches that have evolved, with a focus on evaluation in human service organizations. We also will discuss recommendations for finding applicable grants, crafting a successful grant application using evaluation results and tools such as logic models, fulfilling grant-mandated requirements, and using evaluation results to complete grant reports and improve programs.

**CPSY 4120 Psychology of Performing Arts (3 Credits)**

Students gain an understanding of the psychological factors involved in the performing arts, including theatre, acting, dancing, music, and circus arts. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4130 Organizational Leadership: Center for Performance Excellence (3 Credits)**

This course is designed to familiarize CPEX Officers with approaches to effective leadership while engaging in leadership roles within the Center for Performance Excellence (CPEX). Students are exposed to successful leadership strategies from the business world and have the opportunity to implement these strategies into their roles as leaders within CPEX. This course is intended for CPEX Officers only.

**CPSY 4150 Psychology of Performance in Business (3 Credits)**

Students gain an understanding of the psychological factors involved in the business world. Factors are examined at the individual, team, and organizational level. Students learn about appropriate psychological interventions for these populations to enhance performance. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4160 Psychology of High Risk Occupations (3 Credits)**

In this course, students gain an understanding of the psychological factors involved in high risk occupations. High risk occupations include individuals whose profession directly involves saving lives or placing their own life at risk. Students learn about appropriate psychological interventions for these populations to enhance performance and resilience in the high stress situations required by their jobs. The course format includes lecture, discussion, guest speakers, case studies, and role plays.

**CPSY 4200 Practicum I: Professional Orientation (2 Credits)**

In this first quarter, of a three quarter practicum series, we will discuss issues that have bearing on your work with forensic populations, the central features of which include adapting to the culture of professional psychology by exploring relationships and by engaging in conflict resolution. By the end of the quarter, you will be well versed in the ethical guidelines, standards, and dilemmas facing you as forensic trainees. Also, you will be knowledgeable about issues related to stress and burnout in this field, including topics such as suicide and physical assault risks, and working within a system. Importantly, you will develop the skills needed to best utilize feedback and provide constructive feedback to others.

**CPSY 4210 Practicum II: Introduction to Multicultural Issues (3 Credits)**

In this quarter, we will continue our discussion of the interface between psychology and the law. Emphasis will be on cultural/diversity issues that impact our clinical and forensic practice. By the end of this quarter you should be familiar with terms such as cultural competency, cultural humility, and diversity and be able to integrate these into your theoretical framework as well as apply the concepts to your forensic work.

**CPSY 4220 Practicum III: Lifestyle Development (3 Credits)**

This course examines professional development through the lens of the foundational and functional competencies of the MAFP program. Students will explore their professional and clinical growth through self-reflective practice, as well as considering their own present and future professional identity. The course will continue discussion of the interface between psychology and the law and career paths within forensic psychology. Students will continue to focus on increasing clinical skills, with a particular focus on consultation skills, case conceptualization, and report-writing skills through vignettes and discussing issues related to their field placement sites. Didactic emphasis will be on forensic assessment, such that by the end of the quarter students will have been exposed to a variety of forensic assessment techniques and instruments and have an increased understanding of the role of psychological assessment in forensic contexts.

**CPSY 4230 Practicum IV: Theories of Personality Diagnosis (3 Credits)**

This class explores diagnosis beyond organizing external symptoms to a consideration of internal processes, where the internal processes are themselves framed by clinical theories of personality. These include systems theory, performance theory, behaviorism, cognitive-behavior theory, and psychoanalysis. The class also covers the currently dominant research-based theory, the five-factor model, emphasizing its relevance to diagnosis.

**CPSY 4240 Practicum V: Theories of Counseling and Behavioral Health Approaches (2 Credits)**

The majority of class will be spent discussing real cases from your current practicum sites. Discussions will be rooted in psychological theory and orientations, covering both theory and specific therapeutic techniques. Case discussion will be positive, constructive, and ethical. Also, the course will explore specific topics related to clinical work or life after MAFP, including a focused exercise on examining your thoughts and feelings regarding life as an early career professional.

**CPSY 4250 Practicum VI: Professional Identity and Career Development (3 Credits)**

This course is designed to be the capstone experience of the forensic training program, allowing students an opportunity to reflect on and synthesize their developmental path toward early career professional. Course goals include enhancing understanding of theory and practice in the field of psychology and, specifically, the forensic arena; applying knowledge gained throughout the course of the program to practical clinical situations, ethical dilemmas, and "real world" dynamics; understanding the importance of professionalism, collaboration, and integrity in the pursuit of a career in this field; and integrating clinical and didactic experiences during the course of training.

**CPSY 4260 Psychophysiology and Biofeedback Lab (2 Credits)**

This course is designed to be both an introduction to psychophysiology and biofeedback and to its applications, particularly to sport and performance. The principles of psychophysiology, the biofeedback instruments used, the areas of application, the techniques commonly used in conjunction with biofeedback, the diverse field of biofeedback and applied psychophysiology, and the latest uses for optimal self-regulation are covered. The course involves use of biofeedback instrumentation as well as classroom participation and readings and a self-regulation project.

**CPSY 4300 Evaluation and Treatment of Juveniles (3 Credits)**

This course examines the history and philosophy of the American juvenile justice system and the impact of present interventions and societal reforms on the juvenile system. The course provides an overview of the legal framework in which the juvenile justice system operates will highlight the differences in adult and juvenile law.

**CPSY 4310 Ethical and Legal Issues (3 Credits)**

Grounded in the American Psychological Association (APA) Ethical Standards, the American Counseling Association (ACA) Ethics Code, and the APA Specialty Guidelines for Forensic Psychology, this course is designed to examine the ethical principles of psychology and the ethical dilemmas faced by mental health professionals in forensic practice. This course will help provide a solid foundation for learning how to categorize ethical problems, understanding the principles and standards that apply to various situations/ethical problems, and developing a decision-making structure for handling ethical dilemmas.

**CPSY 4323 Issues in Measurement & Cognitive Assessment (3 Credits)**

In this course, students will apply their critical thinking and analytical skills to psychological and forensic assessment, with an emphasis on validity, reliability and issues of standardization. Lectures will cover the historical bases of assessment and measure design and will also highlight contemporary approaches to testing. The course will provide exposure to recent social criticisms and ethical concerns surrounding psychological testing. Students will also learn to administer, score, and interpret the WAIS. Students will have exposure to other assessment measures (WISC, WIAT, WRAT) and approaches to diagnosis cognitive and learning disabilities. Students will understand diagnostic validity, how to identify interpretive material, and how to think ideographically about nomothetic data. Through discussions of legal cases, students learn numerous forensic issues to which cognitive assessment is applicable, including competence to waive Miranda rights, and ability to enter a contract. Corequisite: CPSY 4323.

**CPSY 4324 Issues in Measurement & Cognitive Assessment Lab Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to learn about the administration of and issues related to intelligence testing. Students learn to administer, score, and interpret the WAIS and have exposure to other intelligence and achievement test instruments. The course is required, in conjunction with Issues in Measurement & Cognitive Assessment CPSY 4323, and will primarily consist of weekly lab meetings.



**CPSY 4330 Cognitive Behavioral Theory and Interventions (3 Credits)**

Considered the “gold standard” of treatment in many forensic contexts, Cognitive Behavioral Therapy (CBT) covers a broad skill set applicable in a variety of treatment settings. This course addresses the principal theories, techniques, and research relating to CBT, focusing on assessment, case conceptualization and intervention approaches within a forensic setting. An emphasis is on understanding CBT theory, applying the theory to cases, and utilizing the techniques with a variety of problems-in-living.

**CPSY 4335 Introduction to Trial Consulting (3 Credits)**

The art of trial consulting is the skill to meld multiple theories, methodologies, and concepts into a working and research-based strategy. This skill is very reminiscent to the art and practice of therapy. As with any practice, be it law, psychology or trial consulting, a solid base is necessary. This course is an introduction into the theory and application of trial consulting techniques in the criminal and civil arena. This overview addresses the key elements in the trial consulting including and introduction into the psycho-legal perspective, the application of research methodologies utilized by trial consultants, and specific interdisciplinary topics within trial consulting. These specific topics include concepts like the theory of persuasion, jury selection, expert testimony, and neuropsychology.

**CPSY 4340 Psychopathology, Evaluation & Treatment of the Adult Offender (3 Credits)**

Psychological theories related to etiology, development and prediction of crime and criminogenic potential. We will review foundational models of criminology, focusing on both risk-need-responsivity as well as strengths-based models. The course is a service learning course in which active practice with assessment tools, motivational interviewing, and feedback is expected.

**CPSY 4350 Sociocultural Issues in Forensic Psychology (3 Credits)**

To the practice of forensic psychology, each of us brings our individual experiences, beliefs, and views on life. We bring our highest selves: our passion, our hard work, our integrity, and our most noble dreams. We also, invariably, bring our worst selves: our “blind spots,” anxieties, misconceptions, and prejudice. As practitioners in a field trusted to explore the limits of human potential and human frailty, we recognize that the costs of ignorance in the arena of cultural awareness are unacceptably high. Rarely, however, do we have the opportunity to take a step back and explore the dynamics of privilege and oppression within society, within our profession, and within ourselves. The goal of this course is to begin the process of reflection and grow in our ability to tolerate ambiguity around issues of profound importance to our clinical practices and personal lives; to question preexisting understandings about how life “is” or “is not”; and to consider with humility, respect, and an open mind perspectives different from our own.

**CPSY 4370 Substance Abuse (3 Credits)**

The objectives of this course are to provide an introduction to the assessment, diagnosis, and treatment of substance abuse and related disorders; to become familiar with the dynamics and etiology of substance abuse; to identify psychometric tools used in the evaluation of substance abuse; to develop working knowledge of the resultant psychological and physiological effects of different substances; and to review evidence-based treatment methods and their application to populations. This course is framed in terms of exploring the different models and therapeutic approaches for understanding substance abuse and misuse.

**CPSY 4380 Group Interventions (3 Credits)**

Interpersonal dynamics of small groups and larger organizational settings; understanding of group processes (such as group formulations and development, group conflict, and group resistance); skills enabling positive group intervention.

**CPSY 4400 Projective Assessment and Report Writing (2 Credits)**

This class covers idiographic (versus nomothetic) assessment techniques that understand responses in functional relation to their occasioning environments, emphasizing clinical interviewing, early memories, and the Thematic Apperception Test. These are integrated with nomothetic test results to understand referral questions. The class also covers assessment report writing.

**CPSY 4410 Criminal Evaluations (2 Credits)**

This course will provide an overview of criminal assessment topics, with an emphasis on the literature, theory, procedure, and tools, including legal competencies, criminal responsibility, violence risk, and malingering.

**CPSY 4420 Research in Forensic Psychology: Independent Study (1 Credit)**

This is a 1-credit course for students in the MAFP program to complete research either by joining faculty research projects or pursuing their own research project. The course is an independent study and will primarily consist of weekly mentorship by a research advisor.

**CPSY 4430 Career Counseling (3 Credits)**

This course is designed to teach the theoretical framework of career counseling, and introduce the basic counseling tools used in the career counseling process. The course presents major theories of career development, introduce sources of occupational information, and introduce principles of assessment in career counseling. The impact of diversity and difference on career development and choices, as well as the career counseling process, is also explored. Topics include: the role of interests, skills, values and personality in the career development process; social, cultural and family influences on the career development process; and career development across the lifespan.

**CPSY 4500 Foundations: Trauma and Global Psychology (2 Credits)**

This course is designed to introduce students to core concepts in the fields of trauma psychology & global mental health including: mental health and psychosocial consequences of disaster, cultural considerations in diagnosis and treatment, best practice intervention frameworks and associated guidelines, and basic principles and ethical issues in the delivery of mental health related humanitarian assistance. Through integration of perspectives from various disciplines (e.g. clinical and social psychology, public health, medical anthropology, humanitarian studies), and with a focus on current challenges and opportunities in the relatively new field of Trauma Psychology & Global Mental Health, students will become familiar with mental health and psychosocial issues in international complex emergencies, including possible international career paths for MA psychology graduates.

**CPSY 4501 Psychotherapeutic Models of Intervention (3 Credits)**

Major psychological models of intervention are the focus of this course. The major theoretical models of personality development, psychopathology and theories of intervention are explored including psychodynamic, family systems, behaviorism, cognitive-behavioral approaches and others.

**CPSY 4503 Clinical Interviewing (3 Credits)**

Theoretical and practical issues related to clinical interviewing in international and national disaster settings.

**CPSY 4505 Multiculturalism and Diversity (3 Credits)**

This course continues introducing students to the central concepts of multicultural counseling competencies and multicultural consciousness. The three aspects of cultural competency are addressed in this course: awareness, knowledge, and skills (Sue & Sue, 2016). Additionally, we will examine a range of diverse populations by race, ethnicity, gender, sexual orientation, and physical differences is included in order to examine the cultural context of accurate assessment and appropriate interventions in counseling diverse clients. Students will examine the role, function, and effects of oppression in society as it relates to social, economic, and environmental justice. Assumptions underlying theory and research methodologies from which basic constructs of human behavior are drawn will be examined to understand how power and other dynamics manage and sustain oppression at the individual and institutional levels. Students will learn about the importance of examining power and privilege in the counseling space and/or creating space for each other to explore their own cultures and the biases and internalized messages about those who are different from themselves.

**CPSY 4509 Global Mental Health Systems (3 Credits)**

This course will focus on the dynamics of mental health systems in developing countries.

**CPSY 4510 Intercultural Practice and Development (2 Credits)**

This course is designed to prepare students for work with a variety of vulnerable populations in cross-cultural settings. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4512 Disaster Mental Health (3 Credits)**

This course will explore disaster response systems and their mental health components.

**CPSY 4515 Ethics (3 Credits)**

The course is designed to educate students about the ethical guidelines in psychology applicable to the field of IDP. Students will learn the APA Ethics Code as well as other more specialized ethics guidelines applicable to the field of IDP. Students will be expected to identify, address and resolve potential ethical conflicts. Potential future trends in the development of ethics in the area of IDP will be addressed.

**CPSY 4530 Program Evaluation (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs. Organization evaluation of international organizations will be discussed. Psychosocial interventions will be highlighted.

**CPSY 4535 Practicum: Professional Identity and Practice (2 Credits)**

This academic and practicum course in professional identity and practice focuses on introducing students to professional practice of psychology. The focus of this seminar is on developing a professional identity as a clinician and understanding the use of supervision. Various topics will be emphasized in this course that include professional issues, career development and ethical and legal issues. Self-reflective practice will be emphasized and encouraged.

**CPSY 4536 Practicum: Working With Diverse Populations (2 Credits)**

The academic and practicum course focuses on working with diverse populations globally. Students will reflect on the aspects of their identities and those of their client and how they influence psychotherapy. Cultural considerations will be considered in the areas of interviewing, case conceptualization, development of treatment goals and clinical practice generally. Topics related to cultural humility, intersectionality and identity, stigma and oppression, use of interpretation and various transnational populations will be emphasized.

**CPSY 4537 Practicum: Interview, Assessment and Diagnosis (2 Credits)**

The focus of this course is academic and practicum experiences related to interviewing, assessment, and diagnosis in practice. Guest speakers, readings, and panels will focus on special considerations for clinical interviewing and assessment with immigrant, refugee, and marginalized populations in the United States.

**CPSY 4538 Practicum: Life-span Considerations in Practice (2 Credits)**

This academic and practicum course in Life-span Considerations in Practice considers various life-span issues of importance when working with individuals and their families in practice. Important experiences of childhood, adolescence, early adulthood, adulthood and late adulthood and their relevance to and presentation in psychotherapy are considered.

**CPSY 4539 Practicum: Evidenced Based Practices in Psychology and Counseling (2 Credits)**

The purpose of this practicum is to provide opportunities for didactic and experiential learning in evidence-based practice in psychology, and integrated mental health (IMH). This practicum will also serve as group supervision of clinical work being conducted in the TDRC. Practicum is a quarterly required course in the MAIDP program. It is on a two-year cycle focusing on developing therapeutic clinical skills. Practicum work in field-placement sites in the Denver community as well as supervision of cases in the Trauma and Disaster Recovery Clinic occur in this practicum.

**CPSY 4540 Practicum: Biopsychosocial Systems in Practice (2 Credits)**

This academic and practicum course in Biopsychosocial Systems in Practice considers ways in which cultural, political, environmental, social, physical and developmental factors influence human experience including mental health. The practicum explores how these multi-systemic and interacting factors come to bear on clients' experiences and presentations and how this informs our work.

**CPSY 4542 Psychophysiology (3 Credits)**

This course is designed to expose students to the field of physiology and highlight its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g. substance abuse, mental illness, and biological rhythms).

**CPSY 4544 Psychological Assessment in Multicultural Contexts (3 Credits)**

This course focuses on the building blocks of psychological assessment and interviewing across cultural contexts, with a focus on identifying culturally valid and therapeutically useful assessment techniques. This course focuses on assessment techniques useful for rapport building, case formulation and treatment planning, risk assessment, and diagnostic evaluation. Methods for summarizing and communicating assessment results with allied professionals and providing assessment feedback to clients and families will also be reviewed. Special emphasis will be placed on developing skills necessary for immigration evaluations, such as asylum, hardship, VAWA, and U-Visa evaluations. Throughout the course, principles of multicultural assessment will be combined with key lessons from therapeutic assessment so that students develop a keen understanding of how assessment can be empowering to clients and families on an individual level, and can further principles of social justice on an ideological level.

**CPSY 4545 Lifespan Development and the Cultural Context (3 Credits)**

This course is designed to examine the various stages of human development, with a special focus on the influence of culture. Students will become familiar with normative developmental processes, methods of studying development, and various theoretical foundations of developmental science. Through the use of lecture, readings, class discussion, and observation, students will be challenged to consider their own development and think critically about the development of others. Students will apply basic information about development to current issues in the field and consider the influence of cultural context on relevant areas of development across the lifespan.

**CPSY 4550 Seminar: Therapeutic Interventions (3 Credits)**

Small group seminar is a small group class designed to provide students a discussion forum to share and integrate their experiences in the IDP Master's Program. Students are expected to address and share their field placement experiences with other students in their seminar. The seminar will also provide instruction on the implementation of theory in IDP to practice in multiple settings. Faculty will provide supervision for the students' field placements.

**CPSY 4556 Trauma Interventions from Cross-cultural Perspectives (3 Credits)**

This course, taught by a different visiting professor each year, will take an in-depth look at trauma and the development of mental health systems and interventions internationally.

**CPSY 4562 Public Policy and Advocacy (2 Credits)**

This course focuses on mental health policy and advocacy in the United States and in countries around the world. Students will learn about the World Health Organization policies on mental health and substance abuse and issues of mental-health stigma globally.

**CPSY 4563 Family Therapy (3 Credits)**

This course examines various approaches to family systems, including an overview of systems theory, plus ideas that have been labelled structural, strategic, and Bowenian. Goffman's performance theory will also be emphasized, especially as it applies to clinical work. Students will practice rethinking interpersonal conflicts, and they will develop increased awareness of their own families and their roles in them. Students will also apply systemic ideas to their own required therapies.

**CPSY 4564 Advanced Spanish Language for Clinical Practice (2 Credits)**

The purpose of this course is to help students with intermediate to advanced competency in Spanish to develop their clinical linguistic skills in order to better meet the mental health needs of the Latinx population in the United States, and, in the case of those doing international work, in Latin America. Students will be required to take a Spanish proficiency exam, prior to taking the course. The course will focus on developing Spanish abilities in the following areas: 1) building rapport and demonstrating basic helping skills, 2) explaining the purpose and process of therapy/evaluation, 3) conducting diagnostic interviews and intakes, 4) providing psychoeducation about different diagnoses and mental health problems, 5) conducting crisis assessments, and 6) providing skills-based treatments.

**CPSY 4567 Culture Lab: Cultural Humility & Global Mental Health Internship Preparation (1 Credit)**

This course is designed to prepare IDP students for work with a variety of organizations and vulnerable populations in cross-cultural settings, both in-person and virtually. Specifically, this course will prepare students for an 8-week international mental health/psychosocial summer internship in countries with a history of acute, chronic, and/or cyclical human-made and natural disasters (although most are now in a stabilization, reconstruction, and/or development phase). Through a blended composition of instruction, self-reflective exercises, case studies, course readings, lectures, and guest speakers, and integrating perspectives from social psychology, cross-cultural psychology, and medical anthropology, students are expected to identify and reflect on personal expectations heading into internship. In addition, this course is designed to provide students with the skills necessary to anticipate and problem-solve cross-cultural challenges, including potential value conflicts and miscommunication that may arise while in the field.

**CPSY 4570 Crisis Intervention & Suicide Prevention (3 Credits)**

Mental Health professionals are frequently called upon to intervene in various crisis situations, either at the point of crisis event or in the aftermath. The course includes an emphasis on both domestic and global frameworks and is designed to provide a stimulating environment in which students critically examine theoretical models, recent research, good practice standards, and contemporary debates regarding crisis and suicide intervention strategies. This course teaches a model and techniques for assessment, initial intervention and follow-up with individuals in high stress situations requiring immediate crisis intervention (both domestically and globally). Additional topics include: assessment and intervention in cases of risk of harm to self, non-suicidal self-injury (NSSI) violence in the schools, severe and persistent mental illness (SPMI), working with chronically suicidal clients, the emerging field of Critical Suicidology, M-1 Holds, suicide terrorism and other forensic issues and public health and prevention models. The class will explore ethical issues surrounding intervening in crisis situations. We will also attend to how issues of marginalization and oppression, as well as strengths and resiliency factors, affect crisis intervention with people of color, LGBTQIA+ individuals, indigenous communities, women and others who experience social, economic and political disenfranchisement. Designed to assist students in developing critical thinking skills, necessary for crisis intervention related assessment, program design, implementation, and evaluation this class features case studies and mock risk assessments so that students feel ready to conduct these skills in the real world. At the end of this course students should have knowledge of how to intervene in various types of crises based on empirically supported frameworks and recent developments in the field.

**CPSY 4590 Psychology of Loss and Grief (2 Credits)**

A review of the theory of loss and grief. The course reviews cultural understandings of loss and grief as seen following disaster and conflict. Treatment modalities of loss and grief are also presented.

**CPSY 4595 Global Mental Health Internship (6 Credits)**

Students will spend one quarter in various international locations working in full time internships with international nonprofit organizations applying the principles and knowledge obtained during their study in the IDP program. Students will work under faculty and professional supervision.

**CPSY 4601 Psychology and Race in an International Setting: South Africa (5 Credits)**

Psychology and Race in an International Setting: South Africa combines pre-departure academic study at the University of Denver (DU) with service learning field placements in the Republic of South Africa (RSA). The course requires attendance at four classroom sessions prior to departure, full participation in a field placement while in RSA, and a re-entry meeting upon our return. Overall, the fundamental focus will be on race and psychology in RSA – salient issues, challenges, resources, and successes in post-Apartheid South Africa. Race both shapes and reflects change. Students will learn about how various racially-based historical and current policies in RSA have shaped (and disenfranchised) various communities throughout the country. Field placements will prioritize community psychology issues inherent in the organizations, people, and settings of historically disadvantaged black communities in South Africa. Secondly, academic topics will include the history of RSA (emphasizing pre- and post-Apartheid time periods), current challenges in RSA (ethnicity, immigration, HIV/AIDS, increased crime rate), and cultural aspects of RSA. Pre-departure classes will also focus on the pragmatics of the trip, team-building, and exploring the goals of international service learning.

**CPSY 4606 Sexuality and Gender-based Violence (3 Credits)**

This course will explore human sexuality across the life span as well as and gender-based violence (GBV) in both domestic and international settings. Through engagement with historical artifacts, academic research, case studies, documentary films, and interviews with survivors, students will gain an in depth understanding of the dynamics of violence as it relates to gender identity and expression, sexual orientation, race, class, religion, and culture through the interconnectedness of oppression and critical cultural considerations. We will examine the socioecological and psychological impact of violence, including gender socialization, societal/cultural messages and norms about violence, and the pervasive impact of trauma for survivors of identity-based violence. Students will work collaboratively to interrogate barriers to change, identify effective prevention and response strategies, and develop skills to respond compassionately and intervene in culturally appropriate ways.

**CPSY 4610 Exercise Physiology (2 Credits)**

This course offers an advanced study of selected areas in physiology of sport and exercise. The applied perspective emphasizes understanding the principles in designing effective conditioning programs for performance, fitness, and health. Empirically valid principles of training for muscular fitness (e.g., strength, power, speed) and energy fitness (i.e., aerobic and anaerobic) are explored. Additionally, environmental influences (e.g., altitude), lifestyle choices (e.g., nutrition), and selected developmental considerations (e.g., as related to gender differences) are discussed. Applications to sport and performance psychology consulting in sport, performing arts, and high-risk professions complement the course content.

**CPSY 4615 The Elite Athlete Brain (3 Credits)**

The primary goal of this course is to provide students with an understanding of the expert's brain from sport and performance literature. The course will review landmark and recent publications examining expert-novice contrasts, and those of athlete-non athlete comparisons. Students will review literature on training interventions to accelerate the development of expertise and learn to evaluate the validity of scientific claims of related consumer products. Students will gain a basic understanding of where state of science in understanding sport related concussions, including diagnostic tools, recovery, and prevention.

**CPSY 4620 Kinesiology (2 Credits)**

This course is an in-depth exploration of selected areas of kinesiology as a discipline and a profession focusing on human movement. Based on interdisciplinary theoretical and empirical perspectives, the explored areas include: (a) functional anatomy as related to adaptations to training; (b) biomechanics; (c) neurophysiological processes involved in motor learning and motor control; and (d) other relevant biophysical processes (as related to talent selection and development, physiological adaptations to training, etc.). In addition, this course surveys career opportunities in academic study and clinical practice in various areas of sport, fitness, exercise, and physical education.

**CPSY 4635 Athletic and Performance Nutrition (2 Credits)**

Graduate level course educating student-coaches and administrators and performance specialists to use research and best practices in performance nutrition to achieve athletic and performance enhancement, and general wellbeing. The course will help facilitate students' ability to influence sporting and general environments to use nutrition as a means to enhance performance, with a secondary examination of preparing students to understand and manage individual differences, needs, and motivations for food choices. Course content will include modeling nutrition, encouraging a sense of family at team meals, leveraging media to internalize nutrition behaviors, and impacting availability of positive nutrition choices.

**CPSY 4652 Theoretical Aspects of Sport and Performance Psychology (3 Credits)**

This course is an in-depth exploration of selected aspects of the theories of sport psychology along with applications of these theories to other performance domains. An advanced understanding of the field of sport and performance psychology is pursued in relation to psychosocial aspects involved in both the preparation and performance processes among adults, youth, and children who represent all skill levels. The explored areas include: (a) motivation, confidence, and anxiety in sport and performance, (b) selected topics in social psychology and psychobiology, (c) psychological skills training, and (d) special topics (e.g., personality, flow, injuries, burnout).

**CPSY 4653 Sport in American Society (4 Credits)**

This course examines sport as a social construct within American society. Both aspects of this relationship will be explored: (1) The influence of social context on sport, and (2) The influence of sport on society. The course will emphasize sport as an agent for social change. Topics for exploration will include the intersection of sport and: gender, race/ethnicity/culture, socioeconomic status, media, violence, deviance, religion, and politics.

**CPSY 4657 Motivational Interviewing (2 Credits)**

This is an advanced course reviewing the theories and research findings related to motivational interviewing with the goal to apply them to performance (athletic, non-athletic) and exercise contexts. Topics include motivation for behavior change, transtheoretical model of behavior change, self-determination theory as applied to behavior modification, and the relationship between and the influences of emotion and motivation on counseling and sport and performance consultation. This course will place an emphasis on relating current leading theories and research evidence to consulting work. Equally in importance, there will be in-class hands-on activities (e.g., role playing), experiences (e.g., self-reflective tasks) and assignments (e.g., role playing tasks) that will add to the student competence in motivational interviewing.

**CPSY 4662 Foundation of Counseling Theories (3 Credits)**

This course will review major contemporary counseling models, theories, procedures, and the helping relationship. Advanced study of techniques and research findings. Survey of principles underlying individual, family systems, and multicultural approaches to counseling.

**CPSY 4669 Consulting Methods & Practices (3 Credits)**

This course is an advanced exploration of theories, research findings, and skills related to the practice of consultation in performance settings. Specific topics include: (a) the consultant roles; (b) the major theoretical approaches to consultation (e.g., mental health, systemic); (c) the processes and stages of consultation (e.g., developing interpersonal relationships; design, implementation, and evaluation of service delivery); (d) ethical and multicultural issues; and (e) students' personal strengths and concerns in the role of a consultant (e.g., values interpersonal style, and consultant variables that impact the effectiveness of their role as an agent of behavior change).

**CPSY 4671 Theories of Performance Excellence (3 Credits)**

This course is designed to familiarize students with theories of performance excellence developed by leading practitioners. Each week, students are exposed to a different practitioner's approach, which often includes an opportunity to observe the practitioner's style through video. Emphasis is placed on the role of theory in practice, theory-based conceptualizations utilizing a case study format, and comparing and contrasting the different theories.

**CPSY 4672 Counseling Methods & Practices (3 Credits)**

This course is an introduction to counseling microskills and techniques needed in helping relationships, with attention to building the therapeutic alliance. Emphasis placed on learning skills in small group format. Laboratory experience in demonstrating skills and the ability to form an effective counseling relationship is required. Pre-practicum experience to prepare students to work with clients.

**CPSY 4674 Clinical Issues: Interviewing and Diagnosis (3 Credits)**

This course examines adult psychopathology as classified in the DSM. Special emphasis will be placed on the intersection of performance with more traditional psychopathology. Students learn about etiology, symptomology, epidemiology, and treatment issues. Possible causes and contributory factors are examined, as well as theoretical and multicultural considerations. Prerequisites: Theoretical Aspects of SPP, Applied SPP, and Ethical Issues in SPP.

**CPSY 4676 Assessment and Measurement (3 Credits)**

This course covers the selection, use, and proper interpretation of common sport and performance psychology assessments. Basic principles of educational and psychological measurement, including test construction, validity, and reliability are addressed. The assessments taught include those used for individual assessment, individual selection, and organizational assessment (360 degree feedback, surveys, etc.). Prerequisites: CPSY 4652, CPSY 4690, and CPSY 4682.

**CPSY 4680 Sport and Performance Psychology Practicum (3 Credits)**

This course will familiarize students with professional issues relevant to the practice of sport and performance psychology. Students will be presenting and analyzing their current applied experiences as coaches and leaders in sport and performance settings in the community. This is a participation-intensive course and the students will receive feedback and suggestions from both the instructor and peers in a group supervision format. Importantly, the ongoing feedback and readings will provide an opportunity for students to understand and apply theories and practice systems of behavior change in sport and performance psychology in the context of their own clients/cases. Students will learn the roles and responsibilities inherent in professional and ethical consultation, with a special emphasis given to the dilemmas of serving as an embedded consultant.

**CPSY 4681 Multicultural Issues (3 Credits)**

This course covers the research and theories of counseling the culturally different client. Students are expected to develop multicultural skills, including culturally-based conceptualization, assessment, and selection of culturally appropriate intervention strategies. This course will examine these issues in general, with a special emphasis on those in sport and performance cultures. This is both an experimental and seminar-based course, aimed at developing student's personal awareness, knowledge, and skills.

**CPSY 4682 Ethical and Legal Issues (3 Credits)**

This course introduces the students to the ethical principles, codes, and standards related to the profession of sport and performance psychology. This includes an overview of the regulation of the practice of psychology, the relationships between ethical codes and legal statutes, and the development of a personal model for ethical decision-making.

**CPSY 4683 Group Interventions (3 Credits)**

This course is a survey of group counseling methods and techniques from a theoretical and applied perspective. The course will include practical application of group counseling interventions. Prerequisites: demonstrated knowledge of ethical principles and departmental consent.

**CPSY 4684 Team and Organizational Dynamics (3 Credits)**

This course examines the principles, theories, and research of human functioning in performance related teams and organizations. It explores the social and psychological factors influencing behavior in organizations, along with individual differences, dyadic relations and small group behavior. Students learn about the dynamics of team and organizational diagnosis, feedback and learning, intervention, and planned change.

**CPSY 4685 Human Growth & Development (3 Credits)**

This course is a comprehensive analysis of theories and research relating to human psychological development and learning across the lifespan. It explores the cognitive, affective, academic, physiological, moral, and social/cultural/racial domains. An emphasis is placed on a) the theoretical models underlying character and moral development, and b) adolescent and college student development theories.

**CPSY 4686 Practicum in Sport and Performance Psychology: Professional Practice (3 Credits)**

This course provides an examination of the critical components of successful and ethical professional practice and career building in sport and performance psychology in conjunction with intensive provision of sport and performance psychology services. The entire body of sport and performance psychology theoretical and applied knowledge as well as the skills that the students have acquired will be utilized. Additionally, rigorous self-reflective activities and ethical decision-making will increase the student professional and personal growth as directly related to effectiveness in the sport and performance psychology practice. Emphasis will be placed on diversifying and integrating theoretical knowledge and applied strategies and skills while simultaneously engaging in supervised independent work in real life sport and performance settings.

**CPSY 4688 Seminar in Sport and Performance Psychology (3 Credits)**

Advanced seminars offered by sport and performance psychology faculty on topics relevant to the practice and science of sport and performance psychology area.

**CPSY 4689 Psychophysiology and Biofeedback (2 Credits)**

This course explores the underlying mechanisms and psychophysical determinants of behavior in sport and performance settings. Students learn the use of biofeedback in achieving voluntary self-regulation and control of stress related behaviors.

**CPSY 4690 Sport and Performance Psychology Interventions (3 Credits)**

This course is designed to familiarize students with the application of sport and performance psychology interventions. Students experience the building of a sport and performance psychology program. This program includes the cardinal skills of relaxation, concentration, imagery, self-talk, and mental routine; followed by broader topics such as goal setting, motivation, confidence, cohesion, engagement, and mastery. The instructor briefly reviews relevant theory and research followed by demonstrations of techniques and strategies, after which students learn by doing. Specific attention is given to blending the science of peak performance with the art of applying science.

**CPSY 4692 Entrepreneurship in Sport and Performance Psychology (3 Credits)**

The primary goal of this course is to provide students with an overview of skills necessary to succeed in the entrepreneurial profession of sport and performance psychology. The course is flexibly designed to accommodate the students' desired career paths. Topics covered may include: sales and marketing, developing a practice, job search and interviewing skills, and understanding the job market.

**CPSY 4700 Organization and Administration of Sport (4 Credits)**

Graduate level course to educate students on the organization and administration of sport and sport coaching. Course content includes emergency action planning, facility management, human resource management, evaluation and development, legal responsibilities, record keeping, finance, and public relations. Students will learn how to lead organizations and coaching staffs to develop fair and safe participation.

**CPSY 4705 Sociocultural Aspects of Sport Coaching (4 Credits)**

Graduate level course to educate students on the sociocultural and social-psychological aspects of sport coaching and athletic performance. Students will understand how to analyze and apply social, sociological and social-psychological theory to sport coaching and athletic performance. Consideration will be given to developing a critical understanding of sport coaches' knowledge development, and how to implement multiple, effective and ethical strategies to enhance coach and athletic performance.

**CPSY 4710 Motor Learning and Sport Pedagogy (4 Credits)**

Graduate level course to educate students on the science and practice of how athletes learn motor skills and how coaches can facilitate skill acquisition. Course content includes the scientific and theoretical frameworks of motor learning, with a secondary examination of motor control and development. Applied course content will focus on how coaches can use learning strategies such as demonstration, instruction, feedback, and practice planning to improve athletic performance.

**CPSY 4712 Tactical Strength and Conditioning Coaching (2 Credits)**

The purpose of this course is to educate students on the scientific, theoretical and practical aspects of tactical strength and conditioning. Students will learn how to design tactical strength and conditioning programs to enhance performance and reduce and lessen the severity of injury. This course is also intended to help students begin to prepare to pass the National Strength and Conditioning Association's (NSCA) Tactical Strength and Conditioning Facilitator (TSAC-F) certification, and related professional development opportunities.

**CPSY 4715 Strength, Conditioning, and Injury Prevention Program Design (4 Credits)**

Graduate level course to educate students on the scientific, theoretical and practical foundations of strength, conditioning and injury prevention. Students will learn how to design strength and conditioning programs to enhance athletic performance and reduce and lessen the severity of injury. This course is also intended to help students become familiar with the National Strength and Conditioning Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS) exam, and position statements from several national governing bodies on athlete safety and physical performance.

**CPSY 4720 Psychology of Athletic Performance (4 Credits)**

Graduate level course to educate students on the psychological aspects of athletic performance, and secondarily coach performance. Course content includes the theoretical and practical application of established mental skills (e.g., motivation, efficacy, arousal, anxiety, focus, self-awareness, goal-setting, imagery, team cohesion). Concepts will be applied to the evaluation and creation of practice and training plans to enhance athletic performance.

**CPSY 4722 Social-Psychology of the Body, Health, and Performance (2 Credits)**

The purpose of this course is to understand the ways in which people in society understand the body in sport, physical activity and health and wellness. Or in more simple terms, answer the question: why society thinks about the sporting, healthy and physically active body in the ways that it does? In order to acquire this understanding we will explore the complex and powerful historical, social and cultural forces that have shaped the assumptions underpinning the sporting, physically active and healthy body. No prerequisites exist for this course.

**CPSY 4723 Applied Sports Technology for Coaches (2 Credits)**

This elective graduate level course is designed to educate students on the uses, effects, and ethics of technologies on athletic performance. Students will learn about the breadth of research and uses of technologies in attempts to enhance athletic performance. Course content includes surveying the sports technology field, technology ethics, positive and negative effects of technology, evaluating knowledge claims (i.e., reliability, validity, measurement issues), and common uses of technology to enhance performance (e.g., team communication, athlete monitoring and tracking, instruction and feedback, apps).

**CPSY 4725 Philosophy and Ethics of Sport Coaching (4 Credits)**

Graduate level course to educate students on the philosophical, social, and ethical foundations of sport and sport coaching. Course content includes the history and formation of sport and sport coaching, social issues (e.g., race, class, gender, inclusivity, etc.), how sport is used for (un)desirable ends and the public good, the coach's role in demonstrating and encouraging ethical behavior, and promoting a healthy and safe environment for numerous stakeholders. Leadership theory (e.g., transformational and servant leadership, emotional intelligence, athlete-centered coaching) is also touched upon and discussed in relation to the ethics and norms of sport, and the relationship between educational institutions and sport/athletics. There are no prerequisites for this course.

**CPSY 4730 Biomechanics of Athletic Performance (4 Credits)**

Graduate level course to educate students on the biomechanics of athletic performance. Students will learn quantitative and qualitative methods of biomechanics to analyze and enhance athletic performance and prevent injury. Course content includes knowledge of the musculoskeletal system, force development and how additional factors such as body composition and joint structures influence athletic performance and injuries.

**CPSY 4735 Understanding Sport Research (4 Credits)**

Graduate level course to educate students on understanding and doing sport research. The primary focus of this course is on facilitating student's understanding of research methods commonly used in sport research. Secondarily, the course will examine how research is actually done, including reviewing the literature and writing and referencing scholarly work. Course content will cover topics such as paradigms and philosophy of science, epistemology and the creation of knowledge, and numerous research designs, methodologies and methods. Content will also include understanding statistics and qualitative methods.

**CPSY 4736 Practicum in Strength and Conditioning and Fitness Coaching (1 Credit)**

The purpose of the Practicum in Strength, Conditioning, and Fitness Coaching course is to help students gain the knowledge, skills and attitudes to become a quality coach and a reflective practitioner through experiential learning. Students will be provided with a variety of strategies and methods to solve real-world strength, conditioning, and fitness coaching problems in real life settings. Students will draw upon other coursework, research, and practical insights to exercise professional judgement. Students must complete at least 50 hours of coaching throughout the quarter.

**CPSY 4751 Applied Sport Coaching 1: Intro to Reflective Practice & Applied Research (1 Credit)**

Applied Sport Coaching 1 introduces students to reflective practice and how to become a reflective practitioner. Students will draw upon a variety of discourses and practices to understand the significance of framing and naming problems and implementing potential solutions within their own context. To help become a skilled scholar-coach, students must complete at least 50 hours of coaching or coaching related duties throughout the quarter. The course culminates with an introduction to action research, and other forms of applied research, and shifts the student from their own reflective practice to a wider, rigorous social research approach to addressing sport or coaching problems.

**CPSY 4752 Applied Sport Coaching 2: Theory, Literature, and Planning Applied Research (1 Credit)**

Applied Sport Coaching 2 introduces students to key issues and challenges of the action research process and additional forms of applied research. Students consider the meaning and social construction of science, research, and enduring concerns such as ethics, power, and benefit and harm. Students consider the role theory takes in action and applied research, identify a focus of the research, review relevant literature, and develop relationships with key stakeholders. Students may also submit institutional review board approval and develop additional materials or tools for their research.

**CPSY 4753 Applied Sport Coaching 3: Data Collection and Analysis (1 Credit)**

Applied Sport Coaching 3 exposes students to issues and methods pertaining to data collection and analysis. Also, students reconcile issues related to the research process and make decisions that focus the scope of the research. Students further their relationships with key stakeholders and, if not already, obtain institutional review board approval prior to data collection. With stakeholders, students solidify the framing of the problem to be addressed and use data collection and analysis methods to understand the problem.

**CPSY 4754 Applied Sport Coaching 4: Implementing Action Plans (1 Credit)**

In Applied Sport Coaching 4, students plan, implement, and reflect on their action, or applied, research. Students' time is "in the field" working through the messy complexities of practice in relation to theory and method. Students learn to manage obstacles that arise and deepen their understanding of what is going on in practice and why. As needed, students revisit theory, literature and method to develop new insights on the path of implementing a rigorous sustainable solution to their identified research problem.

**CPSY 4755 Applied Sport Coaching 5: Writing and Communicating Research (1 Credit)**

Writing up research, as well as creating other ways to communicate the action research to stakeholders and partners, is a significant challenge. In Applied Sport Research 5, students learn issues related to journal style guidelines, including key issues such as audience, tone, writing style, and submission guidelines and instructions for authors. Also, students learn how to communicate in a variety of ways to lay audiences and community partners and stakeholders, which is essential to providing benefit to partners.

**CPSY 4756 Applied Sport Coaching 6: Knowledge Dissemination and Reflection (1 Credit)**

Applied Sport Coaching 6 is the culmination of two key milestones. First, this course facilitates students' dissemination of their action, or applied, research studies. Students finish their written manuscript and submit it for publication. Students also reflect on the entirety of the research process and reflective practice. Through the submission process, students develop an understanding of what it takes to become a scholar-coach, they contribute to the advancement of science in sport, and they have their work challenged by the peer review process. Second, this course is the culminating experience for students in the Masters of Arts in Sport Coaching degree program. Students reflect on their growth while in the program and consider next steps on the journey as lifelong learners and scholar-coaches.

**CPSY 4991 Independent Study (1-4 Credits)****CPSY 4995 Independent Research (1-17 Credits)****CPSY 5000 Rad Behav/Func Contextl Models (3 Credits)**

This course is designed to provide a historical, philosophical, and conceptual background to better understand and appreciate Behaviorist views of "being-in-the-world". The course lays the foundation for the sophisticated application of the science of behaviorist theories and methods for the assessment of clinical problems and the art of doing psychotherapy. The course will invite a little discomfort, disturb some preconceptions, and compel students to address some difficult questions and thorny issues. Among the goals of this course are to see students commit to being more than a psychologist technician, to encourage them to develop a guiding philosophical core in their practice as a psychologist; to assist them in clarifying or deepening whatever philosophical worldview they may hold; and that they will have achieved an informed understanding of radical behaviorism/functional contextualism - whether or not they choose to further pursue these models.

**CPSY 5010 Cognitive & Affective Models (3 Credits)**

This is the first in a three part sequence that includes Psychophysiology and Clinical Neuropsychology and is designed to introduce students to the current research in cognitive neuroscience and consciousness. This first course focuses on sensation/perception, learning, memory, emotion, language and other higher cognitive functions. Lectures will emphasize current technologies and historical inquiry and the unique contributions made by psychosocial and cultural variables.

**CPSY 5020 Psychoanalytic Models (3 Credits)**

Psychoanalytic theories, including Freud's topographic and structural theories, ego psychology, object relations theory and modern relational theories, including self-psychology and intersubjectivity.

**CPSY 5030 Systems Models (3 Credits)**

Basic concepts of general systems theory and their applications in psychology, focusing on family systems, groups and organizations.

**CPSY 5040 History and Systems in Psych (2 Credits)**

Basic psychological concepts surveyed from a historical point of view, tracing development of psychological bases of professional practice.



**CPSY 5050 Advanced Statistics (3 Credits)**

This course is designed to increase students understanding of advanced analytical techniques in statistics, particularly as they pertain to psychology. We will take an applied approach, i.e., the course material will emphasize the feasibility, application, and utilization of these analyses rather than the theories upon which they are based.

**CPSY 5070 Research Methods (2 Credits)**

Sequential course that cover fundamentals of structuring, analyzing and critiquing research reports and proposals; strategies to guide and facilitate the writing process; attitude and thinking skills necessary for function as a local clinical scientist; research design tools, methods and strategies for answering different types of questions.

**CPSY 5073 Qualitative Research Methods (2 Credits)**

Qualitative research involves obtaining in-depth information about the behaviors and beliefs of people in naturally occurring social settings. This course introduces students to the philosophical underpinnings, history, and key elements of five qualitative approaches: narrative research, phenomenology, grounded theory, ethnography, and case study. We compare theoretical frameworks and methodologies, experience the use of data, and discuss writing strategies. In addition, we read articles that are exemplars of each approach.

**CPSY 5075 Program Evaluation Technique (3 Credits)**

Theory and techniques for developing management information and assessment systems for human service programs.

**CPSY 5080 Diagnosis and Classification (2 Credits)**

An overview of major DSM diagnostic categories, as well as an introduction to ICD and noncategorical classification.

**CPSY 5108 Introduction to Acceptance and Commitment Therapy (ACT) (2 Credits)**

Acceptance and Commitment Therapy (ACT) belongs to the movement in clinical psychological science that sees acceptance and openness to experience as an essential addition to change-focused psychotherapeutic treatment strategies. Although consciously based on behavior-analytic thinking, ACT is a hybrid in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. The paradox upon which ACT is founded is that only radical acceptance of what cannot be changed empowers people to recognize and change the things that they can. The ACT approach is about embracing necessary suffering in order to make more committed, life-affirming choices and live in accordance with personal values. ACT emphasizes that in a very deep sense all human beings are in the same boat. The technical and theoretical bases of ACT are through normal didactics, but the heart and art of the approach occurs through experiential exercises, group process, and from observation and modeling. Prerequisite: CPSY 5000.

**CPSY 5120 Introduction to Animal-Assisted Interventions (3 Credits)**

This course serves as an introduction to animal-assisted interventions (AAI) as they are commonly used by mental health care professionals. It is designed to provide students with an overview of the foundations of AAI, the variety of ways in which this modality is used, international perspectives on AAI, various perspectives on ethics and animal welfare, and researchers' current understanding of the role of the human-animal bond in facilitating AAI treatment efficacy. General topics to be addressed include the characteristics of the species used in AAI, the basic principles of AAI, the use of AAI with a variety of populations, and animal abuse issues. A number of guest lecturers will share their knowledge and experiences with students throughout the quarter.

**CPSY 5130 Issues in Measurement (3 Credits)**

Validity, reliability and standardization issues in psychological testing; statistical properties of commonly used tests.

**CPSY 5170 Life Cycle: Inf to Mid Childhd (3 Credits)**

Understanding normal development of children (0-12 years), integrating theory, research and a phenomenological perspective.

**CPSY 5180 Life Cycle: Adolescent - Adult (2 Credits)**

Understanding normal adolescent development (13-18 years), integrating theory, research and a phenomenological perspective. Major theories, life events, crisis and the adult life phases. There will be an emphasis on the diversity of adult experiences.

**CPSY 5200 Life Cycle: Late Adulthood (3 Credits)**

Theories of aging; social, psychological and biological changes; assessment and intervention methods, emphasizing issues impacting older adults. (65 years and above).

**CPSY 5230 Group Dynamics & Interventions (3 Credits)**

Provides psychologists in training with multiple learning experiences highlighting that groups and organizations are intensely psychological environments in which most psychologists function professionally and personally and have the potential to impact positively.

**CPSY 5231 Social Psychology (3 Credits)**

This course explores how social psychologists approach psychology, concentrating on key concepts, research findings, and critical thinking strategies that students can integrate into their own clinical work.

**CPSY 5250 Existential and Humanistic Theory and Therapy (2 Credits)**

Historical roots and basic assumption of existential and humanistic views. Students encouraged to integrate materials with their personal values and assumptions about human nature and their interaction with clients.

**CPSY 5270 Physiological Psychology I (3 Credits)**

Terminology and principles of and research in physiological psychology. Where possible, application made to content and practice of clinical psychology.

**CPSY 5271 Physiological Lab I (1 Credit)**

Optional. Assistance with material covered in CPSY 4170.

**CPSY 5290 Clinical Neuropsychology (3 Credits)**

Historical, conceptual and clinical foundation for, as well as current developments related to, the field of clinical neuropsychology. Includes exposure to: developmental neuropsychology and neuroanatomy; higher cognitive functions; neuropsychologically informed interviews and standard neuropsychological test batteries; neuropsychological profiles associated with a variety of acquired disorders (both classical neuropsychological and psychological in nature); ethnic, cultural, age and gender considerations; and current status of a variety of professional/ethical issues. Prerequisite: CPSY 5270.

**CPSY 5310 Ethical Issues in Psychology (3 Credits)**

In-depth consideration of ethical standards applicable to the science and practice of psychology; pertinent laws and legal standards governing the practice of psychology; areas in which legal and ethical standards suggests contradictory actions on the part of the clinical psychologist.

**CPSY 5320 Professional Issues in Psych (2 Credits)**

Issues, concerns and controversies impacting current practice of professional psychology at the state and national levels; preparation for future alternative systems of service delivery. Emphasis is on professional life after the PsyD. Required for first year students.

**CPSY 5340 Psychology of Racism and Other Oppression (3 Credits)**

This course focuses on the impacts of multiple forms of oppression targeting diverse communities with a focus on racism. Historical and intergenerational components of oppressive systems will be reviewed. The course will offer an overview of the ways in which oppression is supported and maintained across macro-, meso-, and individual dimensions, and students will be challenged to consider approaches for interrupting oppression in their professional roles. Intersectional forms of oppression and their effects will be examined. Cognitive, behavioral, and psychological manifestations of oppressive ideologies expressed by therapist and client will be examined with a focus on reducing the harms of oppression in psychological practice. This course is part of the multicultural course sequence.

**CPSY 5360 Intersectional Identity Development (3 Credits)**

This course introduces conceptual frameworks of development across multiple domains of identity and their intersections. Diverse models of identity development will be reviewed with an emphasis on the ideological, cultural, and developmental factors influencing identity formation. The interplay of social power with identity will be explored. This course is part of the multicultural course sequence.

**CPSY 5370 Clinical Practice with LGBTQ+ Populations (3 Credits)**

This course will focus on the specific experiences of lesbian, gay, bisexual, transgender, queer (LGBTQ+) peoples and additional communities experiencing oppression based on their sexual orientation and/or gender identity. Concepts honoring the diversity of these communities will be discussed. Intersectional and developmental perspectives of the biological, psychological, relational, cultural, and social issues encountered across the lifespan will be integrated throughout the course. Systems of power and oppression that target LGBTQ+ communities on macro-, meso-, and individual levels will be reviewed, and the impact of these oppressions on psychological health will be discussed. The course will highlight affirmative psychotherapy approaches that support resiliency and incorporate culturally responsive practices. The course will recognize the ethical considerations of working with LGBTQ+ communities in alignment with current profession-wide guidelines. This course is part of the multicultural course sequence.

**CPSY 5380 Culturally Competent Psychotherapy (3 Credits)**

As the final class in the year-long multicultural course sequence, this class will integrate the theoretical content of the preceding classes and focus on their psychotherapeutic implications. This course will address psychotherapy with the following groups - African Americans, Asian Americans, Latinos, Native Americans, and the LGBT community.

**CPSY 5385 First-Year Seminar (2 Credits)**

This is a clinical and didactic seminar on beginning psychotherapy. The focus will be on case formulation and developing a therapeutic relationship with the client. Content covered will include foundations of evidence-based practice, common factors, documentation standards, standards of practice, emergency/crisis policies and procedures, and foundational applied ethics.

**CPSY 5388 Professional Seminar: Psychological Assessment (2 Credits)**

This seminar will focus on clinical material related to aspects of psychological assessment. It demands more of a time commitment than most other seminars because assessment requires longer sessions with clients to administer tests, time to score and interpret tests, and report writing. Students should not sign up for this seminar if the main reason is to fulfill the GSPP four assessment cases requirement. Students should only rank this seminar if they are passionate about assessment. There will be opportunities to complete ADHD evaluations, learning disability assessments, personality batteries and collaborative therapeutic assessments for children and adults. Students are required to complete a minimum of 4 cases during the course of the year (one per quarter). We will not be providing forensic testing or neuropsychological testing services, although we will discuss some neuropsychological issues as they arise. Students will have the chance to present their cases and consult with the seminar. Requirements for enrollment in the seminar include: prior completion of Cognitive Assessment and Self-Report Assessment, as well as completion of or at least concurrent enrollment in the Introduction to Rorschach class. The seminar co-leaders provide supervision and enrich the experience. Supervision of assigned small subgroups typically takes place either before or after seminar or on Fridays.

**CPSY 5390 Professional Seminar: Forensic Issues (2 Credits)**

This seminar will introduce students to the various areas and ways in which psychology interacts with the legal and criminal justice systems. Students will develop their capacity to perform evaluations relating to psychological questions, dilemmas, and disputes that are most frequently requested of forensic psychologists. The focus of the seminar will be on assisting students in clarifying their role as an evaluator and consultant to attorneys, judges, and criminal justice personnel; exploring the ethical responsibilities therein; learning to compose reports for a legal rather than a clinical audience; and preparing to testify as an expert witness. Students will formulate and deliver case presentations, participate in a "mock" testimony experience, and submit reports. Students in past seminars have conducted child custody evaluations, mental status at the time of offense evaluations, Social Security disability evaluations, asylum, T-visa, and U-visa evaluations, animal abuse, competency, and juvenile placement evaluations. These evaluations allow students the opportunity to conduct full battery psychological assessments and learn how to apply findings to a legal context. In addition, we have been getting more court-mandated therapy clients. Thus, students will get assessment experience as well as individual therapy experience with adults and children. Assessment experience is required. Students are required to complete a combination of 4 assessments/therapy clients during the year. Please note that the forensic seminar requires a substantial time commitment because assessments require longer sessions with clients to administer tests, time to score and interpret tests, and report writing.

**CPSY 5391 Professional Seminar: Psychodynamic Therapy (2 Credits)**

This seminar focuses on psychodynamic psychotherapy - that is, individual adult psychotherapy with the aim of bringing about meaningful and lasting psychological concepts as they apply to your patients, with a practical, "hands on" focus - for example, what to do and say when your patient shuts down, threatens suicide, act out, comes on to you, misses appointments, gets worse, throws up in your office, and all the other troubling and fascinating things people do from time to time in psychotherapy. Prior or current personal psychotherapy is highly desirable and strongly recommended. Students should be prepared to discuss their clinical work candidly - and help foster an environment of mutual trust, compassion, and respect, in which candid discussion can take place.

**CPSY 5392 Professional Seminar: Couple and Family (2 Credits)**

This seminar allows students more in-depth training in working with systems including couples and families. Students should take Couples Therapy and Family Therapy either before or concurrent with the seminar. Special topics covered include divorce, step families parenting, sex therapy, multicultural issues, and ethics, as well as more general couple and family therapy work.

**CPSY 5393 Professional Seminar: Acceptance and Commitment Therapy (2 Credits)**

Acceptance and Commitment Therapy (ACT) is a pragmatically based, relatively new and highly experiential form of therapy whose overarching goals are to a) assist clients (and therapists) in accepting what cannot be changed (i.e., the form or frequency of certain private events), while b) helping them fully commit to behaving in accordance with idiosyncratic values. Although consciously based on behavior-analytic thinking, ACT is a hybrid therapy in terms of approach and technique, bringing together aspects of Zen Buddhism, Gestalt therapy, and humanist-existential thought. In the seminar, students will learn the technical and theoretical bases of ACT through group process, individual and small group supervision, as well as from observation and modeling. Prerequisite: Behavioral Models course.

**CPSY 5394 Professional Seminar: Cognitive-Behavior Relational Therapy (2 Credits)**

This is a year-long seminar on integrating cognitive-behavior (CBT) and relational therapy. Trainees learn the theory and practice of CBT and relational therapy through readings, didactic presentations, discussion, and especially case presentations of their clients and themselves. Small-group supervision is also required.

**CPSY 5404 Professional Seminar: Integrative Therapy (2 Credits)**

This advanced seminar examines various integrative models of psychotherapy, and students will have the opportunity to develop their own therapeutic "voice" by integrating the major theories already learned at the GSPP. While the seminar will be theoretical, one goal is to help students prepare for practice in the real world by exploring the common factors of therapy, and how to work collaboratively in a client-directed fashion. Clients may include adults, adolescents, and children with a wide variety of presenting concerns, in individual, couples, family, or group therapy. Competency areas covered include professionalism, reflective practice, scientific knowledge and methods, relationships, individual and cultural diversity, ethical/legal standards and policy, assessment, and intervention. In addition to supervision on psychotherapy, there may be an option for students to be supervised on their supervision of a first-year student in the PPC.

**CPSY 5406 Professional Seminar: Health Psychology (2 Credits)**

This advanced seminar focuses on the ways that clients' physical health concerns affect psychosocial and emotional well-being. We focus on the relationship between the mind and the body and take a holistic and contextual approach to understanding work with clients, keeping in mind relational and cultural variables throughout the seminar. Clients in the PPC that have been in this seminar have had cancer, multiple sclerosis, diabetes, heart failure, chronic pain, autoimmune diseases, etc. As relevant to our work with clients, we discuss pain management, mindfulness, differential diagnosis of depression and anxiety, sleep hygiene, psychosocial oncology, grief and loss, and other empirically supported treatments for issues that clients present. The overarching theoretical framework of the course is relationship-focused, client-centered, and strengths-based. We draw on rehabilitation psychology and medical psychology, and explore diversity issues in a variety of ways, including examining disability as a multicultural issue. We use readings from interpersonal psychotherapy, feminist and multicultural therapy, positive-psychology, meaning-centered psychotherapy, humanistic/existential therapy, client-centered therapy and post-traumatic growth to guide discussions. Particular attention is paid to helping clients enhance their strengths and find meaning in their lives during times of transition. Since many health settings are focused on a short-term model of treatment, students in seminar have the option of taking on shorter-term cases and we explore the use of time-limited psychotherapy in a health setting. It is expected that most students take on new cases in this seminar.

**CPSY 5407 Professional Seminar: Caregiver and Child Relationships From Pregnancy Through Early Childhood (2 Credits)**

This seminar involves the evaluation and treatment of infants, young children, and their caregivers in the Professional Psychology Center. Supervision is provided from an integrative and relationship-based perspective, and topics relevant to perinatal, infant, and early childhood assessment and treatment are discussed. Prerequisite: CPSY 5385.

**CPSY 5408 Professional Seminar: Military Psychology (2 Credits)**

This clinical seminar teaches military cultural competency, which is infused throughout topics during the year. There is also a focus on learning the evidence-based treatments taught and utilized within the Department of Defense and the Department of Veteran Affairs as the purpose of this field placement and seminar is to prepare students to serve this population and to work within these large systems of care for their predoctoral internships, postdoctoral fellowships and beyond. A specific focus on the prevention of vicarious trauma, compassion fatigue and burnout is infused throughout the year-long seminar. Throughout case presentations, students are encouraged to discuss how various intersecting aspects of culture and identity contribute to the case and their own interventions as therapists.

**CPSY 5420 Behav-Analytic Prin 1 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles underlying major systems and models of behaviorism. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic tradition. Course I specifically targets contingency-shaping selection processes based upon Pavlovian and operant conditioning paradigms. Recommended prerequisite: CPSY 5000.

**CPSY 5421 Behavioral Analysis Princ La (1 Credit)****CPSY 5422 Behav-Analytic Prin 2 (2 Credits)**

This course covers philosophical foundations, assumptions, and principles relevant to cultural-linguistic practices. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. Course 2 specifically addresses verbal relational contingency selection processes based upon cultural and its verbal community. Prerequisite: CPSY 5420.

**CPSY 5423 Behav-Analytic Assess/Case Frm (2 Credits)**

This course covers the philosophical foundations, assumptions, and principles relevant to behavioral assessment and case formulation tactics. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets an empirical data-driven approach to idiographic assessment for purposes of developing conceptual analyses from the contextual-functional analytic perspective. Prerequisites: CPSY 5420, CPSY 5422.

**CPSY 5424 Behavior-Analytic Intervention (2 Credits)**

This course provides an overview of issues, principles and methods basic to clinical practice and intervention. Emphasis is given to the philosophy of science called radical behaviorism and its behavior-analytic functional-contextualistic traditions. This course specifically targets a range of commonly used methods of intervention (e.g., counter-conditioning and exposure-based treatments, guided action strategies, acceptance-commitment approaches, Eastern interventions). Issues relevant to the structuring of therapy sessions, the therapeutic relationship, behavioral nonadherence, empirical research, and other topics of therapeutic interest will be reviewed. This course will incorporate the use of experiential exercises, modeled demonstration, and behavior rehearsal methods for training purposes. Prerequisites: CPSY 5420, CPSY 5422, CPSY 5423.

**CPSY 5466 Health Psychology (2 Credits)**

This course is designed to provide students with a broad overview of the salient empirical and theoretical aspects of health psychology and behavioral medicine. The course will emphasize the role that psychological variables play in the development, exacerbation, treatment and prognosis of both acute and chronic illness. We will also highlight sociopolitical and cultural discourse surrounding end-of-life decision making, healthcare accessibility and the phenomenology of a disabled population.

**CPSY 5480 Integrated Primary Care (2 Credits)**

This course is designed to provide an introduction to the field of Integrated Primary Care (IPC). Primary health care physicians currently serve as the de-facto mental health care providers for approximately 50-80% of the patients they serve. Psychologists are desperately needed to support primary care, yet traditional clinical training does not adequately prepare them to work in this field. Students in this course can expect to acquire a solid knowledge in IPC that will enable them to function effectively in the primary care culture. A clinical exposure component are required so students can experience the pace and problem range seen in the primary care office. Class size is limited. Students not enrolled in the PsyD program must petition the instructor for approval to register.

**CPSY 5500 Diagnosis & Treatment of Children (2 Credits)**

The focus of this course will be on the evaluation and treatment of children. Considerations concerning the particulars of the evaluation process will be discussed. An integrative approach to child treatment will be presented with a "child-in-family" approach. Play therapy approaches and techniques will be described and contrasted. Behavioral approaches will be discussed. Work with populations common in child work will be discussed, such as children in high-conflict divorce families, learning disabilities, ADHD, mood disorders and situations of physical/sexual abuse.

**CPSY 5505 Diagnosis & Treatment of Adolescents (2 Credits)**

This course focuses on counseling and psychotherapy with adolescents from a variety of approaches, including developmental, integrative, psychodynamic, person-centered, reality, rational emotive, cognitive behavioral and systemic. Topics will include the ethical and legal issues involved in psychological interventions, culturally responsive counseling, and orchestrating productive family sessions with challenging adolescents.

**CPSY 5550 Couples Therapy (2 Credits)**

Theory, techniques and research relating to couples therapy, including theoretical perspectives: behavioral couples therapy, emotionally-focused couples therapy and object relations couples therapy. The course also addresses specific problem areas, including domestic violence, infidelity, depression, anxiety, substance abuse and personality disorders. Prerequisite: CPSY 5030.

**CPSY 5560 Family Therapy (2 Credits)**

Theory, techniques and research relating to family therapy, including several theoretical perspectives: behavioral, experiential, psychodynamic, multigenerational approaches. Special topics covered include working with community resources, addressing developmental issues of children, working with medical and school systems, utilizing cultural factors in planning programs and interventions and adults in family therapy. Prerequisite: CPSY 5030.

**CPSY 5562 Psychological Consultation (2 Credits)**

This course provides an overview of the practice of psychological consultation. Theories and models of consultation in various settings including businesses, organizations, health care, and schools are covered. The process and stages of consultation from entry to termination are analyzed. This class differentiates consultation from other types of psychological interventions. Important legal, ethical and multicultural issues in consultation are addressed throughout the course. Students develop their own model for conducting consultation and refine that model through work with local organizations. Students increase their awareness of their strengths and weaknesses in the practice of consultation. Methods of instruction include lecture, discussion, experiential exercises, and interactions with local organizations and professional consultants.

**CPSY 5591 Psychodynamic Psychotherapy (2 Credits)**

Theoretical understanding and treatment of adults within a developmental, ego analytic framework. Second quarter - the neuroses. Prerequisite: CPSY 5020.

**CPSY 5620 Intersubjective Systems Theory (2 Credits)**

This course focuses on psychotherapy from the perspectives of intersubjective systems theory in working with adults. We examine the co-creation of the therapeutic relationship, the making of meaning, empathic listening, attuning to the other's affective experience and putting the other's subjective experience into words. We develop treatment plans and case formulations that are consistent with this perspective.

**CPSY 5680 Cognitive Assessment (4 Credits)**

Theoretical, professional, and clinical issues involving intelligence and its measurement; assessment of cognitive functioning and clinical interpretation of test results, focusing on the WAIS-III (and child equivalents).

**CPSY 5685 Introduction to Pediatric Neuropsychological Assessment (2 Credits)**

Pediatric neuropsychology integrates many basic sciences including behavioral Neurology, developmental psychology, neuroanatomy, psychopathology, and psychological assessment. The role of pediatric neuropsychologist is to provide comprehensive assessment, consultation, and intervention in the context of a developing child. The course will review important concepts, theories, and empirical research in the field of pediatric neuropsychology. Students will learn the basic rationale in conducting a pediatric neuropsychological evaluation, including a brief review of many common pediatric assessment measures. In addition, many common pediatric disorders will be reviewed from a neuropsychological perspective including: Dyslexia, Attention Deficit hyperactivity Disorder, Pervasive Development Disorders, Traumatic Brain Injury, Seizure Disorders, and Mental Retardation. Upon completion of the course the student will have a greater appreciation of a neuropsychological conceptual framework and have a better understanding of specific pediatric disorders.

**CPSY 5686 Suicide Prevention, Intervention and Postvention (2 Credits)**

Suicide is a serious public health issue and challenge for the nation, Colorado, and our local communities. While most clinicians are focused on the assessment and treatment of people at high risk for suicide, a more comprehensive approach is needed to prevent people from becoming suicidal in the first place. This course covers best practices in suicide prevention, intervention, and "postvention" (suicide crisis response) and will explore the particular issues of several vulnerable populations.

**CPSY 5690 Introduction to the Rorschach (4 Credits)**

The purpose of this course is to provide a solid foundation for using the Rorschach Inkblot Method. The Rorschach serves a central role in personality assessment. It has a long history in psychology and is the topic of an abundance of empirical research—as well as many uninformed misconceptions. It meets Supreme Court Daubert validity standards and is admissible in court. It is a very powerful technique but is very complex, requiring extensive knowledge to effectively administer, score, and interpret.

**CPSY 5692 Advanced Rorschach Analysis (2 Credits)**

This course is an exploration of advanced topics in Rorschach interpretation. Topics will include: conceptual understanding of the Comprehensive System; content and sequence analysis; differential diagnosis; integrating alternative systems of interpretation with the Comprehensive System; development and use of special scales; appropriate use of computerized interpretation; and integration of Rorschach analysis with personality theory. Prerequisites include course work in Rorschach administration, scoring and basic interpretation; and in personality theory. Students will be expected to score, analyze, and present Rorschach protocols.

**CPSY 5700 Advanced Personality Assessment (2 Credits)**

This class is for students who wish to learn the skills necessary to conduct comprehensive psychological assessments in a competent, ethical, antiracist and culturally informed manner. This course will focus on learning how to integrate multiple personality measures into a cohesive understanding of one's personality. Students will be taught how to write a traditional integrated personality report and several weeks will be spent on Collaborative/Therapeutic Assessment (C/TA). Students will be exposed to several personality tests including the Minnesota Multiphasic Personality Inventory – 3 (MMPI-3), Rorschach Performance Assessment System (R-PAS), Early Memories Procedure, Wartegg Drawing Completion Test (Crisi Wartegg System), Thematic Apperception Test (TAT), Trauma Symptom Inventory – 2 (TSI-2) and the Thurston Cradock Test of Shame (TCTS), among others. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5705 Self Report Assessment (3 Credits)**

Construction and application of objective instruments, emphasizing the MMPI and MCMI. Students are required to submit test reports. Prerequisite: CPSY 5130.

**CPSY 5706 Self Report Assessment Lab (1 Credit)**

Optional. For students anticipating a need for extra help with report writing.

**CPSY 5740 Integrative Personality Assessment (2 Credits)**

This course is the culmination of the assessment sequence, and integrates techniques, approaches and concepts covered in issues in Measurement, Cognitive Assessment, Objective Personality Assessment, and Rorschach. Aspects of the other core courses in the curriculum will also be brought to bear on the question of how to obtain and how to interpret information within various theoretical models for the purposes of answering referral questions and planning interventions. Projective testing will be introduced as a source of behavior samples for which the occasioning environment is known to the psychologist. There will be focus on distinguishing interpretable from irrelevant information, and on integrating interpretable information into meaningful patterns. The goal of using assessment to answer referral question and plan treatments will generate a special focus on report writing.

**CPSY 5741 Therapeutic Assessment (3 Credits)**

This course will explore Collaborative/Therapeutic Assessment, which is an approach to psychological assessment that can have extraordinary therapeutic effects with clients. We will focus on the Therapeutic Assessment model developed by Stephen Finn. We will read broadly in the area: from the genesis of collaborative assessment fueled by Fischer to the empirical foundations and structure of Therapeutic Assessment provided by Finn to novel applications of the approach highlighted by Handler, Tharinger, and others. This important paradigm shift in assessment is applicable to personality, cognitive, and neuropsychological assessment as well as any professional endeavor that aims to help clients understand themselves in life-changing ways. The course is designed for those with a solid foundation in assessment who wish to develop greater facility in helping their clients. Prerequisites: CPSY 5130, CPSY 5680, CPSY 5690, & CPSY 5705.

**CPSY 5745 Human Sexuality (2 Credits)**

The psychology of human sexuality is a survey of historical and contemporary psychological views on a wide variety of sexual behaviors; theory and research bearing on the relationship between life span, psychological development, psychological functioning, interpersonal processes, and sexual behaviors; political and social issues involved in current sexual norms and practices. Specific implications for clinical psychology will be discussed.

**CPSY 5750 Supervision (2 Credits)**

This course is designed to familiarize students with theories of supervision; provide practical, guided experience in peer supervision/consultation; help students understand and critically discuss the supervisory process; aid in gaining awareness of how multicultural issues may affect supervision; and familiarize students with ethical and legal issues in supervision.

**CPSY 5760 Professional Issues II (2 Credits)**

This class provides an organized and comprehensive approach to pre-doctoral psychology internship selection, emphasizing an understanding of "fit." Topics covered include choosing sites; writing cover letters, CVs, and AAPI essays; preparing application materials; interviewing techniques; rank ordering sites; and dealing with emotions related to the process. The course syllabus includes important readings from the current literature. Lectures are balanced with guest appearances by DU Writing Center staff and others. Opportunities are given for role play among the students.

**CPSY 5765 Cognitive Behavioral Therapy (2 Credits)**

This course focuses on clinical applications of cognitive-behavioral theory. Major theorists in the area are reviewed, including Ellis, Beck, Lazarus, and Meichenbaum. Research utilizing cognitive-behavioral therapy as an evidence-based practice are reviewed. In addition, key cognitive behavioral techniques are demonstrated and practiced.

**CPSY 5831 Theory and Foundations of IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This course will provide an in-depth historical, theoretical, and empirical foundation for students interested in engaging in ongoing research and practice in Infant Early Childhood Mental Health (IECMH). Formative readings from the IECMH literature, including groundbreaking articles and textbooks will be reviewed and discussed. We will examine methods of applied IECMH work, including promotion of well-being and the spectrum of prevention, early intervention, assessment, and treatment with young children and their caregivers. The multidisciplinary nature of IECMH will be explored, along with a focus on how psychologists and infant mental health specialists fit into these teams in various contexts. We will also examine different "ports of entry" or means into treating caregivers, young children, and their relationships from an IECMH framework. Empirical studies establishing the efficacy, effectiveness, and cultural sensitivity (or lack thereof) of various assessments, therapeutic approaches, and practices in the IECMH field will be examined. We will spend the most time examining critical theories of social development including attachment and temperament and will consider their applicability to IECMH work, cultural responsive across several cultures, strengths, and limitations. Throughout the course, will explore the IECMH Diversity tenets created by leaders in the field and will apply the tenets in discussions and coursework.

**CPSY 5832 Caregiver-Child Assessment in IECMH: The Process of Assessment, Diagnosis, Report Writing, & Feedback (2 Credits)**

Intensive training will be offered in the process of assessing a caregiver and child relationship in a manner designed to inform dyadic treatment planning. All students will be trained in conducting a multi-modal, relationship-based assessment with a caregiver and child under the age of six. Assessment tools used will include the Infant Toddler Mental Status Exam (ITMSE), the Crowell Procedure and the Working Model of the Child Interview (WMCi). Students will also be introduced to the Interpersonal Inventory and paper and pencil means of assessing the individuals and their relationship. Students will be introduced to diagnosis in IECMH using the Diagnostic & Statistical Manual of Mental Disorders – fifth edition (DSM-V) and the Diagnostic Classification of Mental Health & Developmental Disorders of Infancy and Early Childhood (DC:0-5) classification systems, as well as crossover considerations between the two systems. Students will conduct a thorough and multi-modal assessment of a caregiver-child relationship and will integrate the information learned into a professional report. Students will practice treatment planning as well as providing feedback to the dyad.

**CPSY 5833 Advanced Topics in IECMH: Infant and Early Childhood Mental Health (2 Credits)**

This advanced topics course will continue fostering the student's understanding of Infant and Early Childhood Mental Health (IECMH) practice. Throughout the course, in-class discussion centers on developing clinical relationships with families and on how these relationships can support growth and change in both child and caregiver. Of particular importance is the student's continued exploration of use of self, and integrating IECMH practice principles into their field placement and CUB Clinic work. Topics include infant regulatory concerns, attachment difficulties, caregiver mental illness and impact on the child and relationship, parenting self-efficacy, child maltreatment and trauma, and application of IECMH treatment practices in the community. Prerequisite: CPSY 5831 or equivalent with instructor's permission.

**CPSY 5834 Perinatal-5 Mental Health: Training Intensive in Evidenced-Based Approaches (2 Credits)**

This intensive therapeutic course will continue fostering the student's understanding of Perinatal-Five mental health practice via working knowledge of a psychotherapeutic model used during this time period. In alternating years we will focus on Interpersonal Psychotherapy (IPT) or Parent Child Interaction Therapy (PCIT), two evidenced based approaches, with a focus on use with clients in perinatal through five populations. Students will gain knowledge of IPT or PCIT approaches to assessment and practice via readings, discussions, video, role plays, and case presentations. Of particular emphasis is the student's continued exploration of use of self and integrating P-5 mental health practice principles when learning about and practicing IPT or PCIT.

**CPSY 5840 Psychopharmacology (2 Credits)**

This course focuses on the various medications prescribed by psychiatrists to alter consciousness, modify behavior, and/or alleviate symptoms in the treatment of mental disorders including depression, bipolar disorder, anxiety, eating disorders, and psychoses. Topics such as sleep, pain and addiction will be covered, as well as drug interactions, psychotropic drugs in pregnancy, the treatment of children, geriatrics, and the psychologist-psychiatrist relationship.

**CPSY 5846 Military Psychology and the Culture of Warfighting (2 Credits)**

This course is intended to provide an introduction to military and veteran culture as well as military psychology and behavioral health. This course is designed as the first of a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with military members, veterans, and the families of servicemembers. The principal focus will be on training students to utilize culturally competent attitudes and knowledge as clinicians when providing services to servicemembers of the military branches, veterans of the military, and the families of servicemembers. American historical context, military history, and military structure will be covered in this course. Additionally, multiple types of behavioral health services within the United States government will be covered including the Department of Defense, the Public Health Service, and the Department of Veterans Affairs. A survey of world affairs as they currently stand, the U.S. national defense strategy, and current military posture will be covered. Salient health care issues within the military and veteran population will be covered. Legal and ethical issues that are pertinent and complex within military psychology and combat will be examined.

**CPSY 5847 Psychology and Physiology of Isolated, Confined, and Extreme Environments (2 Credits)**

This course is intended to survey and examine human psychological and physiological performance in extreme, austere, and challenging environments and the secondary effects of these environments after deployment. This course is designed as the second in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. This course will examine issues, literature, and critical arguments surrounding team makeup and cohesion in austere environments as well as physiological and cognitive/behavioral effects of operating within these environments. Operational behavioral health will be covered in addition to the physical and psychological after-effects of these deployments. Psychological casualties, forensic issues, and post-deployment transition will also be covered. Prerequisite: CPSY 5846.

**CPSY 5848 Evidence-based Practice for Military-related Health Disparities (2 Credits)**

This course is intended to survey and examine current evidence-based assessment tools utilized to diagnose certain psychiatric and neurological conditions within military servicemembers and Military Veterans. The course will also focus on the understanding and utility of the best available evidence for the treatment of these psychiatric conditions. Prevalence rates, comorbid conditions, differential diagnosis, and complicating treatment factors within these particular psychiatric conditions will be the primary focus of the course. This course is designed as the third in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity.

**CPSY 5849 Behavioral Medicine and Interprofessional Healthcare in Military/Veterans (2 Credits)**

This course is intended to build upon academic and clinical knowledge gained throughout the entirety of the Graduate School of Professional Psychology curriculum and integrate this knowledge with the understanding of clinical and operational psychology within Military and Veteran settings gained through courses in the Sturm Specialty in Military Psychology. This course is focused on the acquisition of knowledge of the unique aspects of Military behavioral medicine and its role within the medical center environment. A second focus of the course is on interprofessional work within healthcare settings and how behavioral science professionals play a role on interprofessional teams within family medicine, primary care, and medical/surgical units within the medical center environment. Additionally, special considerations for behavioral medicine and interprofessional work with Military and Veteran populations will be covered. This course is designed as the fourth in a series of four courses in military psychology to prepare competent professionals who will utilize knowledge of current affairs, theory, knowledge of the scientific literature, and historical context when working with government, military members, veterans, and the families of servicemembers in an operational, consultative or clinical capacity. Enforced Prerequisites: CPSY 5846.

**CPSY 5852 Foundations in Substance Use Disorder (2 Credits)**

The course examines the major theories addressing substance use disorder and addiction. Students will explore these disorders as understood from a variety of theoretical frameworks (including psychoanalytic, behavioral, humanistic and social learning theory), as well as findings from neuroscience. The course emphasizes a developmental perspective in the understanding of these issues. Further, the course will emphasize current treatment models based on empirically based information and research. Students will gain skills in using their generalist training to conceptualize, diagnose, and treat these difficult disorders.

**CPSY 5853 Neurobiology of Attachment, Trauma and Addiction (2 Credits)**

The course will examine research and practice findings from the fields of neuropsychology and biology with regard to substance use disorders. Major findings and theories related to brain and nervous system functioning as they relate to substance use will be discussed, and used to further inform treatment considerations and clinical conceptualization. Additionally, students will be engaged in a more in-depth review of treatment modalities available. Students will build on their knowledge of empirically supported treatments in the first course. Students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course.

**CPSY 5854 Behavioral Addictions: Assessment and Treatment (2 Credits)**

The course will examine research and practice findings regarding behavioral addictions such as sex, pornography, gambling, food, and others. Discussion of brain and nervous system functioning as they relate to behavioral addiction will be discussed, and used to further inform treatment considerations and clinical conceptualization. Prerequisites: students must successfully pass CPSY 5852 Foundations in Substance Use Disorder prior to enrolling in this course, and completion of CPSY 5853 Neurobiology of Addiction and Advanced Treatment is strongly recommended.

**CPSY 5855 Advanced Treatment of Substance Use and Addictive Disorders (2 Credits)**

This course will provide students a more nuanced and advanced look at the current treatments for substance use and other addictive disorders. Topics will include medically assisted treatment models, therapeutic communities, and the use of FDA-approved psychoactive substances to treat addictions and underlying disorders.

**CPSY 5865 Introduction to Psychosocial Oncology (3 Credits)**

In this course, students will be introduced to the field of Psychosocial Oncology. This course will include an overview of the physiological processes involved in cancer prevention, etiology, and treatment. Students will develop a better knowledge of the different types of cancer, staging, and treatment options. A brief history of the field of psychosocial oncology will also be presented. The psychological sequelae of cancer diagnosis, treatment, metastases and recurrence, and survivorship will be included in this course. Special topics will also include working with caregivers and family members of cancer patients, sexuality and cancer, and working with patients and families at the end of life. Common psychotherapeutic interventions and assessments for oncology settings will be explored. In addition, the variety of roles of a psychologist in oncology settings will be discussed. Themes that will be included throughout the course are ethical and reflective practice, working with cancer patients from a multicultural perspective, and reducing compassion fatigue.

**CPSY 5880 Business Issues in Professional Psychology (2 Credits)**

This course introduces students to business principles as they apply to professional psychology. Students think through various business practice decisions, such as starting, managing, marketing, and diversifying a psychology practice and consider the related legal, ethical, and financial issues.

**CPSY 5989 Doctoral Paper Development (1 Credit)**

This course is designed to facilitate the development and writing of the doctoral paper. Students are expected to adhere to the GSPP Doctoral Paper Guidelines and the APA style guidelines. A major feature of the class is student-to-student sharing and critiquing of doctoral project ideas and plans. Students are expected to take advantage of this opportunity to hone their writing skills and develop their doctoral paper proposal. Students have complete the proposal phase of their project further develop their research methodology.

**CPSY 5991 Independent Study (1-17 Credits)****CPSY 5993 Advanced Field Placement Experience (1-8 Credits)**

All PsyD students are required to work as a Psychology Trainee in an outside agency each year prior to the internship year. The minimum total is 384 hours per year. Students are expected to arrange with a field placement to receive psychological clinical training, which could include the following types of experiences: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc.

**CPSY 5994 PsyD Internship (4,8 Credits)**

The Graduate School of Professional Psychology (GSPP) requires that all students attend a yearlong or two half-time years of clinical internship. Internship is the clinical experience after the student has completed all courses, the clinical competency examination, and at least three years of residency at GSPP. Students typically apply through APPIC and are offered formal internships. Occasionally students create internships, but they must be approved formally through GSPP prior to the start of the internship. The basic experiences may include training in: psychotherapy, assessments, group therapy, individual therapy, family therapy, supervision, primary care psychology, intake evaluations, case management, consultation, testing, etc. To register, student must have departmental approval. Students can register half-time for 4 credit hours or full-time for 8 credit hours.

**CPSY 5995 Independent Research (1-17 Credits)**



# Communication (COMN)

## **COMN 3130 Organizational Communication (4 Credits)**

This is an applied course, service learning course, based on a consulting model. While the course will extend and enrich the topical and theoretical knowledge developed in COMN 1550 and COMN 2130, the primary purpose of this course will be to help students explore how they can put such knowledge into practice by collectively working with a local non-profit organization to first diagnose and then propose (and, in some cases implement) solutions to an organizational communication problem faced by that organization.

## **COMN 3230 Principles of Leadership (4 Credits)**

Roles, functions, behaviors that influence and direct; emphasis on interpersonal effectiveness; theories and methods.

## **COMN 3270 Health Communication (4 Credits)**

This course examines the role of health communication in our everyday lives. We will focus on communication strategies that inform and influence individuals, families and communities in decisions that enhance health. We will also explore the dynamics and impact of health communication between individuals and the health care system such as doctor-patient communication, dissemination of health related information, and the role of mediated communication in examining health communication.

## **COMN 3280 Family Communication (4 Credits)**

The purpose of this course is to enhance understanding about communication patterns within families. In this course, we will examine theory/research on the role of communication in creating and maintaining healthy marriages and families. Specifically, we will study communication and the family life cycle, different family forms, family race/ethnicity, power in families, conflict in families, communication and stress in families, and communication in the aging family. The course format includes lectures, discussions, analysis of case studies, and in class applications.

## **COMN 3285 Advanced Relational Communication (4 Credits)**

Advanced Relational Communication is intended to increase understanding of relationships from diverse perspectives. The three main perspectives we will investigate show how relationships affect and are affected by their context, the individuals involved, and the relational system. The goals of this course are for students to increase their skill in (1) explaining how knowledge about context, individuals, and relational systems increases understanding of communication processes in a variety of relationships; (2) evaluating critically the information about relationships that we encounter in our everyday lives; (3) asking and investigating questions about real-life relationships.

## **COMN 3290 Communication and Aging (4 Credits)**

In this course, we will focus on the communication processes associated with aging. We will explore the implications of aging and how aging affects the process and outcomes social and relational interactions. We will examine communication and aging through interactional processes (intrapersonal, interpersonal and relational) and through context (organization, family, health, and culture). Emphasis will be placed on the theoretical and applied research in communication and aging.

## **COMN 3300 Principles of Persuasion (4 Credits)**

This course involves a social scientific approach to persuasion and social influence. Some of the topics included in this approach are the relationship between attitude and behavior; characteristics of the source, message, and receiver of a persuasive appeal; and models and theories that explain the effects of persuasive communication. By the end of the course, students should be able to think more critically about the persuasive messages they encounter in everyday life, to apply theoretical models of persuasion, and to construct persuasive messages.

## **COMN 3315 Public Deliberation (4 Credits)**

During the last two decades public deliberation has emerged as the centerpiece of theoretical and practical accounts of liberal democracy. This course begins by setting out the nature and functions of public deliberation. We will then track how deliberative democrats respect the traditional accounts of inclusion, equality and reason in an attempt to meet the demands of the deep cultural diversity that marks social life in advanced industrial societies. Specifically we will ask if public deliberation as portrayed in these accounts is sufficient to meet these demands or do we need to expand our understanding of political argument to include a diversity of rhetorical practices? And, once we do expand our account of deliberation how does this transform the traditional problematics of both democratic and rhetorical theory?.

## **COMN 3425 Rhetoric and Governance (4 Credits)**

An introduction to the works of Michel Foucault and his influence on contemporary rhetorical theory. Permission of instructor is required.

## **COMN 3435 Rhetoric and Public Life (4 Credits)**

An introduction to the conceptual and political history of the public sphere. The course pays particular attention to how the normative assumptions of public communication are affected by the demands of cultural pluralism. Permission from instructor is required.

## **COMN 3470 Seminar in Free Speech (4 Credits)**

This course will survey some of the major conceptual innovations in the justifications of freedom of speech. We will begin with an exploration of the traditional defenses of free speech and then move to a reexamination of those defenses in light of modern communication theory and the challenges of pluralism. In particular we will ask if the justifications of free speech need to be rethought given our understanding of speech as a social force that constitutes identities and values rather than merely expressing private opinions. Moreover, given our understanding of the social force of speech, should we regulate speech that is racist, sexist and seems to erode the foundations of a public culture based on mutual respect and public deliberation over social goods? Can we devise a robust defense of free speech based on its social force that both protects those that may be harmed by antidemocratic discourses and still provides the resources for democratic dissent?.

**COMN 3680 Gender and Communication (4 Credits)**

This course focuses on the interactive relationships between gender and communication in contemporary U.S. society. This implies three priorities for the class. First, the course explores the multiple ways communication creates and perpetuates gender roles in families, media, and society in general. Second, the course considers how we enact socially created gender differences in public and private settings and how this affects success, satisfaction, and self-esteem. Third, the course connects theory and research to our personal lives. Throughout the quarter, the course considers not only what IS in terms of gender roles, but also what might be and how we, as change agents, may act to improve our individual and collective lives. Cross listed with GWST 3680, HCOM 3680.

**COMN 3700 Topics in Communication (1-4 Credits)****COMN 3702 Topics in Communication (1-4 Credits)****COMN 3703 Topics in Communication (1-4 Credits)****COMN 3704 Topics in Communication (1-4 Credits)****COMN 3705 Topics in Communication (1-4 Credits)****COMN 3770 Mediated Communication and Relationships (4 Credits)**

This course examines how people develop, define, maintain, and manage interpersonal relationships through their use of mediated communication. We will examine communication in relationships that occur through the internet, text-messaging, cell phones, chat rooms, gaming, and virtual communities. This is a seminar type course where students guide and are guided through their own study of mediated relationships.

**COMN 3800 Philosophies of Dialogue (4 Credits)**

This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship. Prerequisite: permission of instructor.

**COMN 3850 Communication Ethics (4 Credits)**

This class is not just about how to be ethical communicators but it is also about how to discover ethics—the good life and care for others, answerability and responsibility—deep within the structures of human communication itself. The course is committed to a mixture of theory and practice but practice is at the heart of the matter. Half of our sessions will be devoted to dialogue or conversation about ethics in life. There we will try to work as close as we can with ethics in our own lived experience. In the other half, we will explore theory: the ethical/philosophical/communicative ground of ethics.

**COMN 3991 Independent Study (1-5 Credits)****COMN 3995 Independent Research (1-10 Credits)**

Topics and quarter hours vary. Prerequisite: instructor's permission.

**COMN 4020 Communication Studies: Relational (4 Credits)**

Recent social science literature in interpersonal communication; emphasis on pragmatics, meta-level perspectives, relational concerns affecting intimacies, friendships, families.

**COMN 4120 Comparative Theories in Human Communication (4 Credits)**

Selected efforts to construct theories of human communication; lectures, discussions, student presentations of analysis of readings.

**COMN 4232 Critical Sexuality Studies (4 Credits)**

This course takes a critical approach to the study of sexualities by challenging our assumptions and everyday knowledges about identities, gender, sexuality, race, and ethnicity. This course is organized around important and recent publications in the fields of Communication Studies and Sexuality Studies. Rather than simply reiterating the canonical voices such as Foucault and Butler, the course focuses on the voices of queer people of color.

**COMN 4310 Communication and Collaboration (4 Credits)**

A survey of contemporary theories and applications.

**COMN 4520 Rhetoric and Social Movement (4 Credits)**

This course is designed to survey the range of humanistic/critical scholarship on social movement in Communication Studies. Whether it has approached "social movements" from a rhetorical perspective, or analyzed the rhetoric within and surrounding social change, social movement rhetoric scholarship is characterized by major theoretical debates. These debates will help focus the seminar's inquiry, and are summarized by the following questions: Are the received tools of rhetorical theory capable of making sense of the (often) non-normative, un-institutionalized expressions of dissent associated with social change? How are scholars to evaluate the ethics and impacts of social movement rhetoric, given its "inherent" nature as challenging to the status quo? What is a social movement, and what is rhetoric's proper relationship to it? Is the figure of the "social movement" the most insightful means of understanding social change? What is at stake in retaining or abandoning the "social movement" in rhetorical criticism that seeks to understand and evaluate social change?.

**COMN 4700 Topics in Communication (1-4 Credits)****COMN 4701 Topics in Communication (1-4 Credits)****COMN 4702 Topics in Communication (1-4 Credits)****COMN 4703 Topics in Communication (1-4 Credits)****COMN 4704 Topics in Communication (1-4 Credits)****COMN 4705 Topics in Communication (1-4 Credits)****COMN 4800 Philosophies of Dialogue (4 Credits)**

This course explores the philosophies of dialogue of Martin Buber, Mikhail Bakhtin and others in the context of contemporary communication scholarship on ethics, culture, and relationship.

**COMN 4900 Quantitative Methods I (4 Credits)**

Lectures, readings, written assignments that facilitate growth and development of the research scholar.

**COMN 4913 Rhetorical Criticism (4 Credits)**

Like other research methods in communication studies, rhetorical criticism is a means: It is a pathway through which you may reach a desired end, as well as a set of tools with which you may shape your final work. However, following Nothstine, Blair, and Copeland (1994), "criticism is a process"—a pathway which "rarely travels a straight line to its end" (p. 343), and a toolkit which arrives with ambiguous instructions (at best) for how to make use of its contents to assemble a research project. In the humanistic tradition, rhetorical criticism is an art motivated by the critic's vision and guided by her or his deftness, ingenuity, and perseverance. Moreover, rhetorical criticism is a practical endeavor inspired by important public events of the day and the critic's desire to persuade. The significance of rhetorical criticism is born in public dialogue or debate. In the wake of the "critical turn," rhetorical criticism not only inspires academic colloquia. Through it, critics pursue democracy and social justice. In conversation with performance studies and ethnography, rhetorical critics have started to embrace self-reflexivity, and writing as a method of inquiry (not simply the "reporting on" inquiry once it is "done"). Given its rich scholarly history, and its fluidity as a research method, one could imagine several different ways to approach a seminar in rhetorical criticism. Such a course might use hermeneutics (or the art of interpretation) as its guide, encouraging participants to engage a text and arrive at its deeper meanings. It might take a skills-based approach, cultivating the necessary techniques of the critic, including the abilities to: locate interesting and important rhetorical acts; closely analyze a rhetorical act's symbolic action and richly describe it to readers; contextualize a rhetorical act to invite a deeper understanding of its significance; and place a rhetorical act in conversation with relevant theory to generate productive insights into the human condition. A seminar in rhetorical criticism might also take a historical approach, attending to the ways rhetorical theory has shaped criticism as a method—such an approach would introduce the range of theoretical "tools" available to critics as they approach different rhetorical acts. At the risk (and with the benefits) of complexity, we will draw upon each of these possibilities, enacting an "inventional" approach to rhetorical criticism.

**COMN 4930 Speech and Communication Research - Qualitative Methods (4 Credits)**

Grounded theory, phenomenology and other non-numerical approaches to research in human interaction.

**COMN 4990 Graduate Tutorial in Communication Studies (2 Credits)**

In this course, students will closely engage in scholarly work with a faculty member, with the intention to foster collaboration on mutually beneficial topics. This close collaboration can take many forms, and much like an independent study, it will be designed by faculty and students together. Such collaboration may include: deeper reading of the literature in a particular communicative context; advancing a research project toward presentation and publication (through data collection, data analysis, or/and manuscript revision); pedagogical development (through the development of syllabi, assignments, teaching materials, and educational philosophy). Students will deepen their knowledge base on a topic of significance in the field, advancing scholarly, pedagogical, and/or creative work.

**COMN 4991 Independent Study (1-10 Credits)****COMN 4995 Independent Research (1-10 Credits)****COMN 5991 Independent Study (1-10 Credits)****COMN 5995 Independent Research (1-22 Credits)**

## Communication Management (COMM)

**COMM 4001 Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Communication Management must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

**COMM 4002 Dynamic Presentation and Training Methods (4 Credits)**

The increasing presence of technology in the workplace has changed the way we present information and conduct trainings, both in person and virtually. In this course, students hone their presentation and training skills by assessing their audience, purpose, and desired learning outcomes. Students practice using appropriate and memorable visual aids in order to maximize the audience and/or participant engagement. Students employ communication strategies and training techniques to improve participants' receptivity and retention of information and ideas. Whether presenting or training in person or virtually, students will gain the skills and confidence needed for effective communication across varied delivery methods.

**COMM 4006 Building High-Performing Teams (4 Credits)**

High-performing teams are invaluable to every organization. Ensuring productive and satisfying group and team interactional outcomes in organizational, professional, and personal settings can be difficult. Students focus on theory, application, and the practice of working together to learn the fundamentals of building high-performing teams. Students learn about the development of group dynamics, assessment, and leadership while also gaining knowledge about their strengths and weaknesses in teams, developing new skills, and learning how to enhance productivity while reducing barriers to effective communication.

**COMM 4010 Business Insights for Communicators (4 Credits)**

Communications leaders must speak the language of business to effectively craft strategies, execute deliverables, and measure outcomes that create tangible value and advance their organizations' objectives. Whether in an industry, public sector, or non-profit role, these leaders gain an edge through supplementing strong technical literacy with the ability to assess operational priorities and execute deliverables accordingly. In this class, students will sharpen their understanding of balance sheets and budgets; demystify key aspects of Information Technology infrastructure (intranets, cloud and on-premises computing, databases, security, etc.); delve into various organizational and divisional/departmental models, functions, and political positions; address the benefits and challenges of globalization and cross-cultural communication; and touch on an assortment of other relevant topics, including managing upward and workflow prioritization. Along the way, students will hone their strategic planning competencies and perspectives by putting all elements learned in this course together. Materials and assessments are geared toward application in relevant contexts.

**COMM 4016 Persuasion and Influence (4 Credits)****COMM 4030 Managing Learning in Organizations (4 Credits)**

To support a culture of continuous improvement, Learning and Development (L & D) professionals must quickly and effectively train and develop employees, evaluate results, show a return on investment, and develop new solutions to meet ever-changing business needs. This course prepares students to lead and manage L & D departments, teams, and processes by guiding them to think strategically, generate creative solutions that address root causes, build trusted partnerships with business partners, and manage knowledge assets.

**COMM 4035 Cultural Intelligence through Communication (4 Credits)**

There is a growing need to communicate effectively across cultural differences. Writer James Neuliep defines culture as an accumulated pattern of values, beliefs, and behaviors shared by an identifiable group of people with a common history and verbal and nonverbal code system. Culture pervades every aspect of the communicative process. This course uses a contextual approach to examine the ways culture, communication, context, and power intersect in intercultural communication interactions. Students will identify and analyze obstacles and barriers to effective intercultural communication. Finally, students will examine strategies and skills needed to become a competent and effective intercultural communicator.

**COMM 4045 Applied Critical Thinking in Communication (4 Credits)****COMM 4140 Marketing Strategy and Process (4 Credits)**

Creating and sustaining competitive advantage is driven by strategies that integrate people, process, and systems. In this application-oriented course, students will examine the fundamentals of marketing, develop the insights and skills to formulate and implement sound marketing decisions, and apply ethical marketing strategies which contribute to the overall business (for-profit and non-for-profit) performance. Students will apply strategic concepts through discussion and teamwork. Throughout the quarter, students will examine how information and research is used to inform marketing management decisions to all level of the organization, including external stakeholders. Because marketing communication plays such a critical role in marketing success, integrating different types of communication channels will be an emphasis.

**COMM 4144 Strategic Public Relations (4 Credits)**

In a complex global environment, business, government, nonprofit, and other organizations require professional public relations practitioners who can effectively develop two-way relationships with constituents/audiences to enable strategic and effective communication processes. This course prepares students for this complex environment through the study and practice of essential components of public relations, which include the use of strategy, the value of relationship development, an overview of the range of PR tactics, the evolving role of digital communications and social media to PR, and the importance of ethics and transparency in PR practice.

**COMM 4145 Public Relations Writing and Content Creation (4 Credits)**

Effective and persuasive writing and creative content development are integral parts of today's public relations programs. This course deepens students' knowledge of the range of content available for public relations professionals to build relationships with media while ensuring they become effective, creative, clear, and concise architects and translators of the written word. In this course, students will develop a deep understanding of messaging for target audiences and the wide variety of concepts at their disposal to create effective communication programs. Students will leave the course with the ability to establish key messages using supporting evidence, craft content for target audiences, evaluate the impact of various media relations techniques as a way to achieve earned media coverage. Students will also develop a portfolio of well-written public relations collateral, including long- and short-form materials.

**COMM 4146 Ethics in Public Relations (4 Credits)**

Public relations professionals, regardless of the industry in which they work, are often tasked with "doing the right thing" when communicating with the public. But what do we mean by "the right thing" in this context? The course explores the role and importance of ethics in public relations practice. Students will consider the fundamentals of transparency and ethics, ethics theory, and ethical decision-making models. With this foundation in place, students will then learn to apply ethical theory and methodology in practice in crisis management, advocacy, corporate social responsibility, and social media contexts.

**COMM 4150 Reputation Management & Crisis Communication (4 Credits)**

Reputation management is the process of tracking, maintaining, and defending a consistent message and positive image across all media. It applies to corporations and individuals, to billion-dollar brands and grassroots causes. Today's reputation management integrates public relations, search engine optimization (SEO), content marketing, and social media management. It requires constant monitoring and participation in the dialogues that comprise modern media as the traditional roles of sender and receiver merge and evolve. As digital presence has become the front lines of reputation management, systems use various predefined criteria for processing complex data to report behavior and activity surrounding a reputation, thereby automating the process of determining positive sentiment, influence, and trustworthiness. While reputation management is an ongoing proactive effort, PR professionals also need to be prepared to react in a crisis. Crisis communication planning and management strategies are an important subset of this field. Through the study of proactive and reactive programs, students will learn how to apply reputation and crisis management principles in times of quiet and chaos all while monitoring, positioning, and measuring a brand's presence online.

**COMM 4154 Media Channels and Technology (4 Credits)**

This course will focus on the increasing role technology and analytics play in the public relations profession. Data-driven decision-making is now essential to the development of public relations strategy and tactics. This course will expose students to engagement across media channels—including owned, shared, paid, and earned media—as well as techniques and strategies for the effective use of technology for tracking, planning, and engaging audiences. This course will position students to lead strategic, data-driven decision-making in the public relations field. The course will also provide students with the tools necessary to engage new media and technology effectively in public relations.

**COMM 4200 Instructional Design (4 Credits)**

Designing training that maximizes results is a central concern in organizations. Students in this course identify the elements of effective learning design, formally and informally, for organizations and professional arenas. Students will strategize instructional approaches in order to meet organizational needs and objectives. Students will create an instructional design product that can be applied appropriately in professional settings.

**COMM 4203 Adult Learning Strategies and Theories (4 Credits)**

Individuals involved in adult learning design and development benefit from a strong foundation in adult learning theories and strategies to develop effective practices. Adult learners bring unique needs, life experiences, and prior knowledge to learning situations and thrive when inclusive, motivational, and relevant application of knowledge, concepts and skills are utilized. In this course, foundational and emerging theories regarding how adults learn best, along with analysis of key instructional strategies, provide solid grounding for implementing best practice in adult learning.

**COMM 4206 Evaluating Learning and Development Effectiveness (4 Credits)**

Assessment and evaluation enable learning and development professionals to determine if learners acquired the intended content, knowledge, skills and/or attitudes; if the benefits of the training endeavors are worth the costs; whether training has met organizational goals; and if further training is necessary. Through case studies, practice exercises, and the development of an authentic assessment plan, students learn how to design, interpret, and apply different types of learning and development evaluation concepts and methods to their respective or intended work settings.

**COMM 4226 Managing Organizational Conflict (4 Credits)**

Conflict is a part of all businesses, government, and nonprofit organizations. It is a product of human existence and diversity in an interrelated society. Though many people fear conflict as a threat to a productive work environment, it is not conflict itself that jeopardizes harmony but unresolved conflict, and the associated costs are well documented. Organizations increasingly recognize that conflict need not carry costly financial and interpersonal burdens and can, in fact, serve as a productive change agent. Students in this course explore the nature and sources of organizational conflict and facilitate development of practical skills to recognize and manage conflict using case studies, exercises, speakers, and field research. Students are introduced to the concept of various conflict resolution methods, including individual initiative, negotiation, mediation, restorative justice, and arbitration. This course is well suited for leaders and aspiring leaders in any profession who want to increase their interpersonal capability and enhance their value in organizations.

**COMM 4235 Integrating Learning and Development Technologies (4 Credits)**

Organizational learning and talent development are changing rapidly in the face of staggering technological advances. As organizations become increasingly decentralized, teams interact virtually, and collaboration becomes dependent on digital tools. In this context, it is imperative that learning and development professionals harness technology to meet the changing needs of individuals and the places/spaces in which they work. In this course, students explore the latest technological trends in Learning and Development, while also learning how to evaluate technologies for their appropriateness in meeting organizational learning and development goals. In recognition of the rapidly changing nature of this field, students also develop strategies for future learning to keep their work relevant and engaged.

**COMM 4301 Brand Management Strategies (4 Credits)**

Organizations of all types – private, public, and nonprofit – increasingly recognize that a strong brand can ultimately become one of an organization's greatest assets. Executing on a strategy designed to build long-lasting brand recognition, resonance, and loyalty is a critical marketing responsibility. In today's dynamic business landscape, brand management requires complex decisions to create meaning and value for consumers. This course covers the essential components of branding with a focus on how to maintain consistent alignment between brand vision and marketing strategies. Students are strongly encouraged to take at least one other marketing concentration course prior to this course.

**COMM 4306 UX Strategies and Methods (4 Credits)**

This course will cover user experience strategies, tactics, and methodologies. Students will learn how to think about UX from a high level, set goals for a product or project, and turn the strategies into concrete steps. Students will learn how to employ research, design thinking, usability testing and analysis to enhance the user experience.

**COMM 4307 Developing Content for User Experience (4 Credits)**

This course will explore how strategically developed content is a cornerstone of the user experience. Students will learn the User Experience Design workflow and how to advocate, research and deliver content for digital experiences. The course will also cover how to measure the business impact of content strategy, as well as how to scale content strategy as a practice within organizations.

**COMM 4308 UX Team Management (4 Credits)**

Building and managing a dynamic UX team is a skillset that goes beyond typical design best practices and team management - the role of design leader today expects company leadership in innovation, creativity and culture. This course will provide the students with the knowledge needed to build, manage, and nurture highly dynamic, fast-paced cross functional teams while also providing experience in the transformational components of design leadership.

**COMM 4309 Service Design (4 Credits)**

Where UX design is specific to the digital experience, service design crosses over from the tangible to intangible experiences within both digital and analog channels. This course takes students through an in-depth exploration of research, mapping, blueprinting, and deep user flow analysis as it relates to interactions and experiences of all types. The impact behind processes for employees and customers across all sectors including public, private, and nonprofit will be covered.

**COMM 4318 Mobile Marketing (4 Credits)**

Mobile is global. We are living in an unprecedented time where people all around the world have access to mobile devices. These devices bring the world to the palm of our hands, and we can do almost anything with them. Often a user's first experience with a product or service will be on a mobile device rather than a desktop computer, so we must shift our mindset to a mobile-first mentality. The fast-paced, ever-changing field of mobile marketing has created exciting opportunities for brands to meet customers where they are and approach them with the right strategy. The focus of this course is to provide an expansive grasp of the tools and tactics used to develop and implement a multi-channel mobile marketing strategy. Through discussion, research, and practical experience, students will learn how to maximize mobile to have the greatest impact within their overall marketing plan.

**COMM 4319 Compelling Content Creation (4 Credits)**

In our digital world, communication is increasingly visual. This course will expose students to the art of turning facts into compelling, strategically-crafted visual narratives that engage an audience. From presentations to interoffice memos, press releases to video content, students will apply course concepts to develop critical business communication skills. The course will also explore on-screen video techniques to maximize impact in a business world that utilizes Zoom and other online tools.

**COMM 4320 Social Media Strategy (4 Credits)**

Social media is a critical communication channel that is constantly evolving. Learn to plan, manage, measure, and anticipate social media efforts that add value to your target audiences through organic and paid options. In this course, students will explore motivations that prompt audiences to engage, identify the tools and technology needed to execute social media campaigns or communication interventions, and devise effective strategy and tactics needed to cut through the noise. Create a stronger online presence, show personality, and build your brand by gaining skills needed to successfully communicate on behalf of any organization or individual using social media. Through online research, case studies, and practical exercises, students will gain first-hand knowledge of social media techniques and how to leverage social media as a communications tool.

**COMM 4321 Integrated Digital Marketing (4 Credits)**

At an ever-increasing rate, consumers use digital media to live, to work, and to play. Digital marketing leverages digital media and technologies allowing brands to promote their products and services to very targeted audiences at key online touchpoints in highly measurable ways. This course takes a deep dive into digital marketing strategies and provides an expansive grasp of digital marketing tactics. Students will analyze the digital marketplace and make strategic decisions about which tactics will have greatest impact, how to integrate them into the marketing mix, and ultimately how to use digital marketing to achieve overarching marketing goals. Required pre-requisites: COMM 4140.

**COMM 4324 Marketing Analytics (4 Credits)**

Marketing analytics leverages business metrics to better understand marketing performance and return on investment (ROI). Through data analysis, attribution modeling, and reporting, marketers are able to measure and optimize their initiatives. This class focuses on developing a performance measurement system for marketing channels, incorporating measuring website traffic, conducting market research, estimating usage patterns, and interpreting website visitor behavior. Key performance indicators are tied to marketing goals and tactical campaigns. Students will conduct a review of online metrics, compare marketing analytics vendors, and develop ways to communicate performance.

**COMM 4325 Search Marketing (4 Credits)**

Search marketing is a communicator's medium and a vital part of any marketing mix. This type of digital marketing specifically focuses on increasing a website's visibility in the search engine results pages (SERPs) through organic Search Engine Optimization (SEO) and pay-per-click (PPC) while also drawing attention to quality website content or well-crafted paid ad messaging. This class will provide deep insight into the tools and tactics of search marketing. Students will learn what makes search marketing demanding and how to overcome the challenges presented by regular search engine algorithm updates, increasing mobile device usage, and the influence of social media. Two key techniques of SEM will be explored: search engine optimization (SEO) to improve results from the natural or organic listings, and paid search marketing, or pay-per-click (PPC), to deliver results from the sponsored listings within search engines. A variety of search practices, including mobile and local, will be explored.

**COMM 4326 Digital Campaign Management (4 Credits)**

A digital marketing campaign is a strategic and creative online effort to promote an organization's goal, reach their target audience in a variety of ways and drive them toward a desired action. Digital campaigns are often more complex and dynamic than traditional marketing methods, requiring constant analysis of data and evaluation of effectiveness. Students will experience this dynamism first hand through a course-long interactive campaign simulation during this course. Students will examine the process and stages engaged when creating a successful digital marketing campaign; investigate how marketing automation can streamline efforts and improve team efficiencies; and evaluate how tracking and measuring campaign data can facilitate optimization and scalability to boost ROI. Recommended Prerequisite: Students are strongly advised to take COMM 4321 prior to this course.

**COMM 4701 Topics in Communication Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of communication, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects, such as ethics, human communication theory, or interpersonal communication. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**COMM 4900 Communication Inquiry, Analysis, and Trends (4 Credits)**

In this course, students will actively immerse themselves in their chosen communication field, cultivating essential networking, writing, and analytical skills. Students will establish professional networks for mentorship, industry insight, and understanding field norms. They will enhance their business writing skills, ensuring clarity and authenticity in their communication. Students will explore current and future industry trends, strategizing for adaptation, relevance, and personal growth. Throughout the course, students will engage in reflective exercises, connecting course concepts to their learning and professional goals, fostering a deeper understanding of their communication practice.

**COMM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**COMM 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**COMM 4905 Storytelling through Research and Measurement (4 Credits)**

Whether conducting a needs assessment, attempting to understand your audience, or developing a new product, communication professionals regularly harness the power of research, measurement, and storytelling. This course explores mixed-methods research design; data collection strategies; strategies for measuring the impact of communication challenges and interventions; and the fundamentals of telling data-driven stories that persuade stakeholders and demonstrate ROI. Together these tools enable confident problem solving, enhance organizational decision making, and influence stakeholder behavior. This course culminates in an individualized project that integrates research design, data collection, data analysis, and storytelling.

**COMM 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the seminar produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**COMM 4980 Internship (0-4 Credits)**

The Communication Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all COMM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**COMM 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**COMM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## Computer Science (COMP)

**COMP 3001 C and C++ Programming Foundations for New Graduate Students (4 Credits)**

This accelerated course covers the basics of discrete mathematics including functions, relations, counting, logic, proofs etc that is necessary to attend CS graduate school. In addition, it includes an introduction to programming and algorithm analysis. Enrollment restricted to graduate students.

**COMP 3002 C and C++ Foundations II for New Graduate Students (4 Credits)**

This accelerated course continues to build on the basics of discrete mathematics by covering material including advanced counting, recurrences, graphs, trees, traversals, automata etc. that is necessary to attend Computer Science graduate school. In addition, it includes an introduction to additional algorithms and data structures. Prerequisite: COMP 3001.

**COMP 3003 Foundations in Computer Systems (4 Credits)**

This course introduces computer systems, including instruction set architectures; memory hierarchies including registers, caching, virtual memory, paging, and segmentation; number representations; binary arithmetic and operations; assembly language instructions; and pipelining in the CPU.

**COMP 3004 Foundations in Discrete Structures & Algorithms (4 Credits)**

Both discrete mathematics and an understanding of algorithms along with their analysis form principle foundations in computer science. In this course, the fundamentals of discrete mathematics including functions, relations, counting, logic, proofs, counting, recurrences, and probability are covered. In addition, beginning data structures and algorithms are covered including linked-lists, graphs, hash-tables, sorting, and binary search. An analysis of these data structures and algorithms is also covered through big-O notation and proof methods.

**COMP 3005 Foundations in Python Programming (4 Credits)**

This accelerated course covers the basics of Python programming. By the end of the course students will be able to develop, design and implement Python programs, explain the differences between data types, learn to read from and write to files, understand and use data structures, understand and use recursion, and use Python packages.

**COMP 3006 Python Software Development (4 Credits)**

This accelerated course covers advanced Python programming for data scientists and cybersecurity professionals. Course Objectives: name and demonstrate proficiency using advanced Python programming techniques; analyze a programming task and create a development plan and high-level software design that accomplishes the task; relate common portions of the Python standard library to specific programming tasks; understand and apply aspects of the Python scientific programming ecosystem to achieve an analysis goal. Prerequisite: COMP 3005.

**COMP 3007 Foundations in Data Science Mathematics I (4 Credits)**

This course presents the elements of calculus essential for work in data science. Students will study differentiation and integration in the context of probability density and of optimization.

**COMP 3008 Foundations in Data Science Mathematics II (4 Credits)**

This course presents the elements of linear algebra and discrete math essential for subsequent coursework in data science.



**COMP 3200 Discrete Structures (4 Credits)**

Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: (COMP 2300 or MATH 2200) and (COMP 2673 or COMP 1353).

**COMP 3351 Programming Languages (4 Credits)**

Learn the fundamentals of programming languages through functional programming through an in-depth understanding of syntax and semantics around program structures and how programming languages are parsed and interpreted. Understand recursion as a fundamental problem-solving paradigm and the important role that higher order types and kinds play in eliminating errors and simplifying software development. Prerequisites: COMP 2370 and ((COMP 2355, COMP 2691) or COMP 2362).

**COMP 3352 Elements of Compiler Design (4 Credits)**

Techniques required to design and implement a compiler; topics include lexical analysis, grammars and parsers, type-checking, storage allocation and code generation. Prerequisite: COMP 3351.

**COMP 3353 Compiler Construction (4 Credits)**

Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

**COMP 3356 Introductory C/C++ Programming (4 Credits)**

This course introduces unmanaged programming language concepts to students whose primary programming experience is in a managed language (Java/Python, etc.). Concepts like type safety, manual memory management and "unsafe" library functions are covered. Common pitfalls in these languages from which most security issues arise are explained and students gain experience in understanding such code and evaluating it for program errors. Students will also be introduced to important compiled language concepts of static/dynamic linking, compilation and debugging. Prerequisites: COMP 3006.

**COMP 3361 Operating Systems I (4 Credits)**

Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: for undergraduates: (COMP 2355 and COMP 2691) or COMP 2361; COMP 2370; for graduate students: COMP 3003, 3004, and 3005.

**COMP 3371 Data Structures & Algorithms (4 Credits)**

Design and analysis of algorithms and data structures; asymptotic complexity, recurrence relations, lower bounds; algorithm design techniques such as incremental, divide-and-conquer, dynamic programming, iterative improvement, greedy algorithms; randomized data structures and algorithms. Prerequisites: COMP 2370 or equivalent and COMP 3200.

**COMP 3372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks.

**COMP 3381 Software Engineering I (4 Credits)**

An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Cross-listed with COMP 4381. Prerequisites: COMP 3351; COMP 3361 or COMP 2362; or instructor permission.

**COMP 3382 Software Engineering II (4 Credits)**

Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

**COMP 3400 Advanced Unix Tools (4 Credits)**

Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

**COMP 3411 Web Programming II (4 Credits)**

In this course you will learn how to develop a full-stack web application that is capable of serving dynamic content from a database. Furthermore, you will learn the core design concepts and principles that will enable you to develop scalable and easy to maintain webapplications - a set of skills that will serve you well in both your personal and professional projects in the future. Prerequisite: COMP 3410.

**COMP 3412 Web Projects: Web Development III (4 Credits)**

In this course you will learn how to develop, as a group, a full-stack web application that is capable of serving dynamic content from a database. We will use the MongoDB, ExpressJS, Angular, and Node.js (MEAN) software stack to work on a real-life problem presented to us by an external product owner. In the class we will use the Scrum framework for Agile development to work, as a software team, through several sprints of development. You will be peer reviewing each other throughout the course, and the product owner will also be reviewing your product through end-of-sprint demos as features are completed. The goal for this class is for it to be a fun, collaborative, and educational environment that demonstrates what it is like to work as a real software team. Prerequisite: COMP 3411.

**COMP 3421 Database Organization & Management I (4 Credits)**

An introductory class in database management systems covering both relational and non-relational databases with an emphasis on relational. Topics include database design, ER modeling, relational algebra, SQL, scripting, and embedded SQL. Each student will design, load, query and update a nontrivial database using a relational database management system (RDBMS). In addition, an introduction to a NoSQL database will be included. Graduate students will read one or two relevant technical papers and write a summary report. Prerequisites: for undergraduates: COMP 1353 or COMP 2673; for graduates: COMP 3005.

**COMP 3424 NoSQL Databases (4 Credits)**

In this course, students learn what NoSQL databases are, learn to identify the differences between them, and gain a fundamental understanding between SQL, relational databases, and NoSQL databases. Students further explore which type of NoSQL database is the correct one given a use-cases, examining types, methods of communicating with it, contrasts to other NoSQL databases, performance and scalability. Prerequisites: for undergraduates, COMP 2355 or COMP 2361; for graduates: COMP 3005.

**COMP 3431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 2370.

**COMP 3501 Introduction to Artificial Intelligence (4 Credits)**

Introduces a variety of Artificial Intelligence concepts and techniques, relevant to a broad range of applications. Students survey multiple techniques including search, knowledge representation and reasoning, probabilistic inference, machine learning, and natural language processing. Examines concepts of constraint programming, evolutionary computation and non-standard computation. Prerequisites: COMP 2370.

**COMP 3621 Computer Networking (4 Credits)**

An introduction to computer networks with an emphasis on Internet protocols. Topics include: internet design, application layer protocols such as SMTP and HTTP, session layer protocols including TCP and UDP, the internet protocol (IP), link layer technology such as Ethernet, and security issues related to networking. Programming experience of client/server architectures using sockets and TCP/UDP through projects is emphasized. Prerequisites: for undergraduates: (COMP 2355 or COMP 2361) and COMP 2370; for graduates COMP 3004 and COMP 3006. Cross listed with COMP 4621.

**COMP 3681 Networking for Games (4 Credits)**

Implementing the networking code for multiplayer games is a complex task that requires an understanding of performance, security, game design, and advanced programming concepts. In this course, students are introduced to the networking stack and how this is connected to the Internet, learn how to write protocols for games, and implement several large games using a game engine that demonstrate the kind of networking and protocols required by different genres of games. In addition, tools are introduced that help understand and debug networking code, simplify the creation of protocols, and make the development of networking code easier.

**COMP 3701 Topics in Computer Graphics (4 Credits)****COMP 3702 Topics in Database (4 Credits)****COMP 3703 Topics-Artificial Intelligence (4 Credits)****COMP 3704 Advanced Topics: Systems (4 Credits)****COMP 3705 Topics in Computer Science (1-4 Credits)****COMP 3731 Computer Forensics (4 Credits)**

Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide students an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis). Prerequisites: COMP 3361; COMP 2355 or 2361 for undergraduates; COMP 3006 for graduates.

**COMP 3801 Introduction Computer Graphics (4 Credits)**

Fundamentals of 3D rendering including the mathematics behind coordinate systems, projections, clipping, hidden surface removal, shadows, lighting models, shading models, and mapping techniques. Significant use of 3D APIs through shader programming is covered along with the basics of 3D model representation and animations. Satisfies "Advanced Programming" requirements for graduate students. Prerequisites: COMP 2370, MATH 1952 or 1962.

**COMP 3821 Game Programming I (4 Credits)**

Introduces the fundamentals of digital game programming that are essential as future game programmers or game designers. Students have the opportunity to learn game engine architecture, 2D and 3D linear algebra for graphics, sprites and animations, input handling, finite state machines, particle systems, user interfaces, game audio, and artificial intelligence for games. Prerequisites: COMP 2370 and COMP 2821.

**COMP 3822 Game Programming II (4 Credits)**

In this course, students learn how to work with a 3D game engine and build 3D games. Topics include algorithms, mathematics for 3D game engines, scene management, animations, 3D shaders, particle systems, physics for games, UIs, terrain systems, and working with higher-level scripting languages on top of the low-level implementation language. Prerequisites: COMP 3821. Suggested corequisite or prerequisite: COMP 3801.

**COMP 3904 Internship/Co-Op in Computing (0-10 Credits)**

Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

**COMP 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**COMP 4100 Human-Computer Interaction (4 Credits)**

Introduces students in computer science and other disciplines to principles of and research methods in human-computer interaction (HCI). HCI is an interdisciplinary area concerned with the study of interaction between humans and interactive computing systems. Research in HCI looks at cognitive and social phenomena surrounding human use of computers with the goal of understanding their impact and creating guidelines for the design and evaluation of software, interfaces, physical products, and services in industry. No prerequisites are required to take the course and students from all disciplines are welcome. Cross listed with COMP 3100.

**COMP 4333 Parallel and Distributed Computing (4 Credits)**

Current techniques for effective use of parallel processing and large scale distributed systems. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course qualifies for the Computer Science "Advanced Programming" requirement. Prerequisites: COMP2370 and COMP2355, or equivalent.

**COMP 4334 Parallel and Distributed Computing for Data Science (4 Credits)**

Current techniques for effective use of parallel processing and large-scale distributed systems for data science. Programming assignments will give students experience in the use of these techniques. Specific topics will vary from year to year to incorporate recent developments. This course is not to be used for the MS Computer Science. Prerequisite: COMP 4581.

**COMP 4355 Advanced System Programming (4 Credits)**

This course covers programming in a UNIX environment, including use of common command line utilities, scripting, source control via Git, and integration of POSIX system calls into C/C++ code. These features will be leveraged to solve practical problems cleanly and efficiently. More emphasis will be placed on using these features than on how those features work. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4362 Operating Systems II (4 Credits)**

Continuation of COMP 3361. Case studies of existing operating systems programming. Prerequisite: COMP 3621.

**COMP 4370 Algorithmic Problem Solving (4 Credits)**

The course is intended for students who are familiar with programming syntax but have not had much experience writing computer programs to solve a problem stated as a high-level description. The course will run through multiple such problem descriptions, discuss the design of programs to solve those problems using popular data structures, and have students implement those designs using a programming language. This course does not count for MS Computer Science requirements. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4372 Advanced Algorithms (4 Credits)**

Advanced techniques for the design and analysis of algorithms and data structures; amortized complexity, self-adjusting data structures; randomized, online, and string algorithms; NP-completeness, approximation and exact exponential algorithms; flow networks. Prerequisite: COMP 3371. Cross listed with COMP 3372.

**COMP 4384 Secure Software Engineering (4 Credits)**

This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software. There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3006, COMP 3361, COMP 3356.

**COMP 4401 Introduction to Python for Data Science (2 Credits)**

This eight-week course enables aspiring graduate students in data science to meet their Python programming proficiency prior to matriculation. Students who complete this course will be able to write and modularize code, design efficient control structures, perform basic data operations, debug errors, distinguish data types and basic structures, and work within an integrated development environment.

**COMP 4431 Data Mining (4 Credits)**

Data Mining is the process of extracting useful information implicitly hidden in large databases. Various techniques from statistics and artificial intelligence are used here to discover hidden patterns in massive collections of data. This course is an introduction to these techniques and their underlying mathematical principles. Topics covered include: basic data analysis, frequent pattern mining, clustering, classification, and model assessment. Prerequisites: COMP 4441 and COMP 4581.

**COMP 4432 Machine Learning (4 Credits)**

This course will give an overview of traditional machine learning techniques, their strengths and weaknesses, and the problems they are designed to solve. This will include the broad differences between supervised/unsupervised and reinforcement learning as well as associated learning problems such as classification and regression. Techniques covered, at the discretion of the instructor, may include approaches such as linear and logistic regression, support vector machines, kNN, decision trees, random forests, Naive Bayes, EM, k-Means, and PCA. After course completion, students will have a working knowledge of these approaches and experience applying them to learning problems. Enforced Prerequisites: COMP 4442 and COMP 3006.

**COMP 4433 Data Visualization (4 Credits)**

This course explores visualization techniques and theory. The course covers how to use visualization tools to effectively present data as part of quantitative statements within a publication/report and as an interactive system. Both design principles (color, layout, scale, and psychology of vision) as well as technical visualization tools/languages will be covered. Prerequisites: COMP 3006.

**COMP 4441 Introduction to Probability and Statistics for Data Science (4 Credits)**

The course introduces fundamentals of probability for data science. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. The techniques will include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Prerequisites: COMP 3007 and 3008; or permission of Data Science Faculty Director.

**COMP 4442 Advanced Probability and Statistics for Data Science (4 Credits)**

This course builds on material in Probability and Statistics 1. Students will carry out model fitting and diagnostics for multiple regression, ANOVA, ANCOVA, and generalized linear models. Dimension reductions techniques such as PCA and Lasso are introduced, as are techniques for handling dependent data. The course introduces the principles of resampling and Bayesian Analysis. Students will acquire sound theoretical footing for the methods where practical, and will apply them to real-world data, primarily using R. Enforced Prerequisites: COMP 4441.

**COMP 4447 Data Science Tools 1 (4 Credits)**

Organizations are using data science to extract actionable insight from data. To highlight the hidden patterns in the data, this course equips students with essential skills for data collection, cleanup, transformation, feature engineering, summarization, visualization, and collaboration. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, API requests, web-scraping, GitHub and various data sets to perform these activities. Prerequisites: COMP 3006.

**COMP 4448 Data Science Tools 2 (4 Credits)**

Building a successful predictive model is a multi-faceted process. This course focuses on hypothesis testing and the development of predictive models. Students will learn the data science process for model development while learning to program a variety of predictive algorithms. Students will do assignments and a final project. This is a hands-on course. Students will use Python libraries, Linux commands, and various data sets to perform these activities. Prerequisite: COMP 4447.

**COMP 4449 Data Science Capstone (4 Credits)**

Data Science Capstone provides students an opportunity to demonstrate their expertise as data scientists. Students are expected to integrate prior knowledge and skills to design, develop, test, and present 'full-cycle' data science products, and apply them in real-world contexts. This includes assessing and communicating their value to decision-making. Two sets of challenges of increasing complexity are presented as mid-term and term projects. These two projects are implemented, documented, tested, and presented by the students or students' two-person teams. Prerequisites: COMP 4442.

**COMP 4455 Shell Scripting and System Tools (4 Credits)**

This course covers navigating and utilizing tools in a UNIX environment, including use of common command line utilities, Bash and Python shell scripting, source control via Git, pipes and I/O redirection, networking in Python and OS multi-processing/multi-threading. More emphasis will be placed on using these tools than on how those tools work. Prerequisite: COMP 3006.

**COMP 4510 Software for AI Robotics (4 Credits)**

This course provides an introduction to the key artificial intelligence issues involved in the development of intelligent robotics. We will examine a variety of algorithms for autonomous mobile robot behavior, exploring issues that include software control architectures, localization, navigation, sensing, planning, and uncertainty. We also introduce the Robot Operating System (ROS) middleware, which is popular in academic, industry, and government research. This course does not assume any prior knowledge of artificial intelligence or robotics. The course will be project focused. In the project assignments you will learn ROS and learn to implement algorithms essential for conducting AI robotics research. Prerequisites: COMP 3005 and proficiency in Python and Unix command-line tools.

**COMP 4531 Deep Learning: Model Design and Application (4 Credits)**

This course addresses the foundational concepts and components of Artificial Neural Networks (ANN), highlighting their capabilities, strengths, and weaknesses as a machine learning algorithm. Students taking this course will develop ANN models from scratch in Python as a basis for understanding their design as well as the underlying mechanics and calculations that shape their behavior. Key topics such as forward-backward propagation, loss function characteristics and optimization will be considered in relation to model design and computational efficiency as well as to problems such as exploding and vanishing gradients. Training strategies (e.g., dropout, initialization, batch normalization) will further enable students to assess trade-offs in model bias & variance. Coupled with hands-on assignments, these building blocks provide the knowledge and skills required to effectively design and implement ANN models that are ethically and technically sound. As well as foreground important architectures such as Convolutional ANNs, Recurrent ANNs, LSTMS, and Transformers as well as their applicability to modern problems. Student learning and proficiency will be assessed based on a combination of quizzes, coding assignments, exams, and a culminating project. Prerequisite: COMP 4432.

**COMP 4581 Algorithms for Data Science (4 Credits)**

This course introduces the design and analysis of algorithms within the context of data science. Topics include; asymptotic complexity and algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, and advanced sorting techniques. Examples to illustrate techniques are drawn from multi-dimensional clustering (k-means and probabilistic), regression, decision trees, order statistics, data mining using apriori algorithms, and algorithms for generating combinatorial objects. Prerequisites: COMP 3006.

**COMP 4591 Computational Geometry (4 Credits)**

This class deals with the design and implementation of efficient algorithms for problems defined over geometric objects, such as points, lines, polygons, surfaces, etc. The methods and algorithms covered find applications in many areas, including computer graphics (e.g., hidden surface removal), computer-aided design and manufacturing (e.g., 3D printing), machine learning (e.g., supervised and unsupervised classification), geographic information systems (e.g. terrain visibility), robotics (e.g., motion planning), data mining (e.g., dimensionality reduction), and computer vision (3D reconstruction), to name a few. Fundamental geometric problems such as partitioning, proximity, intersection, convexity, visibility, point location, and motion planning are focused on. Efficient data structures and algorithms for their solutions and design techniques germane to the field, such as divide-and-conquer, plane sweep, randomization, duality, etc. are discussed in detail. Practical methods for the robust implementation of geometric algorithms are also covered. Prerequisites: COMP 3200 and COMP 3371. This course satisfies the Theory requirement for graduate students.

**COMP 4600 Seminar in Computer Science (0-4 Credits)**

Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15- page paper with bibliography required.

**COMP 4621 Computer Networking (4 Credits)**

The Internet is arguably the most transformative invention in recent history and is at its core a massive global computer network (of networks). Students in this course learn how the Internet works, from the highest-level application layer to the lowest-level hardware layer. Topics covered include the OSI and TCP/IP reference models, physical transmission methods, error detection and correction, addressing, routing algorithms, congestion control and more. Prerequisites: COMP 3006, COMP 3361 (or instructor approval). Cross listed with COMP 3621.

**COMP 4701 Special Tpcs-Computer Graphics (1-4 Credits)****COMP 4702 Advanced Topics-Database (3 Credits)****COMP 4703 Adv Topics-Artificial Intell (1-4 Credits)****COMP 4704 Advanced Topics-Systems (3-4 Credits)****COMP 4705 Advanced Topics-Programming (1-4 Credits)****COMP 4709 Special Tpcs-Computer Security (3 Credits)****COMP 4721 Computer Security (4 Credits)**

This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisites: COMP 3006, COMP 3361 (or advisor/instructor approval).

**COMP 4722 Network Security (4 Credits)**

Network Security covers tools and techniques employed to protect data during transmission. It spans a broad range of topics including authentication systems, cryptography, key distribution, firewalls, secure protocols and standards, and overlaps with system security concepts as well. This course will provide an introduction to these topics, and supplement them with hands-on experience. In addition, students will perform an extensive analysis, or development of a security related product independently. Prerequisites: COMP 4721.

**COMP 4723 Ethical Hacking (4 Credits)**

Ethical hacking is the process of probing computer systems for vulnerabilities and exposing their presence through proof-of-concept attacks. The results of such probes are then utilized in making the system more secure. This course will cover the basics of vulnerability research, foot printing targets, discovering systems and configurations on a network, sniffing protocols, firewall hacking, password attacks, privilege escalation, rootkits, social engineering attacks, web attacks, and wireless attacks, among others. Prerequisites: COMP 3361, or COMP 3001, 3002, 3003, and 3004.

**COMP 4724 Systems Security Management (4 Credits)**

This course covers basic system administration tasks on a Unix environment, with a special focus on command line navigation, file/process access control, setting up network configurations, and managing services related to networks and their security. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4732 Human-Centered Data Security and Privacy (4 Credits)**

With an increasing digital presence, it is critical to understand users' needs and requirements in using technological equipment to secure interactions and adhere to privacy perceptions. Thus, it is essential to analyze the cognitive, social, organizational, commercial, and cultural factors in mind. This course will provide a socio-technical approach for analyzing critical user interaction with devices encountered in everyday life, including web, mobiles, and wearables. This course will help students develop an understanding of technological interactions from the perspectives of multiple stakeholders such as users, developers, system administrators, and others and build tools to protect user data.

**COMP 4799 Capstone Project in Cybersecurity (1-8 Credits)**

The purpose of the cybersecurity capstone project is to provide an integrative experience that ties together the learning outcomes from academic coursework undertakings and industry skills necessary to be productive in delivering an end product. Students will engage in one of many options available, such as involvement in a research project, a case study, a product development project, or an extensive survey paper. Capstone projects are presented at the end of the quarter in front of a representative group. Prerequisites: COMP 3001, 3002, 3003, and 3004.

**COMP 4991 Independent Study (1-12 Credits)**

Independent study on a particular topic supervised by a faculty member. Student must find a faculty member who will supervise work on the topic. Cannot be arranged for any course that appears in regular course schedule for that particular year.

**COMP 4995 Independent Research (1-17 Credits)**

Research projects undertaken in conjunction with a faculty member.

**COMP 5991 Independent Study (1-17 Credits)****COMP 5995 Independent Research (1-17 Credits)**

## **Conflict Resolution (CRES)**

**CRES 3951 Mediation Fundamentals (4 Credits)**

This course provides 40-hour mediation training following the model standards for Mediator Certification programs established by the Association for Conflict Resolution. It covers the mediation process and mediator skills including preparation, opening statement, information gathering, movement and solution seeking, negotiation, confidentiality, ethics, power balancing and diversity issues. Students engage in video-recorded role-play scenarios to develop mediation skills.

**CRES 4111 Reflective Practice and Evaluation (4 Credits)**

Course is designed for practitioners who would like to become more reflective and theory oriented in their practice, and for researchers who wish to work with actual data and questions from practice. The goals are to learn techniques for making theories of practice explicit, to examine ways practice and research may modify theory, and to explore how to introduce and expand reflective practice into conflict resolution.

**CRES 4221 Negotiation Theory and Practice (4 Credits)**

An overview of negotiation theories, strategy and tactics to understand the role of power perceptions, communications, and ethics affect bargaining processes and outcomes.

**CRES 4222 Theories of Conflict Practice and Third Party Roles (4 Credits)**

An analysis and critique of the nature and role of third parties in conflict intervention including conciliator, arbitrator, facilitator, monitor, trainer. Theoretical perspectives and case studies are used to understand the situations in which third parties operate, what values and resources they bring to their roles, and how power issues affect mediator functioning. Ethical guidelines are also considered.

**CRES 4225 Conciliation and Reconciliation (4 Credits)**

Societies are often divided along ethnic, racial, or religious lines. Without work at the grassroots level, international peace agreements regularly fail within five years of ratification. How do we create sustainable post-conflict relationships? How does justice factor into peace, or into the sustainability of peace agreements? This course explores these questions by building on concepts and themes introduced in Mediation Theory (CRES 4222), and analyzing topics such as multilevel interventions and their challenges, second track diplomacy, and citizen dialogue. Reconciliation is a key factor in peace building – Voice, Acknowledgement, and Repair are specifically considered within this realm. Focus is also on the challenges presented by deep-rooted, protracted conflicts, allowing for more complete understanding of the situations in which third parties must operate.

**CRES 4400 Restorative Justice (2 Credits)**

This course explores four leading Restorative Justice practices - Victim-Offender Mediation, Conferencing, Talking Circles, and Truth Commissions - to understand how needs of victims are addressed, and embracing notions of forgiveness, reconciliation and social healing within a set of principles based on social justice.

**CRES 4410 Intractable Conflict (2 Credits)**

This course is focused on factors that lead to intractability, along with strategies for violence prevention and conflict transformation. Conflict mapping and analysis, sources of intractability, and social, psychological, economic and political dimensions of intractable conflicts are examined.

**CRES 4820 Topics in Conflict Resolution (2,4 Credits)**

Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transfos, methods for conflict resolution research.

**CRES 4830 Topics in Conflict Resolution (2-4 Credits)**

Fields of interest to Conflict Resolution Students such as negotiation, international conflict resolution case studies, restorative justice, conflict transformation, methods for conflict resolution research.

**CRES 4840 Managing Organizational Conflict in the Workplace (2,4 Credits)**

A broad study of conflict in organizations that may involve gender, race, age, disability and other issues, using lecture, case studies, group dialogue, and team projects to develop systems of management and evaluation.

**CRES 4850 Creating Agreement (2 Credits)**

Multilateral agreements are as complex as they are difficult to create. What are the key elements in this process? The history of such negotiations is one of both successes and failures. This course examines the development of criteria necessary for creating satisfactory and acceptable agreements involving multiple parties through a series of case studies that link negotiation theory and praxis.

**CRES 4870 Conflict Vulnerability Assessment (2 Credits)**

This course guides students seeking to specialize in early warning and conflict prevention approaches at the community, societal, or country level through the contemporary scholarly literature, policy-related instruments and models that seek to define and measure "conflict vulnerability."

**CRES 4961 Professional Development (0 Credits)**

To develop the specialized knowledge, skills, attitudes, values, norms, and interest needed to perform professional roles in the Conflict Resolution practitioner community. It involves informal socialization including lessons learned incidentally through association with mentors, networking with practitioners, and observations of conflict resolution processes in all areas of life. Students gain an awareness of how self-image and activities play an active part in professional socialization.

**CRES 4971 Practicum (4 Credits)**

Students design, execute, and evaluate conflict resolution interventions. Student involvement in planning, implementation, reflection, and evaluation may look different in different contexts, but all elements are present in some form. Students are supervised by faculty with relevant theoretical expertise and practice experience.

**CRES 4981 Internship (0-4 Credits)****CRES 4985 Internship (4-8 Credits)****CRES 4991 Independent Study (1-4 Credits)****CRES 4995 Independent Research (1-4 Credits)**

## Construction Management (CMGT)

**CMGT 4120 Construction Planning & Scheduling (4 Credits)**

Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite or Corequisite: CMGT 4420.

**CMGT 4155 Sustainable Development (4 Credits)**

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

**CMGT 4177 Environmental Systems and MEP Coordination (4 Credits)**

A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings.

**CMGT 4230 Design Management and Schedule Control (4 Credits)**

This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces.

**CMGT 4250 Construction Job Site Management (4 Credits)**

This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

**CMGT 4320 Introduction to Architecture and Design Management (4 Credits)**

This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

**CMGT 4410 Construction Building Systems (4 Credits)**

A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

**CMGT 4420 Construction Estimating (4 Credits)**

This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Experiential learning lab is associated with this course. Prerequisite: CMGT 4320 and CMGT 4410. This course is a co/prerequisite for CMGT 4120.

**CMGT 4480 Const Project Management (4 Credits)**

Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application.

**CMGT 4490 Residential Development (4 Credits)**

A course sequence designed to emphasize the practical application of the theories and concepts of residential development. The course provides a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property in a case format. Students will apply accounting, finance, marketing, real estate and construction management techniques in the planning for a residential development. The application of green building materials and methods is emphasized.

**CMGT 4700 Topics in Construction Mgmt (0-4 Credits)****CMGT 4980 Construction Mgmt Internship (0-4 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities.

**CMGT 4991 Independent Study (1-10 Credits)**

## Continuous Enrollment (CENR)

**CENR 4500 Continuous Enrollment-Master P (4 Credits)****CENR 4600 Continuous Enrollment-Master (8 Credits)**

Continuous Enrollment 4600 registration permits graduate students to maintain full-time status with the University and to use University resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing full-time academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 4600 is for master's level and EdS students, including those with approved time extensions for completion of their degrees and who are eligible for financial aid.

**CENR 4700 Continuous Enrollment-MAext (0 Credits)**

Continuous Enrollment 4700 registration permits graduate students to maintain active status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 4700 is for master's level and EdS students who have an approved extension of time for completion of their degree program, but who are no longer eligible for financial aid because they are past the 7-year master's level (6 years for MSW), or 8-year EdS financial aid eligibility limit. CENR 4700 shows as 0 credit hours and does not confer loan eligibility or loan deferment.

**CENR 5600 Continuous Enrollment-PhD (8 Credits)**

Continuous Enrollment 5600 registration permits graduate students to maintain full-time status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing full-time academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 5600 is for doctoral level students, including those with approved time extensions for completion of their degrees and who are eligible for financial aid.

**CENR 5700 Continuous Enrollment-PhDext (0 Credits)**

Continuous Enrollment 5700 registration permits graduate students to maintain active status with the University and to use university resources; including library, e-mail, lab access, student health insurance, and reduced rates at the Coors Fitness Center. It is only for students who have completed all their course work and is allowed only when a student is pursuing academic work/research necessary to complete a degree. Permission to enroll for Continuous Enrollment is granted for up to one academic year beginning in the fall quarter. Students requiring CE must complete and submit the proper permission form prior to registration. CENR 5700 is for doctoral level students who have an approved extension of time for completion of their degree program, but who are no longer eligible for financial aid because they are past the 10-year financial aid eligibility limit. CENR 5700 shows as 0 credit hours and does not confer loan eligibility or loan deferment.



# Counseling Psychology (CNP)

## **CNP 4642 Adult Development (3 Credits)**

Literature on normal development of adult thinking and problem-solving processes and the self-esteem. Physiological changes and relationship between cognitive development and developmental tasks of adults included.

## **CNP 4645 Lifespan Development (5 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development.

## **CNP 4700 Counseling Theory (5 Credits)**

Basic counseling theories and philosophical principles as a foundation for professional training including history, concepts, techniques and trends.

## **CNP 4701 Advanced Seminar: Counseling Theory (3 Credits)**

Focus on advanced practice issues and (doctoral students only) integration of theory and practice.

## **CNP 4702 Introduction to Assessment (5 Credits)**

This is a biweekly course designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course will provide students with exposure to basic objective tests, projective tests, personality tests and other diagnostic techniques.

## **CNP 4704 Psychological Assessment (5 Credits)**

Administration, scoring and interpretation of objective and projective personality-assessment techniques, the DSM IV, diagnostic categories, report-writing skills, ethical standards for testing. Lab fee required. Prerequisite: counseling or school of psychology Ph.D. student or instructor approval.

## **CNP 4705 History and Systems of Psychology (3 Credits)**

Historical and philosophical basis of modern psychological theories; basic issues as related to major school of psychology.

## **CNP 4706 Cognitive Assessment (5 Credits)**

This course provides students in Counseling Psychology with experience in individual intelligence, learning and memory, and neurocognitive screening test administration, scoring, interpretation, and report writing. Each student has an opportunity to administer various cognitive measures, with particular emphasis on the Wechsler Scales. Contemporary issues pertinent to the assessment of intelligence are covered. Emphasis is placed on synthesizing and integrating information from cognitive assessment with other sources to produce effective intervention and therapeutic recommendations. Issues regarding the use of such tests are discussed, as well as appropriate use in agencies and clinical practice. Lab fee required.

## **CNP 4707 Introduction to Integrated Health (3 Credits)**

This course is designed to provide students with an introduction to issues in the practice of integrated health psychology, including the topics of interprofessionalism, diagnosis and assessment, treatment, treatment adherence, and consultation. Students will learn about the roles held by behavioral health providers, particularly in the primary care medical setting. Emphasis is placed on evidence-based and culturally competent practice in the integrated health environment.

## **CNP 4710 Career Counseling (5 Credits)**

This course is designed to facilitate student development of knowledge, skills and competencies to engage in counseling clients with career issues; utilize occupational/career resources including technology-based resources and assessments; examine theories of career development and decision-making; develop the ability to evaluate and implement appropriate assessments; collaborate with clients in identifying personal and career goals; and organize and implement program planning and techniques and do so in a diversity of work settings. Lab fee required.

## **CNP 4720 Group Counseling Theory (5 Credits)**

This course is designed to introduce graduate counseling students to group counseling theory, research, and practice. This course will focus on group theory and research but will also provide instruction and experiences in a variety of group techniques. The course is designed for students in counseling psychology, school psychology, and other related fields who work with persons in a group context. This course focuses on the entire age range from children, adolescents, and adults. This course aims to define therapeutic groups broadly. Students will learn about group theory, research, and techniques through class lectures and discussion, group demonstrations, videotapes on group topics, reading assignments, a group presentation, an experiential task group, a required paper related to the task group presentation, and other required assignments.

## **CNP 4730 Research Methods and Program Evaluation (5 Credits)**

This course is designed to provide an introduction and overview of comprehensive program development and evaluation, and research methods. The course will provide direction on the following topics: causation, research hypotheses, independent and dependent variables, sampling, internal and external validity, experimental, quasi-experimental, single-subject, causal-comparative, and correlational designs, measurement and data collection procedures, types of instrumentation and methods for determining reliability.

## **CNP 4740 Basic Counseling Techniques (3 Credits)**

Basic counseling and interviewing skills; emphasis on building counseling relationships and facilitating client's self-exploration; skills of empathy, advanced empathy, self-disclosure, confrontation and immediacy.

## **CNP 4741 Int Counseling Techniques (3 Credits)**

Sample of counseling techniques and effectiveness with different types of clients. Prerequisite: CNP 4740.

## **CNP 4743 Professional Development in Counseling (1 Credit)**

Introduction to the field of counseling with special emphasis on practicum placement. Prerequisite: admission to the MA program in counseling psychology.

**CNP 4750 Counseling Psychology Beginning Practicum (3 Credits)**

Supervised practice in counseling for master's students. Prerequisite: CNP 4740, and be a counseling psychology student.

**CNP 4751 M.A. Internship (1-5 Credits)**

Yearlong, 600-hour supervised field practice for second-year master's students with weekly seminar. Prerequisites: CNP 4750 and be a counseling psychology master's students.

**CNP 4752 Counseling Psychology Advanced Practicum I (3 Credits)**

Supervised practice in counseling for doctoral students. Prerequisites: CNP 4750 or prior practicum, and be a counseling psychology student.

**CNP 4753 Counseling Psychology Advanced Practicum II (1 Credit)**

Group supervised practice in counseling for second-year doctoral students with emphasis on process and countertransference issues. Prerequisite: CNP 4752.

**CNP 4754 Couns Psych: PhD Internship (1 Credit)**

Meets 12-month internship requirement in counseling psychology. Prerequisites: completion of comprehensive examination and dissertation proposal.

**CNP 4755 MA Clinic (1,5 Credit)**

MA clinic is a required course for all students in the 90-credit Clinical Mental Health Counseling Concentration.

**CNP 4756 PhD Counseling Clinic (1 Credit)**

On-campus, advanced-experience counseling of clients from the community with close supervision and observation. Prerequisite: Doctoral student in counseling psychology.

**CNP 4758 PhD Field Experience (8 Credits)**

Required 12-month, 40-hour-per-week internship for doctoral students in Counseling Psychology. Registration for this course indicates full-time enrollment. This course is not graded. Prerequisites: completion of comprehensive examination and dissertation proposal. Department approval is required for registration. Fall quarter enrollment must be done in conjunction with CNP 4754.

**CNP 4760 School Counseling Practicum (1-4 Credits)**

A minimum of 100 hours supervised practice in School Counseling for Master's students in the School Counseling Concentration. Students must be supervised by a licensed school counselor. Enforced Prerequisites: CNP 4740 with a minimum grade of C.

**CNP 4761 School Counseling Internship I (1-4 Credits)**

100-hour supervised field practice in a school setting for Master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4762 School Counseling Internship II (1 Credit)**

A minimum of 600-hour supervised field practice in a school setting for master's students in the School Counseling Concentration, with weekly seminar. Students must be supervised by a licensed school counselor.

**CNP 4768 Counseling Psychology: Social Psychology (3 Credits)**

Social Psychology is designed to provide students a broad and general understanding of social psychology. The course will cover aspects of self, cultural dynamics, group processes, emotional/cognitive aspects of social behavior.

**CNP 4769 Cognitive Behavioral Therapy (4 Credits)**

Cognitive Behavior Therapy (CBT) is a treatment approach that incorporates a multitude of evidence-based strategies to construct an individualized and comprehensive treatment plan for a wide variety of mental/behavioral disorders. CBT has been extensively investigated in both research and applied setting. CBT offers foundational knowledge and skills to provide an active, client involved approach to resolving individual and family challenges. CBT is structured, goal-directed, and focuses directly on client problem areas. Students will practice and develop the skills necessary to implement CBT techniques and strategies.

**CNP 4770 Counseling Psychology Seminar: Research (3 Credits)**

Review of current process and outcome research in counseling and psychotherapy; substantive issues, including client and therapist variables as well as methodological issues and experimental designs. Prerequisite: doctoral student.

**CNP 4772 Diversity Seminar: Psycho-Social Issues (1-5 Credits)**

Series of courses to analyze social and psychological impacts of oppression related to minority status, socioeconomic status, gender and family configurations; taught using an awareness and knowledge approach; implications for counseling; series includes general seminar and series of 1 credit follow-up seminars on particular topics, e.g., American Indian mental health, African- American mental health and women's mental health. Prerequisites: CNP 4773 and students must take the 3-credit general seminar prior to the individual seminars.

**CNP 4773 Diversity: Multicultural Counseling Psychosocial Issues (5 Credits)**

The purpose of this course is to provide an overview of multicultural and social justice issues in the United States. While this is not a skills training course, implications for multicultural counseling skills will also be discussed. Issues and concepts related to gender, race, ethnicity, sexual orientation, gender identity, and social class will be examined within a framework of privilege and oppression. This course is designed to present a general introduction to multicultural and social justice issues as well as culturally responsive counseling. Due to the extensive amount of material in this area, only some selected issues and topics will be presented. Students interested in gaining more specific, or in-depth knowledge of topics covered in this class may pursue the one-credit Counseling Psychology diversity seminars offered in the Counseling Psychology program. Significant emphasis will also be placed on experiential learning and the application of students' awareness and knowledge accrued throughout the quarter.

**CNP 4775 Counseling Psychology: Cognitive & Affective Basis of Behavior (3 Credits)**

The seminar is intended to enhance students' understanding of the fundamental psychological concepts in cognitive and affective sciences and of the relevance of these theories and concepts to clinical practitioners. This seminar will provide weekly lectures to engage students in core issues surrounding the scientific study of affective and cognitive processes involved in human behavior. Academic inquiry and dialogue will also be fostered through group presentations and discussions of peer-reviewed journal articles and book chapters.

**CNP 4776 Family Counseling (3 Credits)**

Introduction to family counseling, including survey of major theories and research, and in-class demonstrations of techniques. Prerequisite: advanced master's or doctoral student.

**CNP 4778 Health Psychology (3 Credits)**

Overview of rapidly expanding field of health psychology; wide variety of topics dealing with role of psychological processes in health and health care; includes impact of stress on physical health, and psychological factors that determine health-related behavior, psychological aspects of delivery of health care, and assessment issues in health psychology.

**CNP 4780 Counseling Psychology Seminar: Supervision (3 Credits)**

Introduces literature and research on counseling supervision, including awareness of individual differences; provides experience supervising master's level counselors. Prerequisites: doctoral student and CNP 4752.

**CNP 4781 Counseling Psychology: Introduction to Psychodynamic Theory (4 Credits)**

This class will explore psychodynamic theory, with an emphasis on creating case formulations and practicing an analytic position in the treatment process. We will be focusing primarily on individual treatment with adults in outpatient settings using a developmental lens. You will be encouraged to develop and deepen your capacities for curiosity and self-reflection, in part as they relate to the exploration of countertransference reactions and meaning making. You will be learning both professionally and personally, as they mutually influence one another, what it means to be a psychodynamic clinician.

**CNP 4783 Counseling Psychology: Eating Disorders (3 Credits)**

This class will offer the opportunity to learn about the diagnosis, assessment, theory, and treatment of eating, weight and shape disorders. While working with clients with eating disorders (EDs) can present unique challenges, we will explore the perception/stigma that these clients are notoriously difficult to treat. We will focus on the importance of integrative treatments, and the role of behavioral, symptom focused techniques in addition to psychodynamic approaches that explore underlying characterological and developmental issues. This class will also consider the impact of culture and media on body image, and the effects of these messages on personal beliefs, attitudes and behaviors.

**CNP 4784 Psychopathology (5 Credits)**

This course is designed to provide students with a thorough understanding of assessment, diagnosis and classification of psychological abnormalities. Psychopathology is typically characterized by deviance from cultural norms, personal distress, danger to oneself or others, or an inability to function in daily life. We will explore the empirical basis for understanding psychopathology as defined in the DSM 5, as well as, the inherent limitations of the current diagnostic system. Interactions of biological, social, psychological, cultural, political, and environmental factors will be stressed, particularly as they contribute to the development and maintenance of mental disorders. Cultural perspectives on each disorder will be addressed every week to attend to issues of social justice and multiculturalism related to diagnosis.

**CNP 4787 Motivational Interviewing (4 Credits)**

Motivational Interviewing is a client-centered collaborative style of therapeutic relationship designed to strengthen a person's motivation for and commitment to change. This class will facilitate skill development in managing client ambivalence, eliciting change-talk and honoring the client's autonomy regarding taking steps toward a commonly agreed upon goal.

**CNP 4788 Physiological Psychology (3 Credits)**

Physiological Psychology is designed to expose students to the field of physiology and highlights its reciprocal relationship with behavior. We will cover topics including the structure and function of the nervous system and areas of research relevant to clinical psychology (e.g., substance abuse, mental illness, and biological rhythms). Given the limited time devoted to each area, more in-depth coverage should be pursued by interested persons.

**CNP 4789 Pharmacology of Addictive Behavior I and II (4 Credits)**

This class provides a solid base of knowledge about the drugs of abuse including what occurs physiologically with drug use and other addictive behaviors. Additionally, this course explores neuroscience and genetic research on addiction to better understand the changes in the brain that underlie drug use and addictive behaviors.

**CNP 4790 Counseling Psychology Seminar: Ethics (3 Credits)**

Professional ethics in practice and research in counseling psychology, including informed consent, confidentiality, clients' rights, psychologists' obligations, etc.; basic APA documents. Prerequisite: doctoral student.

**CNP 4791 Counseling Psychology Seminar: Counseling Couples (3 Credits)**

Introduction to couples counseling, including survey of major theories and research.

**CNP 4792 Pro-Seminar in Counseling Psychology (1 Credit)**

Introduction to field of counseling psychology required for all first-quarter doctoral students. Prerequisite: counseling psychology doctoral students.

**CNP 4794 Counseling Psychology Seminar: Special Topics (1-15 Credits)**

Variety of special topics on research and practice in counseling psychology; readings, lectures and projects to provide an in-depth understanding of topics, which vary from to year and cover areas such as counseling women, counseling in business and industry, advanced group therapy, time-limit counseling, vocational counseling, etc.

**CNP 4795 Master of Arts Counseling: Legal and Ethical Issues (5 Credits)**

Introduction to ethical and legal issues in school and agency counseling for master's students. Prerequisite: Master's student in Counseling Psychology.

**CNP 4797 Counseling Addictive Behavior (4 Credits)**

Introduction to assessment, treatment and outcome evaluation of chemical and nonchemical addictive behaviors. Requirements include abstinence from a "compulsive" behavior; journaling about one's cognitive, emotional and behavioral reactions during the abstinence period; attending 12-step meetings; participating in a quasi-12-step in class meeting; critiquing a film depicting dynamics of an alcoholic family.

**CNP 4799 Infectious Diseases in Addictive Behaviors (2 Credits)**

Drug and alcohol abuse and infectious diseases go hand in hand. This class explores the high risk for contracting and spreading infectious diseases among drug abusers. This class helps prepare students to identify such diseases, determine client risk for infection, and educate students about disease prevention and treatment options.

**CNP 4800 Consultation (1 Credit)**

This course is designed to teach the basic theories of psychological consultation that can be used to guide practice in a variety of settings. Students learn to differentiate process, collaborative and expert consultation. The class format includes presentations from practitioners working in school, medical, forensic, and business settings. In addition, students also learn about the ethical principles that guide their practice and to also become sensitive to how their work with diverse cultural backgrounds may be perceived. Prerequisite: must be enrolled in the Counseling Psychology doctoral program.

**CNP 4991 MA Independent Study (1-10 Credits)****CNP 4995 Independent Research (1-10 Credits)****CNP 5771 Counseling Psychology: Doctoral Research Seminar (3 Credits)**

The purpose of this course is to guide students in completing the Dissertation. This is not a research methods course but a course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**CNP 5991 PhD Independent Study (1-10 Credits)****CNP 5995 Independent Research (1-20 Credits)**

## Curriculum and Instruction (CUI)

**CUI 4020 Introduction to Curriculum (3 Credits)**

Introduces curriculum theory and curriculum as a field of study; includes study of issues such as standards, cognition, diversity, ecology, and social justice, among others.

**CUI 4021 Models of Curriculum (3 Credits)**

Reflects on ways various curriculum orientations may resolve modern issues or problems, with students' independent pursuit of one or two orientations in depth; orientations examined include cognitive pluralism, developmentalism, rational humanism and reconceptualism, among others. Recommended prerequisite: CUI 4020.

**CUI 4022 Curriculum Theory into Practice (3 Credits)**

Helps students move from theoretical concepts and decisions involved in curriculum development to actual construction of curricula; survey of potential components encompassed in a variety of curricula followed by participation in designing a curriculum as a member of a student team; final facet requires students to develop a curriculum. Prerequisites: CUI 4020 and 4021 or instructor's permission.

**CUI 4027 Implementing Curriculum: A Practicum (3 Credits)**

Opportunity to experience authentic role of curriculum on site; work at the Denver Zoo, the Denver Museum of Nature and Science, other museums and school sites; to develop and implement curriculum.

**CUI 4031 Teaching and Learning (3 Credits)**

This course builds the biological and contextual foundations for learning, including brain and cognitive development theory. The course also helps students build a framework for culturally responsive classroom management, including rituals, routines, and relationships with students and families. Students apply cognitive development theory and equitable classroom management strategies to analytical case studies. Course restricted to students in TEP program or instructor approval.

**CUI 4032 Analysis of Teaching (3 Credits)**

Provides a systematic introduction to the research base that characterizes effective practice and to the array of research methods that can be employed to study teaching and teacher development.

**CUI 4033 The Practice of Teaching (3 Credits)**

Course explores personal, conceptual, and empirical understandings of "teaching practice." Topics addressed have included: metaphors for teaching practice, best practices for equity and social justice, professional development practices.

**CUI 4034 Curriculum & Cultural Context (3 Credits)**

This course will address the influence of cultural, political, sociological, and economic factors on curriculum at the instructional, situational, societal, and ideological levels. Students should be interested and willing to explore these issues through readings and discussion. We will be exploring various perspectives, including our own, which inform the discussion on this critical area of education.

**CUI 4035 Critical Perspectives in Education (3 Credits)**

In this course, students will examine issues related to democracy, power, and privilege in public education. Specifically, students will learn about how anti-democratic groups are working to undermine public education in the U.S. Students will explore White privilege, racism, classism (and other "isms") and the impact they have had and continue to have in public school settings, particularly at schools that serve historically marginalized and oppressed students. Theoretical frameworks such as Critically Relevant Teaching and Critical Race Theory will be introduced in this class as well.

**CUI 4039 Transformational Teaching and Learning (3 Credits)**

This course takes an exploratory approach to the analysis of transformation teaching and learning. It asks questions such as "What are effective teaching and learning environments?" "For whom and under what circumstances?" "How can we create such environments?" We will explore how patterns of activities in the classroom can be designed to achieve simultaneously all of the major goals of educational reform. The term classroom is not restricted to the physical classroom space but "classroom" in the sense of the organized instructional activities that can extend outside of the school building into the community.

**CUI 4041 School and Curricular Reform (3 Credits)**

A look into school reform movements, why most fail and only a few succeed.

**CUI 4043 Development of Technology Enhanced Educational Environments (3 Credits)**

Utilizing emerging Learning Theories and complex Instructional Design Theories, students will move into advanced educational web page development including designing with style sheets and layers. Several customized technology mediated lessons or professional projects will be created for use in practice. Various tools, designed to enhance learning environments, will be explored.

**CUI 4046 Technology Leadership (3 Credits)**

Explores the role of ethics, values, social, legal, and power issues associated with technology in education. Analyzes how technology is transforming learning, equitable distribution of information, and the implications for providing optimal education to diverse learning populations.

**CUI 4047 Humanizing Pedagogies (3 Credits)**

This course will provide a foundation in the conceptualization, design, and implementation of a humanizing pedagogy. A humanizing pedagogy is a "revolutionary approach to instruction that ceases to be an instrument by which teachers can manipulate students, but rather expresses the consciousness of students themselves" (Freire, 1970, p. 51). Students in this course will apply their knowledge of humanizing pedagogy to specific content areas, practice, and research through the tenets of a humanizing pedagogy. Moreover, students will explore humanizing literacy and math as fundamental human rights that afford access and equity to historically marginalized communities.

**CUI 4050 Research Seminar: Conducting Systematic Reviews (0-3 Credits)**

The Curriculum and Instruction (C&I) Research Seminar: Conducting Systematic Reviews (CUI 4050, 3 credits) is the first of a series of courses for doctoral-level students in the Curriculum and Instruction Program. It is also available to students in other programs who would like to learn how to complete a systematic literature review, as well as think about identifying a research problem to address and research purpose.

**CUI 4051 Seminar in Dissertation Organization and Design (1-5 Credits)**

Individualized assistance in developing the dissertation topic, issue, problem; guidance in preparation for proposal orals and application to the Institution Review Board (IRB), direction for dissertation chapter organization, writing and completion. This seminar is targeted for the student who needs support in completing the dissertation.

**CUI 4058 Teacher as Researcher (3 Credits)**

Emerging philosophical and methodological issues that arise when school practitioners undertake research within their own sites; range of research traditions including quantitative, statistical research and qualitative methodologies; mastering relevant skills and accessing resources for students to be better prepared to conduct their own inquiries and understand and solve problems.

**CUI 4130 Philosophy of Education (3 Credits)**

Focuses on 3-4 philosophers and examines the contributions their philosophical ideas have on education. Philosophers studied have included John Dewey, Cornel West, Nel Noddings and Maxine Greene.

**CUI 4131 Spirituality in Education (3 Credits)**

This course will explore the role of spirituality in education from both the student and educator point of view through an examination of the big questions that are held close to the heart; the ones that guide us toward meaning making in the world. The primary goal of the course is to plumb the depths of spirituality, a deep sense of inner meaning making, that calls us toward a particular profession. The course will focus on the interface between spirituality in education through the lenses of curriculum and instruction.

**CUI 4153 Practicum: Curriculum and Instruction (0-5 Credits)**

Designed to fit the educational needs of the individual student who may choose from a wide variety of practicum (internship) experiences, including teaching, curriculum development, museum internships or research projects in curriculum and instruction on or off campus. In the case of taking on a paid position, students should consult the Office of Internationalization about their visa status and requirements. Students should work with their advisor before they plan to register in order to get this course in the class schedule when it will be needed.

**CUI 4155 Special Topics (1-10 Credits)**

Special topics in the field of education.

**CUI 4160 Race, Class and Gender in Education (3 Credits)**

Ethnicity, Class & Gender in Education applies the concepts and theories of social science disciplines - sociology, social psychology, anthropology, historical perspectives and philosophical orientations - to the inclusive examination of the issues of racism, classism, sexism, and homophobia in education. This course seeks to conceptualize ethnicity, gender and social class as interactive systems, not as separate and independent variables, that impact students, teachers, school systems and the educational enterprise. We examine educational systems and practices that historically have disadvantaged women and peoples of color and discuss strategies and techniques for empowerment of the members of these groups.

**CUI 4170 Engaging Learners through the Arts (3-5 Credits)**

This seven day institute is designed to engage participants in a challenging exploration of the creative process through workshops with professional artists in the disciplines of dance, visual arts, creative writing, music, and theatre, and to provide a greater understanding of the theory and practical applications of school reform.

**CUI 4172 Aesthetic Foundation in Education (3 Credits)**

Educational enterprise from aesthetic viewpoints; examination of a number of aesthetic theories and exploration of implications for curriculum, teaching, and evaluation.

**CUI 4180 History of Education in the United States (3 Credits)**

Traces historical context and development of K-12 schools in the United States from initial discovery of North and South America by Europeans to the present; understanding through examination of central issues that strongly influenced our current educational systems - evolution of schools, religion, social and political reform, women's issues, nationalism and ethnicity, industrialization of the nation and world.

**CUI 4310 Supporting Apprentice Teachers (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn as they learn to create culturally responsive classroom environments and to address the strengths and needs of all students particularly Culturally and Linguistically Diverse (CLD) Learners and students in Special Education. Topics addressed include mentor support for apprentice teachers' planning, teaching of reading and writing, applying a teacher evaluation framework, designing and interpreting formative and summative assessment, using data to inform instruction and differentiation for ELLs and GT identified students.

**CUI 4311 Supporting Apprentice Teachers II (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing unit and lesson plans, literacy (specifically reading), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4312 Supporting Apprentice Teachers III (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about developing formative assessment plans, literacy (specifically writing), and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4313 Supporting Apprentice Teachers IV (3 Credits)**

This course is designed to support mentor teachers as they build relationships with the apprentice teachers during the residency or student teaching phase of a teacher education program. It is designed to complement the professional standards-aligned coursework that apprentice teachers complete as part of the licensing process. As such, this course is designed to strengthen the connection between the institute of higher education and the field placement site. In doing so, mentor teachers can support the learning of apprentice teachers in the practical application of theoretical frameworks. This course specifically addresses supporting apprentice teachers as they learn about using data to inform instruction, differentiating instruction for English Language Learners and Gifted and Talented identified students, and developing competencies in the evaluative framework for residency or student teaching used in a teacher education program.

**CUI 4400 Nature and Needs of Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of 1) conceptual foundations and definitions of giftedness, 2) how intelligence, creativity, and non-intelligence factors are related to giftedness, 3) the nature, development, types, and needs of gifted individuals, 4) principles and issues in the identification of gifted individuals, and 5) the major issues and tensions in the education of gifted and talented individuals. Lectures, discussions, and other class activities and assigned readings and projects will include topics such as the history and nature of the giftedness construct; theories of intelligence and creativity and their relationship to conceptions of giftedness; types of giftedness; the diversity of gifted individuals and their personal and educational needs; the role of identification in the education and development of gifted children and youth; and purposes and perspectives in gifted education.

**CUI 4401 Psychological Aspects of Giftedness (3 Credits)**

The psychological development of gifted children is examined through a study of current theories, models, research, and case histories. Understanding of psychological development creates a foundation for applications and practices that nurture the psycho-social-emotional development of gifted individuals. Specific topics include the psychological nature and needs of the gifted; perfectionism, stress, and underachievement; special issues for gifted boys and gifted girls; highly gifted; and pertinent theories of psychological development. Emphasis is placed on synthesis of theories and application to specific situations.

**CUI 4402 Curriculum for Gifted Learners (3 Credits)**

This course is designed to provide participants with an understanding of the conceptual foundations in the design and development of curriculum for gifted and talented students. Includes theories, models and processes for curriculum modification and curriculum design; strategies for adapting educational content, process, product, and learning environment based on the educational characteristics and needs of gifted learners; and curriculum design and development approaches that are effective in the intellectual and personal growth of gifted and talented learners. Content in this course is aligned with appropriate instructional strategies and techniques recommended for use with gifted and talented learners. Lectures, discussions, class activities, assigned reading and projects include topics such as a general overview of curricular principles and perspectives; critical analysis of general curriculum; issues of diversity in curriculum development and modification including cultural congruence; recommended models of curriculum development for gifted and talented learners; and national trends in gifted education.

**CUI 4403 Instructional Strategies for Gifted Learners (3 Credits)**

This course provides a basic understanding of how to adapt curriculum for gifted learners through various instructional strategies. Strategies studied include: acceleration, enrichment, differentiation, compacting, grouping, independent study, and service learning. By selecting instructional strategies based on assessed learner needs, educators can reach many types of gifted learners in their classrooms including gifted students of poverty and gifted learners of cultural and ethnic diversity. The objectives of this class are that participants: know about and be able to define instructional strategies that meet assessed academic and affective needs of gifted learners and be able to adapt curriculum for gifted learners using learned instructional strategies.

**CUI 4404 Twice-Exceptional Students (3 Credits)**

The purpose of this course is to acquaint the student with the various areas of exceptionalities typically encountered with gifted students and to provide classroom related techniques to assist the teacher in identifying and working with twice-exceptional children in an effective manner. Environmental, behavioral, motivational, emotional and educational needs are addressed. Legal responsibilities, parent communication and staff development will be emphasized.

**CUI 4405 Practicum in Gifted Education (1-3 Credits)**

Students wishing to earn credit for the Practicum in Gifted Education must complete an experience in three of the five areas (Teaching, Assessment, Administration, Research, or Policy). Students must submit a Practicum Proposal outlining the intended practicum experiences. This Proposal must be approved by the practicum faculty supervisor when the practicum experiences are begun.

**CUI 4407 Current Issues in Gifted Education: Identification (3 Credits)**

This course focuses on the screening and selecting of gifted and talented students. It is designed for practicing professionals - teachers, counselors, psychologists, and administrators - who must make decisions about the identification and serving of gifted and talented students. Course uses multiple assessments, both quantitative and qualitative, to identify gifted students within an increasingly diverse population (including culturally- and ethnically-diverse, high-potential, linguistically-different students with unique affective needs as well as high-potential economically-disadvantaged students). Students will use data to diagnose educational needs, prescribe appropriate educational strategies and to incorporate appropriate identification strategies for identifying gifted and talented students. Legal responsibilities and parent communication as well as staff development are emphasized. Students are required to develop an identification model based on relevant theory and current practices to be used in their particular setting. Enforced Prerequisites: CUI 4400 with a minimum grade of C- OR CUI 4401 with a minimum grade of C-.

**CUI 4408 Creativity: Theory & Practice (3 Credits)**

The essence of innovation is creativity, in thought, process and outcome. Classic and current theories provide a foundation for analysis of the concept of creativity. This course is designed to provide participants with an understanding of 1) the conceptual foundations and definitions of creativity; 2) how intelligence, creativity, and non-intellective factors are related to the constructs of giftedness; 3) documented brain research underlying exceptional cognition and/or creativity; 4) principles and issues in the identification and appropriate programming for creative individuals; and 5) the multiple perspectives and manifestations of creativity. Salon discussion groups, lectures, class activities and assigned readings and projects focus on the history and nature of the construct of creativity, theories of creativity, the role of innovation and transformation, assessment and measurement tools, environmental support of the creative process and creativity, and teaching and learning applications.

**CUI 4410 Prog Dev/Ldrshp/Comm Gifted Ed (3 Credits)**

This course emphasizes the concepts and practices involved in development and management of school- and district-based programs for the special education of gifted and talented children and youth. The course leads to in-depth understanding of program components and systems, program planning and evaluation, program leadership, advocacy in gifted education, and communications. In addition, emphasis is placed on planning and development of staff development in relation to gifted children. This course includes extensive in-class discussion and field applications.

**CUI 4411 Wkshp: Gifted & Talented Educ (1-3 Credits)**

This blended course is designed to provide participants with an overview of the education of gifted and talented students. Areas of focus within the course include definitions of gifted and talented learners, gifted learner characteristics, educational/academic and affective/psychosocial needs, common identification methods, and research-based instructional strategies for gifted learners. Course restricted to students in TEP program or instructor approval.

**CUI 4412 Culturally and Linguistically Diverse Learners in Gifted Education (3 Credits)**

Culturally and Linguistically Diverse Learners have inequitable access to gifted programming, curricula and services; therefore, they do not receive instruction that nurtures their learning talents, culture, and emergent bilingualism. This course is designed to address the needs of the Culturally and Linguistically Diverse (CLD) and the Gifted and Talented (GT) learner. Upon completion of this course, students should be able to meet the approved standards for the English Language Learner Professional Development Pathway. In addition to ELL standards, this course is aligned with state gifted education standards.

**CUI 4450 Education and Psychology of Exceptional Children (3 Credits)**

Characteristics of students with moderate needs and state criteria used to determine eligibility for special education population.

**CUI 4451 Teaching the Exceptional Child (3 Credits)**

This course provides a broad overview of the field of exceptionality and special education. Included are discussions of current issues and controversies in the field, characteristics, classification, diagnosis, and educational interventions for early childhood and school-aged children with high-incidence and low-incidence disabilities who have exceptional education needs. This course also explores the characteristics of students with various disabilities, the history of Special Education, The Individuals with Disabilities Education Act (IDEA) and its current implications, the Response to Intervention Model (RtI) and the Individualized Education Plan (IEP). Prerequisite: CUI 4450.

**CUI 4452 Low Incidence Disabilities and Behavior Intervention (3 Credits)**

This course reviews a wide range of neurodevelopmental disorders and low-incidence disabilities including fragile X syndrome and Fetal Alcohol Syndrome, along with syndromes associated with chromosomal deletions. Implications for assessment and intervention are outlined including diagnostic criteria, prevalence and treatment. Research on identification and treatment including state of the art interventions and assistive technology are addressed. This class also addresses theories, research, effective practices, and background information needed to implement successful behavior intervention programs for whole classroom management and for students identified with behavioral needs. Prerequisites: TEP 4010 and CUI 4451.

**CUI 4453 Curriculum Adaptations and Assessments for Children with Disabilities (3 Credits)**

This course applies theories, research, effective practices, and background information for assessment for students with disabilities, monitoring student academic progress, and transition planning for students exiting K-12 schools.

**CUI 4455 Assessment of Students with Special Needs (3 Credits)**

Theories, research, effective practices and background information needed to develop, implement, analyze, and apply assessment data for mild/moderate-needs students.

**CUI 4457 Behavior Intervention (3 Credits)**

Theories, research, effective practices, and background information needed to implement successful behavior intervention programs for mild/moderate-needs students.

**CUI 4459 Curriculum, Collaboration, and Transitions in K-12 Schools (3 Credits)**

Knowledge, techniques to develop independent skills for K-12 moderate/mild-needs students and transitions across grade levels.

**CUI 4500 Elementary Literacy: Theory and Practice I (1-3 Credits)**

This course provides an introduction and overview to the many components that make up a quality balanced literacy program. During the course students will analyze current research and theory in reading and writing instruction. This course will use students' classroom placements to create a foundational understanding on which to build solid literacy philosophy as well as instructional ideas and strategies.

**CUI 4501 Elementary Literacy: Theory and Practice II (1-3 Credits)**

This course is an extension of Elementary Literacy I and concentrates on the continued development of theories and practical strategies for teaching literacy in diverse classrooms. This course will supply K-6 teachers with the skills to assess student abilities, select appropriate instructional strategies, and design effective instructional programs that lead to increased listening, speaking, reading and writing achievement of all children.

**CUI 4502 Elementary Science and Social Studies Methods for Cultural Linguistic Diversity (3-4 Credits)**

This course will enable students to develop a deeper understanding of science and social studies content and curriculum in the elementary classroom. Students will explore a range of instructional materials and develop teaching strategies with the guidance of state content standards and research on effective classroom instruction for culturally and linguistically diverse students. This course will revolve around discussion of key questions in the following eight areas: The Role of Social Studies and Science; Instruction; Standards; Content Knowledge; Curriculum Integration; Technology; Culturally Responsive Pedagogy; Sheltered Instruction. Course restricted to students in TEP program or instructor approval.



**CUI 4503 Elementary Math Methods for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course prepares students for mathematics instruction in elementary classrooms. We will study theories of learning, the development of children's mathematical thinking, and research-based instructional practices in mathematics. Students will solve mathematical problems using a variety of methods, practice giving math lessons, engage in continuous instructional improvement activities, grapple with issues of equity—race, class, gender, ability, and the intersections therein—as they pertain to math teaching and explore digital resources related to teaching math for understanding. Course restricted to students in TEP program or instructor approval.

**CUI 4504 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity I (3 Credits)**

This course is the first of a two-course study that will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4505 Mathematics across the Content Areas (2,3 Credits)**

In this class, prospective secondary teachers study fundamental mathematical ideas and how they apply to various real-world settings. For instance, students may explore the mathematics of gerrymandering and map projections. Students will also engage in mathematical practices such as argumentation and justification. Finally, students will learn about inquiry-based approaches to teaching that they can use in their secondary classrooms with their students.

**CUI 4506 Mathematics for Elementary School Teachers I (2,3 Credits)**

In this class, prospective elementary school teachers experience an in-depth look at the representations of rational numbers, including base-ten and decimal numbers, integers, fractions, and arithmetic operations on these sets. Problem solving is emphasized throughout. Students also learn about inquiry-based approaches to teaching that they can use in their classrooms with their students.

**CUI 4507 Mathematics for Elementary School Teachers II (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisite: CUI 4506.

**CUI 4508 Mathematics for Elementary School Teachers III (3 Credits)**

In this class, prospective elementary school teachers study fundamental mathematical ideas typically taught in grades 5-8. Students learn about visualization and its importance in geometry. Students study geometric shapes and solve a variety of problems involving geometric shapes. In addition, students learn some fundamental ideas of measurement and study length, area, volume, dimension, error and precision. Students also solve problems involving area, learn about solid shapes, and solve volume and surface area problems. Finally, students learn about inquiry-based approaches to teaching that they can use in their classrooms with their students. Prerequisites: CUI 4506.

**CUI 4509 Mathematics for Middle School Teachers (3 Credits)**

Mathematics education for middle school teachers. Meets Common Core State Standards.

**CUI 4511 Secondary Literacy: Reading and Writing Across Content Areas I (3 Credits)**

This course is the first of a two-course study that is designed to give secondary Residents an introduction to best practices in content area literacy instruction for in 6-12 classrooms. In support of the instructional shifts presented by the Common Core State Standards, Residents will explore the rationale behind instructional strategies for literacy instruction in the content area classrooms, as well as examine tools and techniques for teaching students to become strategic readers and writers as they model their own thinking and scaffold students' use of strategies for content area literacy.

**CUI 4512 High School Mathematics from an Advanced Perspective (3 Credits)**

High School mathematics education. Meets Common Core State Standards.

**CUI 4513 Elementary Math, Science, and Social Studies Methods Cultural Linguistic Diversity II (3 Credits)**

This course is an extension of the Autumn quarter session and will prepare students to develop a deeper understanding of math, science and social studies content and curriculum in the elementary classroom as guided by Colorado Model Content Standards, Next Generation Science Standards and research on effective sheltered content instruction for culturally and linguistically diverse students. Pre-service teachers will develop an understanding of how students in the elementary grades construct meaning through active engagement in purposeful learning opportunities.

**CUI 4514 Secondary Literacy: Reading and Writing Across Content Areas II (3 Credits)**

This course is an extension of the Autumn quarter session. In this course, Residents will deepen their knowledge of the English language and linguistics, through an analysis of socio and psycholinguistics, as well as rigorous practice in grammar, syntax and semantics. As Residents gain a more practical understanding of the complexities of the English language, they will be better able to support their English Language Learners. This course addresses the following Common Core State Standards: L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking L3: Apply knowledge of language to understand how language functions in different context to make effective choices for meaning or style, and to comprehend more fully when reading or listening. W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**CUI 4521 Urban Education II: School, Student, Family and Community Influences on Student Learning (2-4 Credits)**

This course will consider how teachers are able to foster meaningful connections between the educational goals of the schools and the personal and cultural experiences of young people. Students will study the child in relation to family, school, and community, as well as the relationships between teacher and pupil. We will emphasize the cultural complexity of an urban society and pay special attention to ways that curriculum, language, and literacy affect school success.

**CUI 4527 Supporting English Language Learners and Students with Special Needs Across Content Areas (3 Credits)**

This course evaluates similarities and differences in theory, methods, approaches, and techniques in meeting the needs of diverse learners including English Language Learners, special needs, and/or gifted. Differentiated instruction, Sheltered instruction, and Response to Intervention (RTI) are key methodologies in meeting needs of diverse learners.

**CUI 4529 Foundations of Education for Culturally and Linguistically Diverse Learners (3 Credits)**

This course will examine the essential knowledge and orientations educators must possess to effectively meet the needs of culturally and linguistically diverse (CLD) learners through the analysis of historical, political, ethical, and legal foundations of language education in the United States. This course will explore the immigrant experience and the experience of CLD learners in schools in order to understand how the psychosocial aspects of the immigrant experience can impact second language learning. Course restricted to students in TEP program or instructor approval.

**CUI 4530 Second Language Acquisition (1-3 Credits)****CUI 4531 Language Development and Strategies for Culturally and Linguistically Diverse Learners (3,4 Credits)**

This course will evaluate methods, approaches, and techniques in language teaching. This course will also explore classroom strategies and practices for content-area instruction through sheltered instruction, and socio-cultural context of second language acquisition in U. S. public schools including how teachers can support bilingualism, multilingualism, biculturalism, and multiculturalism in the mainstream classroom. Furthermore, this course will explore the needs of special education and gifted culturally and linguistically diverse learners.

**CUI 4532 Culturally Responsive Pedagogy (3,4 Credits)**

This course examines the intricate web of variables that interact in the effort to create culturally responsive pedagogy. It examines the need and establishes a definition for culturally responsive pedagogy; and includes an examination of one's conception of self and "others;" conception of social relations; and conception of knowledge teaching and learning in a culturally diverse context. Furthermore, it cultivates the practice of culturally responsive teaching as well as explores the reality of implementing cultural responsive pedagogy in an era of standardization. In sum, this course helps practicing teachers acquire the dispositions, cultural knowledge, and competencies to adapt their curriculum and instructional skills for culturally responsive classroom practice.

**CUI 4536 Language and Cultural Issues in Assessment and Instruction (3-4 Credits)**

This course expands the educators' knowledge of the connection between data-based instruction and assessment. Educators assess student learning by utilizing strategies that provide continuous feedback on the effectiveness of instruction. Educators learn informal and formal assessment practices that promote student learning and achievement. Educators develop knowledge and understanding of initial assessment of culturally and linguistically diverse learners' skills and abilities in order to provide appropriate placement and instruction. Educators utilize native language tests to promote adequate placement/transition of students. This course also helps educators develop a framework to analyze and develop culturally responsive assessment practices in order to improve student achievement. Finally, this course integrates Response to Intervention (RTI) strategies to improve student assessment.

**CUI 4538 Literacy and Language Development for Culturally and Linguistically Diverse Learners (3,4 Credits)**

Attaining age-appropriate English literacy skills poses many challenges to culturally and linguistically diverse (CLD) learners. Educators must therefore develop proficiency in effective literacy instruction for CLD learners. Effective literacy instruction includes a repertoire of teaching practices designed to scaffold literacy and language across the content areas, and culturally relevant curriculum as an essential component to support the achievement of CLD learners. This course will focus on helping educators gain the necessary skills, orientations, and competencies to advance the literacy of CLD learners through linguistic and cultural knowledge.

**CUI 4540 Curriculum, Instruction and Assessment: Theory and Practice I (1-3 Credits)**

This course explores the theoretical underpinning and practical application of curriculum design. Students design their own curriculum unit aligned to standards, essential questions, big understandings, and social justice themes. Course restricted to students in TEP program or instructor approval.

**CUI 4541 Curriculum, Instruction, and Assessment: Theory and Practice II (1-4 Credits)**

In this course, apprentice teachers will explore the theoretical underpinnings and practical application of data and assessment. This course will build essential knowledge and skills in school and classroom assessments, research methodology, and equity in assessment practices. Students will design a series of assessments aligned to unit goals. Course restricted to students in TEP program or instructor approval.

**CUI 4542 Curriculum, Instruction, and Assessment: Theory and Practice III (1-4 Credits)**

This is the third and final quarter of an academic year-long weekly seminar to foster reflective, research-based classroom practice. Teacher candidates will deepen their understanding of teaching and learning in contemporary schools through a guided teaching apprenticeship with a trained mentor teacher, focused observations of a myriad of classrooms, readings, interviews, discussions, critical writing, and presentations. Course restricted to students in TEP program or instructor approval.

**CUI 4544 Ed Psych: Exceptional Child (1-3 Credits)**

The focus of this course is on educating children and adolescents with special needs in the general education classroom. The intent is to enable future educators to better serve the needs of these children in their classrooms. Topics such as the special education process, information on specific disabilities, accommodations and modifications, behavior issues, mental health, and communicating with parents will be addressed.

**CUI 4600 History and Philosophy of STEM Education (3 Credits)**

The goal of this course is to help future Science, Technology, Engineering, and Mathematics (STEM) education leaders understand the historical trajectory of public education in relation to the larger sociopolitical forces of American history. Two premises guide this course: 1. Social and political conditions in society exert intense pressure on STEM fields and STEM education, which poses significant challenges to STEM education leaders. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4610 Learning & Teaching of STEM (3 Credits)**

In this course, students will be introduced to foundational research literature on learning and teaching in STEM education. The research introduced will focus extensively on theories of learning and how these theories are influencing P-16 STEM curriculum, instruction and assessment. The literature base introduced is foundational to research conducted in STEM education.

**CUI 4620 Research on Diversity, Equity, and Social Justice in STEM Education (3 Credits)**

The goal of this course is to help future STEM education leaders understand the current context of issues of diversity, equity and social justice in STEM education and explore its implications for access and opportunity for traditionally marginalized students. Two premises guide this course: 1. Social and political conditions in contemporary society exert intense pressure on STEM fields and STEM education. 2. Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4640 Improving STEM Instruction (3 Credits)**

For as long as the United States has implemented public education—well over 100 years—many features of schooling have stayed the same. Despite waves of curricular and policy reforms, widespread anxiety over student achievement (especially in comparison to other countries), and concerted efforts to “disrupt” education, many elements of teaching and learning persist. In STEM education, especially, scholars and practitioners have been advocating for the same things for decades: teaching for conceptual understanding, using rich tasks that encourage student collaboration, incorporating discourse in the classroom, and supporting students to engage in STEM practices like proof, argumentation, and the scientific method. We know that these things can support meaningful student learning. But most K-12 STEM classrooms are centered on memorization and standardized testing. Why is it so hard to change? The short answer: It’s complicated. In this course, students will critically examine various instructional improvement efforts, identifying both the ways in which these efforts are potentially productive and potentially destructive. We’ll juxtapose these efforts with relevant research on teacher learning and organizational change in order to critique reform efforts. Ultimately, students will become more critical consumers of instructional improvement efforts and will be better prepared to translate research into practice. Although STEM is the focus of this class, the overarching ideas of the course are applicable to many other subjects.

**CUI 4690 Field Experience: Curriculum & Instruction (3 Credits)**

This course provides students with an authentic field experience for those pursuing a degree in Curriculum & Instruction. Field Experience in Curriculum & Instruction is an off-campus, experience taken throughout the coursework plan. Field Experience is designed to broaden one’s professional skills and is considered a critical transition of substantial growth. Field Experience is a hybrid on-line and face-to-face seminar that is designed to facilitate case analysis, ongoing self-reflection, and to provide peer consultation and professional feedback relevant to best practices. The Field Experience is considered a critical professional transition to help consolidate learning and professional competencies in preparation for employment. All students engage in weekly experience seminars (either on-line or face-to-face) facilitated by a University Supervisor. Supervision is designed to provide ongoing professional feedback, case analysis, peer consultation, and continued professional development and experiences pertinent to successful practice. This course promotes the idea that educators are lifelong learners and regularly reflect on and adjust their practice.

**CUI 4700 Foundations of Education: Cognitive Theory I (3 Credits)**

Introduction to cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula.

**CUI 4710 Foundations of Education: Cognitive Theory II (3 Credits)**

Second course in cognitive research in education. Includes theories and research regarding the implementation of these theories in specific curricula. Prerequisite: CUI 4700.

**CUI 4720 Discourse in the Mathematics Classroom (3 Credits)**

The study of discourse as it relates to mathematics teaching and student learning.

**CUI 4730 STEM and Instructional Technology (3 Credits)**

The goal of this course is to help students understand the role of technology in teaching and learning, particularly in Science, Technology, Engineering, and Mathematics (STEM) courses. Three premises guide this course: 1) Technology offers great potential for innovation in education, but it also can be dangerous if used inappropriately and indiscriminately; 2) Social and political conditions in society exert intense pressures on technology in STEM education, which poses significant challenges to STEM education leaders; and, 3) Education in general – and STEM education in particular – are political, economic, and social endeavors that reflect social arrangements. This course will enable students to view their specialization as part of a complex and larger milieu; that is the U.S. educational system.

**CUI 4740 Policy and STEM Education (3 Credits)**

In this course, students will be introduced to and explore a range of educational policies and how those policies have influenced and continue to influence Science, Technology, Engineering, and Mathematics (STEM) education. A particular focus of the class will be the underlying ideologies of policies that have had a strong influence on the development of curriculum and research in STEM education. Students will learn how to critique educational policies in general and policies that have influenced STEM education in particular. Students will also develop a policy brief that is specific to some area of STEM education that they will publicly disseminate.

**CUI 4991 MA Independent Study (1-10 Credits)****CUI 4995 Independent Research (1-10 Credits)****CUI 5980 Research as Problem Analysis (3 Credits)**

This course is the first of three culminating research courses for students in the Ed.D. in Curriculum and Instruction. This course is designed to guide candidates through the doctoral proposal process and introduce the initial stages of data collection and analysis.

**CUI 5981 Research as Intervention (3 Credits)**

This course is the second of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates finish collecting their data and analyze their data. This course will also introduce and develop the evaluation or analysis section of the doctoral paper and the beginning steps of the dissemination of the research project.

**CUI 5982 Applied Research (3 Credits)**

This course is the final of three culminating research courses for students in the Ed.D. in Curriculum and Instruction and is designed to help candidates disseminate their project, reflect on their project, and defend their project. This course is specifically focused on writing the quasi-practical section of the doctoral paper and the dissemination of the research project to the community partner.

**CUI 5983 Defense of Research (1 Credit)**

This course will build on the "persistent problems of practice" and research questions identified in CUI: 5980, data collection and analysis in CUI 5981, and applied research skills in CUI 5982. By the end of the course you will be able to schedule and present your doctoral research project for defense. Completion of CUI: 5982 "Research as Applied Research" or permission of the instructor.

**CUI 5991 PhD Independent Study (1-10 Credits)****CUI 5993 Dissertation in Practice (1-4 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in C&I; must have completed C&I doctoral research courses (CUI 5980, CUI 5981, and CUI 5982).

**CUI 5995 Independent Research (1-10 Credits)**

## Economics (ECON)

**ECON 3040 Marxian Political Economy (4 Credits)**

An exposition of Marx's theory of value through a detailed reading of Capital, vol. I. Excerpts from other readings by Marx, and some of the relevant secondary literature used. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Requires junior standing or above. Cross listed with PHIL 3075.

**ECON 3110 European Economic History (4 Credits)**

The emergence of capitalism from feudal society; the Industrial Revolution, English capitalism; European industrialization; state and economy in capitalism; 20th-century Europe and the global economy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3460 Monetary Theory and Policy (4 Credits)**

Studies the interaction between money and the economy. Examines the workings of the financial institutions and how they affect the economy. Looks at the questions of what serves as money, what determines interest rates, and how the central bank conducts monetary policy and its effect on the performance of the economy. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3480 Money & Financial Markets (4 Credits)**

Examines workings of the money and financial markets and their relation to the monetary system and to the macroeconomy. Restriction: junior standing. Prerequisite: ECON 2020 or ECON 2030.

**ECON 3500 Economic Development (4 Credits)**

Careful re-examination of the works of the prominent development economists of the immediate postwar decades to critically shed light on the treatment of topical development problems by modern economists. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3590 Urban Economics (4 Credits)**

Covers topics and issues of economic growth and decline in metropolitan areas, emphasizing urban economic issues. A broad range of policy areas is discussed, including labor market policy, welfare reform, housing policy, racial segregation, transportation, and environmental policy, among others. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3600 International Monetary Relations (4 Credits)**

Theory, policy, and history of international organization of money and finance; open-economy macroeconomics: balance of payments, exchange rate dynamics, monetary policy effectiveness. Cross-listed with INTS 3600. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3610 International Trade Theory & Policy (4 Credits)**

Examines topical trade issues confronting the United States, policies proposed to tackle them, and the theoretical underpinnings of these policies. Studies how those policies could affect the less developed countries as determined by the environment established under the World Trade Organization. Prerequisite: ECON 2020 or 2030. Recommended: ECON 2610.

**ECON 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**ECON 3701 Topics in Economics (4 Credits)**

Specialized topics in Economics. Check with the Department of Economics or the Schedule of Classes for further information.

**ECON 3740 Health Economics (4 Credits)**

This course is designed to study the nature of the organization of health care production, delivery and utilization according to economic theory. It introduces the up-to-date problems and issues in the U.S. health care system by studying demand for and supply of health care services, health care production and costs, and market analysis of health care industry. Important parties playing roles in health care industry such as private health insurance firms, physicians, pharmaceutical industry, and hospital services will be studied in detail. In addition, the course deals with the role of government in health care industry and various health care reforms proposed in the U.S. Restriction: junior standing. Prerequisite: ECON 2020 or 2030.

**ECON 3830 Topics in Macroeconomics (4 Credits)**

Coverage varies but may include advanced topics in monetary theory, the study of business cycles, or the works of important monetary and macroeconomic theorists. Restriction: junior standing. Prerequisite: ECON 2030.

**ECON 3900 Growth, Technology and Economic Policy (4 Credits)**

This course will introduce students to innovation dynamics – technological change as the foundation for the growth of and structural changes in economic activity - through the lenses of 1) economic theory, as evolutionary economics, in particular original institutional economics and neo-Schumpeterian economics, as well as Marxian themes around dynamics of change in economies and societies; 2) economic history, to further underline the nature of innovation as a social phenomenon that has impacted technological capability and economic activity, in scope, reach, and level, in societies as well as societies themselves; and 3) economic policy, to emphasize focus areas for the successful support of innovation, and desired innovation, with examples drawing from the economic development process as well as national innovation systems concepts and the role of the public sector as an active participant in economic activity in general. The focus for the course under all three perspectives will be on changes to technological capability, from a social perspective that emphasizes systemic components in the processes of innovating and change. Prerequisite: ECON 2050.

**ECON 3970 Environmental Economics (4 Credits)**

This course examines economic perspectives of environmental and resource problems, ranging from peak oil, food crisis, and climate change. Topics include the property-rights basis of polluting problems, environmental ethics, benefit-cost analysis, regulatory policy, incentive-based regulation, clean technology, population growth and consumption, and sustainable development. Restriction: junior standing. Prerequisite: ECON 2020.

**ECON 3991 Independent Study (1-8 Credits)**

Prerequisites: ECON 1030.

**ECON 3995 Independent Research (1-4 Credits)**

This research project is based on a topic that the student picks in consultation with the chair of the economics department. During the consultation process a faculty supervisor is assigned to work with the student throughout the research process. The topic is preferably one that requires the student to demonstrate her/his ability to apply what he/she has learned in the intermediate-level required courses for the economics major. Restriction: senior standing.

**ECON 4020 Adv Macroeconomic Theory (4 Credits)**

Determinants of national income and its components and of the level of employment and the general price level; also examines business cycles and alternative macroeconomic theories.

**ECON 4030 Advanced Microeconomic Theory (4 Credits)**

The course covers a broad range of topics in mainstream microeconomic theory, which is based on individual maximizing behavior under constraints. Topics include Games and the role of institutions, General Equilibrium Theory, Externalities, and Incomplete Contracts, and more. The focus of the class is twofold: to understand the modeling foundations and underlying assumptions, and the limitation they imply; and to gain competence working through microeconomic models to evaluate their implications in terms of economic efficiency, social welfare, and distribution.

**ECON 4050 Origins of Modern Economics (4 Credits)**

This course covers the development of economic theory from the decline of the classical school through the emergence of the Keynesian theory and investigates in detail the structure of the neoclassical theory and the degree to which Keynesian economics provides an alternative. We examine why economists thought that certain theoretical frameworks were better than others and what problems still remain.

**ECON 4670 Econometrics: Multivariate Regression Analysis for Economists (4 Credits)**

This course develops the theoretical foundations of ordinary least squares (OLS) regression analysis and teaches students how to specify, estimate, and interpret multivariate regression models. Students have to apply what they have learned using a popular software package used for econometrics and real data. Special topics also covered include regression models that include dummy variables, log-linear models, fixed effects models, a brief discussion of instrumental variables, and an introduction to time-series analysis and forecasting. Cross-listed with ECON 3670.

**ECON 4701 Topics in Economics (4 Credits)**

Specialized topics in Economics.

**ECON 4850 Mathematics for Economists (4 Credits)**

Graduate level equivalent of ECON 3850.

**ECON 4980 Internship (0-1 Credits)**

Students doing an internship and writing an impact assessment report based on their work to demonstrate their understanding of economic theory relevant to the analysis and assessment of social policy to satisfy a MS in Economics and Social Policy degree requirement take this course. This course may also be taken for zero credit by students enrolled in the MA in Economics program who do a degree-related internship. Students must complete one 3000-level ECON course with a passing grade prior to enrollment in ECON 4980.

**ECON 4991 Independent Study (1-10 Credits)****ECON 4993 Thesis Topic Development and Defense (4 Credits)**

This resembles an independent-study where a student will work under the supervision of a professor. The aim is to encourage the student, as s/he completes a certain number of hours of course work, to actively formulate and develop her/his thesis topic, and to formally present and defend it in a thesis workshop scheduled by the Department. A minimum of 20 credit hours of graduate-level course work must be completed. Instructor's permission required.

**ECON 4994 Comprehensive Exam (1 Credit)**

Students taking the comprehensive exam scheduled by the department that tests their understanding of economic theory relevant to the analysis and assessment of social policy to satisfy a MS in Economics and Social Policy degree requirement take this course.

**ECON 4995 Independent Research (1-10 Credits)**

## Emergent Digital Practices (EDPX)

**EDPX 4000 Digital Design Concepts (4 Credits)**

An introductory course requiring conceptual, perceptual and manual skills to meet rigorous studio research into the history of mark-making, letter forms and layout designs as reflective of cultural, social, political and psychological contexts of interpretation. This class also emphasizes 2-D principles of design, including form, structure, conceptual understanding, visual aesthetics, semiotics, organizational systems, relationships of typography and imagery. Lab fee.

**EDPX 4010 Emergent Digital Tools (4 Credits)**

This course serves as a primer on the tools essential to expression, sharing, and creation in digital mediums. This includes knowledge of web technologies, creative coding, video, audio, and the basic historical and theoretical contexts of each. Lab fee.

**EDPX 4020 Emergent Digital Cultures (4 Credits)**

This course familiarizes students with current crucial approaches to understanding digital media and the impacts these media have in personal, community, cultural, social, institutional and international life. The course pays particular attention to cultural constructions of emergent digital media and practices. This course introduces graduate students to a variety of disciplinary lenses and conceptual practices, with readings and research ranging from media theory and studies, philosophy of technology, media archaeology and history, to science fiction studies as approaches to digital media and cultures.

**EDPX 4100 Programming for Play (4 Credits)**

This course offers an introduction to the creation of games and playful interactive objects. Students explore the space of socially conscious and humane games as well as investigate the creation of compelling interfaces and interactive opportunities. Cross listed with EDPX 3100. Prerequisites: EDPX 4000 and EDPX 4010, or permission of the instructor.

**EDPX 4112 Rapid Physical Game Design & Prototyping (4 Credits)**

This course is a rigorous investigation into games, rules, systems, interaction, collaboration, and the iterative design methodology through the rapid creation of large, human scale, "Big Games." The ambition is for students, working in changing collaborative groupings, to rapidly create games in response to varying material and conceptual constraints. Participants will both create and constructively critique games created by classmates. Participants are expected to become reflective in their play. Class time will be devoted to play-testing and discussion. Prerequisite: EDPX 4000. Lab fee.

**EDPX 4200 Data Visualization (4 Credits)**

This course explores the creation of informational graphics for visual unpacking of relationships within and among data sets. Students learn to visualize large data sets as a means of revealing and exploring patterns of information. Creating interactive visualizations is also covered, allowing for deep and participatory engagement with information. The resulting mediums include print and web. Lab fee. Cross listed with EDPX 3200.

Prerequisites: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4210 Typographic Landscapes (4 Credits)**

This class is a rigorous investigation of the expressive potential of typography as a crucial element of visual expression and electronic media.

This class presumes no background in typography. Students are guided through project-based explorations that range from hand-rendered inter-letter spatial relationships to the typesetting of modest sets of pages for paper and e-books. Lab fee. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4270 Making Networked Art (4 Credits)**

In Making Networked Art, students will develop technical skills for creating interactive works that live online. This course aims to develop a critical understanding of and response to the social, cultural, aesthetic and technical contexts of network culture, building on a deep understanding of contemporary and historical networked art practices. Students will work with HTML, CSS, and JavaScript to develop experimental approaches to user interface and interaction, deploying a range of digital materials from data to rich multimedia content to create work that produces new understandings of the role of the network in a post digital age. Prerequisite: EDPX 4010, or permission of the instructor. Lab fee. Crosslisted with EDPX 3270.

**EDPX 4310 Tangible Interactivity (4 Credits)**

Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students learn to create and hack electronic input and output devices and explore multi-touch augmented reality, and other forms of sensor-based technologies. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4320 Interactive Art (4 Credits)**

This course expands the concepts, aesthetics, and techniques critical to the exploration and authoring of interactive art. It explores human computer interactions; user/audience interface design/development; interactive logic, author-audience dialogue; meta-data/multimedia asset acquisition and authoring environments. While utilizing students' skills in numerous media forms, the class focuses on sensing, interactive scripting techniques, and emerging forms of digital narrative. Emphasis is on the development of interactive media deployment and distributions ranging from screen media to physical environments. Lab fee. Cross listed with EDPX 3320. Prerequisites EDPX 4310 or EDPX 4450.

**EDPX 4330 Advanced Coding (4 Credits)**

This course is focused on text-based creative coding for multiple purposes. Specific applications change each quarter and can include mobile apps, computer vision, machine learning, generative art, programming reactive spaces, web animation, and other emerging ideas, all driven by creative coding. Prerequisite: EDPX 4010.

**EDPX 4340 Designing Social Good (4 Credits)**

This course focuses on interdisciplinary approaches to artistic, scholarly and cultural methods for creating change in contemporary societal mindsets for a more sustainable and equitable future. Our objectives are to understand how current practices are reinforced and to then make experiences that encourage new ideas in the personal and global sphere. Lab fee. Cross listed with EDPX 3340. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4350 Sustainable Design (4 Credits)**

This course reviews and implements advanced sustainable design strategies as a praxis intersecting the domains of digital media design, dissemination, community organization and networking. The course builds upon the basic paradigms that have coalesced in the organizational and critical platforms of the sustainable design movement including ecology/environment, economy/employment, equity/equality and education/pedagogy/dissemination. The class reviews a wide spectrum of sustainable design strategies including: mapping of consumptive origin-thru-fate, green materials usage, creative commons, open source software/hardware movements, collaborative design, predictive complexity modeling, biomimicry, evolutionary design methods, and greening infrastructure, among others. Lab fee. Prerequisite: EDPX 4000 and EDPX 4010 or permission of the instructor.

**EDPX 4370 Biomedial in Emergent Digital Practices (4 Credits)**

The graduate section of Biomedial is an EDP advanced art-science course that will survey and investigate the interplay between new media, biological systems/ technologies and bioethics as they relate to creative inquiry at the juncture of life sciences, digital media and contemporary technoculture. The course will build upon the basic paradigms and platforms of biosemiotics and biomimetics to expand into a coverage of our framing of corporeality, biological/environmental sensibilities and our perceptions and interconnections with biomaterials and lifeforms that we exist thru and within. Course topics will adapt to significant developments in biological sciences, emergent media and bioethics. The course can be repeated for credit with offering of new course topics. EDPX 4370 Graduate students will lead collaborative group projects. Additional graduate assignments will undertake individual biomedical research projects for adding experimental depth to course topics i.e. development of creative tools for transcoding, modeling or bioethics critique. Tools will be demonstrated and made usable in group projects. Cross Listed with EDPX 3370.

**EDPX 4400 Video Art (4 Credits)**

This course continues the investigation of theories and practice of electronic media and expands into an exploration of video art, providing the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing various video formats. The course may be repeated for credit with permission of the instructor and when projects vary. Lab fee. Prerequisite: EDPX 4010 or permission of the instructor. Cross listed with EDPX 3400.

**EDPX 4410 Advanced Video Art (4 Credits)**

This course continues the investigation of theories and practices of electronic media and expands into an individual exploration of video art focusing on "off-screen" time-based media through conceptual and technological experimentation. Projects explore creating digital video for projection into spaces, onto buildings, and in the form of installations, to name a few formats. Projects are used as a platform for creative expression focusing on the critical skills necessary for the conception and completion of ideas. Lab fee. Prerequisite: EDPX 4400 or permission of instructor.

**EDPX 4440 Site-Specific Installation (4 Credits)**

This class produces projects investigating physical space, virtual space and site-specific public installations. Lab fee. Cross listed with EDPX 3440. Prerequisites: EDPX 4000 and EDPX 4010.

**EDPX 4450 Visual Programming (4 Credits)**

This course introduces intuitive visual "programming" that allows rapid building of personalized tools for data, video, image, and sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or to bridge between multiple pieces of software. Lab fee. Cross listed with EDPX 3450. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4460 Visual Programming II (4 Credits)**

This class uses advanced visual programming concepts (as provided by Max/MSP and Jitter) to explore visualization and sonification techniques in an artistic context. Areas of exploration include OpenGL modeling and animation, virtual physics emulation, audio synthesis techniques, and external data manipulation. Students use these concepts to create art installation and performance projects. Lab fee. Cross listed with EDPX 3460. Prerequisite: EDPX 4450.

**EDPX 4490 Expanded Cinema (4 Credits)**

This course introduces several forms of expanded cinema, such as video remixes and mashups; live cinema and audiovisual performance; VJing; sonic visualization; visual music; and ambient video. The class extends the student's multitrack video and audio mixing skills to an emphasis on both performance and generative approaches to audiovisual media. It introduces software and hardware sets including VJ tools and visual programming for generating as well as manipulating video files and real-time source streams. Lab fee. Cross listed with EDPX 3490. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4500 Sonic Arts (4 Credits)**

This class introduces the tools and techniques of the sonic arts, including field recording; sampling and synthesis; sound editing and effects processing; and mixing. Students survey a variety of sonic arts, historical and contemporary, to understand techniques and strategies for developing and distributing sonic artifacts. Lab fee. Cross listed with EDPX 3500. Prerequisite: EDPX 4010 or permission of the instructor.

**EDPX 4600 3D Modeling (4 Credits)**

This course serves as an introduction to 3D modeling, texturing, and lighting on the computer. Students complete a series of projects in which the processes of preparing and producing a 3D piece are explored. Various strategies and techniques for creating detailed models to be used in animation and games are examined. Additional attention is spent on virtual camera techniques as well as the use of compositing in creating final pieces. Current trends in the field are addressed through the analysis and discussion of current and historical examples. Lab fee. Cross listed with EDPX 3600, MFJS 3600. Prerequisite: EDPX 4000 or permission of the instructor.

**EDPX 4610 3D Animation (4 Credits)**

This course examines animation within virtual 3D environments. Starting with basic concepts, the course develops timing and spacing principles in animation to support good mechanics. They also serve as the basis for the more advanced principles in character animation as the class progresses. Lab fee. Cross listed with EDPX 3610. Prerequisite: EDPX 4600.

**EDPX 4620 3D Spaces (4 Credits)**

An exploration of 3D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine is used by students to examine the opportunities of virtual 3D worlds. Lab fee. Prerequisites: EDPX 4010 and EDPX 4600, or permission of the instructor.

**EDPX 4700 Topics in Digital Cultures (4 Credits)**

This course provides an in-depth exploration of the emergent digital practices of a particular culture and unique area of advanced study (for example, art and science studies; activism; youth culture; critical game studies; the philosophy of technology; or social networking). Students learn the social/historical context of the particular culture and observe and document the interplay between cultural practices and particular technologies. Prerequisite: varies with topic.

**EDPX 4701 Topics in Emergent Digital Practices (1-4 Credits)**

Topics in Emergent Digital Practices.

**EDPX 4710 Critical Game Studies (4 Credits)**

This course is a critical investigation of contemporary ludic cultures. Ludic cultures are environments and practice of play. This course is taught with a hybrid teaching model where games are treated as texts, and outcomes are in the form of discussion and synthetic media responses. We construct and play a hyper-local canon of games, both in and outside of class. We read from the growing body of literature in game studies. We reflect and respond to these texts through shareable media. This course partially satisfies a cultures requirement for emergent digital practices majors and minors. Lab fee.

**EDPX 4730 21st Century Digital Art (4 Credits)**

An exploration of Digital Art and surrounding culture from the last 15 years. Topics will include machinima, demoscenes, MMO performances, interactive installations, VR, animation, video shorts, and much more. Students will actively search for, share and critically review much of the creative work for the class.



**EDPX 4740 Performance Cultures (4 Credits)**

This course explores the history and current state of technology and performance. Topics covered include expanded cinema, live cinema, VJing, performance art, and the intersections of audiovisual media and technologies with dance, theater, and more. This course incorporates reading and discussion of critical texts and documentation of theory, process and practices, and the class includes screening and discussion of examples of both historical and emerging forms of media-enriched performance. Students produce written media on a variety of performance-related issues, artifacts, and practitioners, culminating in a written document or interactive publication. Lab Fee. Prerequisites: EDPX 4010 and EDPX 4020, or permission of the instructor.

**EDPX 4750 Sound Cultures (4 Credits)**

This course explores the sonic turn of emergence in contemporary digital culture. New sound technologies and practices, along with the development of interdisciplinary sound studies, have made avant-garde composition, sound art, film soundtracks, electronic music, turntablism, jazz, and alternative as well as popular musical forms equally essential zones in which we attune to changing technocultural conditions. To situate the course's emphasis on contemporary sonic experience and auditory ways of being in the world, an historical portion of the class establishes the ways in which new sound cultures have appeared since WWII to transform how musicians, artists, scholars, and listeners experience and understand sound. The class facilitates experiences ranging from the pole of auditory realism to that of sonic speculation and futurism. Students will develop a sonic literacy that includes: listening as a creative act; understanding how to work with diverse sonic materials; and appreciating the critical voice as a creative and cultural imperative. Prerequisites: EDPX 4010 and 4020.

**EDPX 4770 Cybercultures (4 Credits)**

This course encompasses a variety of lenses through which to view, evaluate and critique ideas of 'community' and communities in cyberspace (cyber culture). The course covers such issues as: identity and race in cyberspace (including 'identity and racial tourism'); communication technologies and social control; digital censorship; and utopian and dystopian representations of digital technology. The course also engages with social theories involving issues of technological determinism and the popular representation of technology. It explores the views of a diverse set of critics to ask whether digital things are 'good' for you and your communities. Cross listed with EDPX 3770. Prerequisite: EDPX 4020.

**EDPX 4780 Science Fiction: Digital Culture (4 Credits)**

This course explores the intersections of emergent digital practices and cultures with the extrapolative thought experiments, technical speculations, and social criticisms of science fiction. Students read, discuss, write and otherwise respond to primary texts by the likes of William Gibson, Bruce Sterling, Cory Doctorow, Philip K. Dick, and Hiroshi Yamamoto. Science fiction studies may also include sub-genres (steampunk, hard science fiction, ecological) and regional categories (Japanese sci-fi), as well as consider science fiction in other media formats (sound recordings, film, games). Students produce written materials in a variety of formats, culminating in a formal essay or interactive publication. Cross listed with EDPX 3780. Prerequisite: EDPX 4020 or permission of the instructor.

**EDPX 4800 Topics in Digital Making (4 Credits)**

This course provides an in-depth explorations of the emergent digital practices of a technology or method for making (for example, wearables; interactive projections; augmented reality; immersive multi-channel soundscapes). Students learn the social/historical context of the particular method and consider the role and function their creations serve when it becomes public. Lab Fee. Prerequisite: varies with topic.

**EDPX 4980 Internship (0-8 Credits)**

Instructor approval required.

**EDPX 4991 Independent Study (1-8 Credits)**

Independent Study form required.

**EDPX 5000 Graduate Seminar (4 Credits)**

Topics vary. Reading and discussion of critical theory. May include project(s) related to the topic. Course may be repeated up to six times.

**EDPX 5100 Graduate Critique (4 Credits)**

The course focuses on student's creative production. Critiques are moderated by a different faculty member each quarter. Conceptual, methodological and theoretical concerns are stressed. Critiques are designed to assist in the experimentation, preparation and construction of individual art projects. Time is also spent on preparing students for a professional practice in the Arts. Course may be repeated up to six times.

**EDPX 5700 Research & Theoretical Methods (4 Credits)**

This course provides graduate students with the strategies and techniques of research in the area of digital media studies.

**EDPX 5800 M.A. Thesis (4-8 Credits)**

Independent work toward completion of the MA Thesis. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5850 M.A. Project (1-4 Credits)**

Independent work toward completion of the MA Project. May only be taken with the permission of the Graduate Director. May be taken for up to 8 credit hours.

**EDPX 5900 MFA Exhibition (1-12 Credits)**

Independent work toward completion of the MFA Thesis Exhibition. May only be taken with the permission of the Graduate Director. May be taken for up to 12 credit hours.

# Engineering (ENGR)

## **ENGR 3340 Product Development and Market Feasibility (4 Credits)**

In this course, students gain knowledge of designing products for market success by developing a product and optimizing its design for specific mass manufacturing technologies. Students gain experience through the design development process including market feasibility research, human-centered design, brainstorming and ideating new concepts, refinement through design iteration, and constructing alpha and beta prototypes that are designed with mass manufacturing considerations. Projects are based upon real world new product development principles. Students learn and practice the fundamentals of design thinking, design process, and entrepreneurship.

## **ENGR 3450 Biosensing Technology (4 Credits)**

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. This course provides instruction in the basic science and engineering concepts required to understand the design and application of biosensors. This module serves as an introduction to some of the biosensors and measurement techniques.

## **ENGR 3510 Renewable and Efficient Power and Energy Systems (4 Credits)**

This course introduces the current and future sustainable electrical power systems. Fundamentals of renewable energy sources and storage systems are discussed. Interfaces of the new sources to the utility grid are covered. Prerequisite: ENEE 2012.

## **ENGR 3520 Introduction to Power Electronics (4 Credits)**

This covers fundamentals of power electronics. We discuss various switching converters topologies. Basic knowledge of Efficiency and small-signal modeling for the DC-DC switching converters is covered. Furthermore, magnetic and filter design are introduced. Prerequisites: ENEE 2211 and ENGR 3722.

## **ENGR 3525 Power Electronics and Renewable Energy Laboratory (1 Credit)**

In this course the fundamentals of switching converters and power electronics in a real laboratory set-up are covered. The course incorporates hardware design, analysis, and simulation of various switching converters as a power processing element for different energy sources. The energy sources are power utility, batteries, and solar panels. Prerequisite: ENGR 3520.

## **ENGR 3540 Electric Power Systems (4 Credits)**

This course covers methods of calculation of a comprehensive idea on the various aspects of power system problems and algorithms for solving these problems. Prerequisite: ENGR 3530.

## **ENGR 3620 Advanced Engineering Mathematics - Corporate (4 Credits)**

Applied mathematics for engineers. Systems and series solutions of ordinary differential equations, Fourier analysis, partial differential equations, linear algebra, vector calculus, special functions, unconstrained and combinatorial optimization, and applied probability and statistics. Prerequisites: MATH 2070 and MATH 2080 or instructor permission.

## **ENGR 3621 Advanced Engineering Mathematics (4 Credits)**

Applied mathematics for engineers. Topics include vector spaces, normed vector spaces, inner product spaces, linear transformations, finite-dimensional linear transformations, linear operators, finite-dimensional linear operators, linear differential systems, linear difference systems, orthogonal transformations, amplitude estimation, fundamentals of real and functional analysis, and introduction to partial differential equations, and applications to engineering systems.

## **ENGR 3630 Finite Element Methods (4 Credits)**

Introduction to the use of finite element methods in one or two dimensions with applications to solid and fluid mechanics, heat transfer and electromagnetic fields; projects in one or more of the above areas. Prerequisites: ENME 2541 AND ENGR 1572.

## **ENGR 3650 Probability and Statistics for Engineers (4 Credits)**

This course covers quantitative analysis of uncertainty and decision analysis in engineering. It covers the fundamentals of sample space, probability, random variables (discrete and continuous), joint and marginal distributions, random sampling and point estimation of parameters. It also covers statistical intervals, hypotheses testing and simple linear regression. The course includes applications appropriate to the discipline. Prerequisite: MATH 1953.

## **ENGR 3721 Controls (3,4 Credits)**

Modeling, analysis and design of linear feedback control systems using Laplace transform methods. Techniques and methods used in linear mathematical models of mechanical, electrical, thermal and fluid systems are covered. Feedback control system models, design methods and performance criteria in both time and frequency domains. A linear feedback control system design project is required. Prerequisites: ENEE 2022, ENGR 3611 or permission of instructor.

## **ENGR 3722 Control Systems Laboratory (1 Credit)**

This laboratory course serves as supplement to ENGR 3721. It aims at providing "hands on" experience to students. It includes experiments on inverted pendulum, gyroscopes, motor control, feedback controller design, time-domain and frequency domain. Corequisite: ENGR 3721.

## **ENGR 3730 Robotics (3 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Cross listed with ENGR 4730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or permission of instructor.

**ENGR 3731 Robotics Lab (1 Credit)**

Laboratory that complements the analysis, design, modeling and application of robotic manipulators. Implementation of the mathematical structures required to support robot operation. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Corequisite: ENGR 3730 or permission of instructor.

**ENGR 3800 Topics (ENGR) (1-4 Credits)**

Special topics in engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENGR 3900 Engineering Internship (0-4 Credits)**

Students in engineering may receive elective credit for engineering work performed for engineering employers with the approval of the chair or associate chair of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned. Junior, senior, or graduate status in engineering is normally required. May not be used to satisfy technical requirements. May be taken more than one for a maximum of 6 quarter hours. Prerequisite: permission of instructor.

**ENGR 4100 Instrumentation and Data Acquisition (4 Credits)**

This course examines different instrumentation techniques and describes how different measurement instruments work. Measurement devices include length, speed, acceleration, force, torque, pressure, sound, flow, temperature, and advanced systems. This course also examines the acquisition, processing, transmission and manipulation of data. Final project or paper. Cross listed with ENGR 3100. Prerequisites: PHYS 1213 OR PHYS 1214.

**ENGR 4200 Introduction to Nanotechnology (4 Credits)**

The most important recent accomplishments so far in the application of nanotechnology in several disciplines are discussed. Then a brief overview of the most important instrumentation systems used by nanotechnologists is provided. The nature of nanoparticles, nanoparticle composites, carbon nanostructures, including carbon nanotubes and their composites is subsequently discussed. The course also deals with nanopolymers, nanobiological systems, and nanoelectronic materials and devices. The issues of modeling of nanomaterials and nanostructures is also covered. Multiscale modeling based on finite element simulations, Monte Carlo methods, molecular dynamics and quantum mechanics calculations are briefly addressed. Most importantly, students should obtain appreciation of developments in nanotechnology outside their present area of expertise. Cross listed with ENGR 3200.

**ENGR 4300 Advanced Numerical Methods (4 Credits)**

Fundamental and advanced numerical methods to approximate mathematical problems for engineering applications using modern software such as Matlab. Topics include numerical differentiation and integration, solution to linear and non-linear equations, ordinary and partial differential equations, and initial, boundary, and eigen value problems. Recommended prerequisite: MATH 2070.

**ENGR 4350 Reliability (4 Credits)**

An overview of reliability-based design. Topics include: fundamentals of statistics, probability distributions, determining distribution parameters, design for six sigma, Monte Carlo simulation, first and second order reliability methods (FORM, SORM). Most Probable Point (MPP) reliability methods, sensitivity factors, probabilistic design.

**ENGR 4455 Fluorescence and Its Applications in Biomedical Sensors (4 Credits)**

The course introduces the principles of fluorescence and its applications in the real world. It covers various topics including fluorophores (dye, fluorescent proteins, quantum dots, etc.), nanomaterials and nanostructures, design of biomedical sensors, point-of-care systems, and wearable devices. Cross listed with ENGR 3455.

**ENGR 4501 Graduate Capstone Design I (3 Credits)**

This is a project-centered course. This is the first third of a practical class that plans the engineering design project prior to addressing the design in earnest. This requires teamwork to develop the plan that details the schedule, cost, and who is responsible for which portions of the design effort. In this segment, the engineering teams establish the starting point for the design. This class puts theory into practice with the "shredding" of the RFP, defining a strategy for the team, balancing what has to be done with existing constraints, understanding the "true" problem of the customer, capturing the associated risks, and capturing margins required for the start of any design activity.

**ENGR 4502 Graduate Capstone Design II (3 Credits)**

This is a project-centered course. This is the second third of a practical class that implements the engineering design process (left side of the vee). This requires teamwork to develop the detailed design, which is a continuation of the accepted proposal. In this segment, the engineering teams add the details to a conceptual design. This class puts theory into practice with requirements development, balancing requirements against the constraints, completing a functional decomposition, developing a CONOPs document, developing a physical architecture, developing a functional architecture, and defining the interfaces through an ICD.

**ENGR 4503 Graduate Capstone Design III (3 Credits)**

This is a project-centered course. This is the third of a practical class that implements the engineering design process (right side of the vee). This requires teamwork to build, checkout, and test the final product. In this segment, the engineering teams build or procure hardware as a step towards the integration of the system. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. Test data is collected through instrumentation of the final product with a buy-out and certification by the team. Testing may include performance testing and environmental testing as envisioned in the context diagram.

**ENGR 4504 Graduate Capstone Design IV (3 Credits)**

This is a project-centered course. This is the fourth of a practical class that implements the entire engineering "vee" design process. This requires teamwork to build, checkout, and test the final design product, e.g. hypothetical missile. In this segment, the engineering teams fine-tune the design process which may address advanced topics such as fault management and resilience. This class puts theory into practice by building components, developing software modules, integrating software with hardware, checkout of the system, and performing tests to verify construction, validate models, and collect data for acceptance by the team prior to demonstrating the operations of the product to the customer. It may also include addressing the beginning of the program through early management and pre-phase A activities. Test data is collected through instrumentation of the final product with a buy-in and certification by the team. Testing may include performance testing, functional testing, and environmental testing as envisioned in the system process.

**ENGR 4530 Intro to Power and Energy (4 Credits)**

Basic concepts of AC systems, single-phase and three-phase networks, electromechanical energy conversion, electric power generation, transformers, transmission lines, AC machinery, DC motors, and contemporary topics in power and energy conversion. Cross listed with ENGR 3530.

**ENGR 4545 Electric Power Economy (4 Credits)**

This course covers economy aspects of electric power industry and the implications for power and energy engineering in the market environment. Cross listed with ENGR 3545.

**ENGR 4560 Power Generation Operation and Control (4 Credits)**

This course covers economic dispatch of thermal units and methods of solution; transmission system effects; generate with limited energy supply; production cost models; control of generation; interchange of power and energy; power system security; state estimation in power systems; optimal power flow. Prerequisite: ENGR 3530 or ENGR 4530 or permission of instructor.

**ENGR 4590 Power System Protection (4 Credits)**

This course covers methods of calculation of fault currents under different types of fault; circuit breakers, current transformers, potential transformers; basic principles of various types of relays; applications of relays in the protection of generator, transformer, line, and bus, etc. Prerequisite: ENGR 3530 or ENGR 4530.

**ENGR 4620 Optimization (4 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Optimization methods will be developed and evaluated in code and used in a real-world application project.

**ENGR 4622 Advanced Optimization (4 Credits)**

Optimization is an indispensable tool for many fields of science and engineering and is one of the pillars of data science and machine learning. This course introduces optimization methods that are suitable for large-scale problems arising in data science, machine learning, and other engineering applications. We will discuss the development, computation, and convergence aspects for algorithms including gradient methods, accelerated methods, quasi-Newton methods, stochastic optimization, variance reduction, online optimization, as well as distributed optimization. We will also exploit the efficacy of these methods in concrete data science problems, including learning low-dimensional models, deep learning, and (possible) reinforcement learning. This course together with ENGR 4620 Optimization will provide in-depth introductions to optimization.

**ENGR 4680 Fault Diagnosis & Prognostics for System Design (4 Credits)**

Reliability engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability, describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time. Normally, quality focuses on the prevention of defects during the warranty phase whereas reliability looks at preventing failures during the useful lifetime of the product or system from commissioning to decommissioning. Diagnosis is used, with variations in the use of logic, analytics, and experience, to determine "cause and effect". In systems engineering, it is typically used to determine the causes of symptoms, mitigations, and solutions. Prognostics is an engineering discipline focused on predicting the time at which a system or a component will no longer perform its intended function. This lack of performance is most often a failure beyond which the system can no longer be used to meet desired performance. The predicted time then becomes the remaining useful life (RUL), which is an important concept in decision making for contingency mitigation. Success in this course requires knowledge of probability theory and statistics, and familiarity with MATLAB/Simulink.

**ENGR 4723 Digital Control (4 Credits)**

The course focuses on modeling, analysis, and design of digital control systems. Topics include: z-Transform and difference equations; sampling and aliasing; Zero-Order Hold (ZOH); A/D and D/A conversions; pulse transfer function representation; time and frequency domain representations; input/output analysis; analysis of sample data systems; stability; design of discrete-time controllers; introduction to state-space representation. Cross listed with ENGR 3723. Prerequisites: ENGR 3721 and ENGR 3722.

**ENGR 4730 Introduction to Robotics (4 Credits)**

Introduction to the analysis, design, modeling and application of robotic manipulators. Review of the mathematical preliminaries required to support robot theory. Topics include forward kinematics, inverse kinematics, motion kinematics, trajectory control and planning, and kinetics. Applications include programming and task planning of a manufacturing robot manipulator. Cross listed with ENGR 3730. Prerequisites: ENME 2520 and MATH 2060 or MATH 2200 or instructor approval.

**ENGR 4735 Linear Systems (4 Credits)**

This course focuses on linear system theory in time domain. It emphasizes linear and matrix algebra, numerical matrix algebra and computational issues in solving systems of linear algebraic equations, singular value decomposition, eigenvalue-eigenvector and least-squares problems, linear spaces and linear operator theory. It studies modeling and linearization of multi-input/multi-output dynamic physical systems, state-variable and transfer function matrices, analytical and numerical solutions of systems of differential and difference equations, structural properties of linear dynamic physical systems, including controllability, observability and stability. It covers canonical realizations, linear state-variable feedback controller and asymptotic observer design, and the Kalman filter. Cross listed with ENGR 3735. Prerequisites: ENGR 3611, ENGR 3721, ENGR 3722, or permission of the instructor.

**ENGR 4740 Adaptive Control Systems (4 Credits)**

Theoretical and application aspects of robust adaptive control design for uncertain dynamical systems. Topics include: parameter estimation, stability, model reference adaptive systems, self-tuning regulators, gain scheduling, design for robustness against unmodeled dynamics and disturbance signals. Examples will be given from aerospace engineering (changes in the dynamics of aircraft), process control, and robotics. Modern alternatives to traditional adaptive control will be discussed (switching multi-model/multi-controller adaptive schemes). Prerequisite: ENGR 3721 or permission of instructor. Familiarity with MATLAB/Simulink.

**ENGR 4745 Adv Non-Linear Control System (4 Credits)**

Nonlinear system analysis methods: Existence of solutions of ODEs, uniqueness, continuity, compactness, fixed point, linearization, metric spaces, Contraction Mapping Theorem, Gronwall-Bellman lemma. Phase plane analysis; Limit Cycles. Lyapunov stability of autonomous and non-autonomous systems. Circle criterion, absolute stability, Popov criterion. Passivity and Lyapunov stability. Input-to-State stability. Small Gain Theorem. Describing functions. Nonlinear control system synthesis methods: Passivity-based control. Stability via Feedback Linearization. Lie derivatives.

**ENGR 4750 Networked Control Systems (4 Credits)**

Fundamental tools and recent advances in networked control. Topics include the control of multi-agent networks found in multi-vehicle coordination, control of sensor networks, unmanned vehicles, and energy systems. Network models, distributed control and estimation, distributed control under limited communications and sensing, formation control, coverage control in mobile sensor networks. Prerequisites: linear algebra, linear control systems, differential equations, familiarity with MATLAB, or permission of instructor.

**ENGR 4755 Optimal Control (4 Credits)**

Introduction to optimal control theory (control laws that maximize a specified measure of a dynamical system's performance). Topics include: optimality conditions and constraints; calculus of variations; review of mathematical programming (Lagrange multipliers, convexity, Kuhn-Tucker theorem); Pontryagin's maximum principle (constraints, Hamiltonians, bang-bang control); dynamic programming and Linear Quadratic Regulation (Riccati, Hamilton-Jacobi equation). Prerequisites: ENGR 3721 (Controls) and ENGR 3735/4735 (Linear Systems) or equivalent courses.

**ENGR 4760 Multivariable Control (4 Credits)**

Multivariable aspects of control (systems with multiple actuators and sensors); performance analysis of feedback control systems; sensitivity; robustness and stability margins; disturbance attenuation; design tradeoffs; singular value; characteristic locus. Modern H-infinity control theory and 'mu' synthesis-based robust control design techniques. Enforced Prerequisites and Restrictions ENGR 3721 (Controls) and ENGR 4735 (Linear Systems at a graduate level) or equivalents.

**ENGR 4765 Robot Control (4 Credits)**

The course focuses on different techniques, methods, and theories for control of robots. The topics covered include: introduction to nonlinear control theory, review of independent joint control, nonlinear and multivariable robot control, feedback linearization control of robots, control of underactuated robots, control of nonholonomic and mobile robots. force and impedance control, and vision-based control. Pre-requisite or co-requisite: ENGR 3730 or ENGR 4730, or equivalent is recommended.

**ENGR 4790 Systems Engineering Requirements (4 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. It spans the whole requirements engineering phase that includes requirements analysis, decomposition, derivation, allocation, verification and validation planning. Students acquire expertise in creating UML and SYML case diagrams and in defining and implementing verification and validation plans. Requirement management methods and tools, associated vernacular, and requirements configuration control are also covered. Prerequisites: ENMT 4100, or permission by the Instructor.

**ENGR 4810 Advanced Topics (ENGR) (1-5 Credits)****ENGR 4865 Design, Innovation, and Entrepreneurship (4 Credits)**

The course focuses on design and innovation of engineering systems and products. It deals with entrepreneurship, critical and innovative thinking, creativity and lateral thinking, research and technology challenges that lead to innovation, entrepreneurship and new product development, problem solving and decision making. It discusses factors that affect innovation (e.g. tech insertion), as well as a wide range of case studies in diverse application domains. Course Requirements: Projects.

**ENGR 4910 Conceptual Design (4 Credits)**

Conceptual design is the part of the design process where—by identifying the essential problems through abstraction, establishing function structures, searching for appropriate working principles and combining these into a working structure— the basic solution path is laid down through the elaboration of a solution principle. Conceptual design specifies the principle solution. Concept design rarely starts at the same point; you might have an existing design that needs iterating or the requirement to create a conceptualized form. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. George Polya (mathematician) presented two important decision-making principles, understanding the problem and devising a plan. To understand what is new, students are asked to look at intellectual property, a category of property that includes intangible creations of the human intellect. There are many types of intellectual property such as patents, and some countries recognize more than others. Designers assess the many different directions a design could take at this stage will allow you to identify what you like and don't like from each one. The preferred concept will then be further developed using engineering drawings, schematics and possibly 3D models which will show how the design will look and operate.

**ENGR 4920 Aerospace Missions (4 Credits)**

The Design "Problem" in Advanced Aerospace Systems describes the problems in the conceptual design of various types of aircraft, spacecraft, and complex vehicles. It covers the following topics: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic). Problem statements are concise descriptions of design problems. Design teams use them to define the current and ideal states, to freely find user-centered solutions. This class stands as a reference of interest to engineers and scientists working in aerospace engineering and related topics.

**ENGR 4940 Mission Operation Controls (4 Credits)**

Space operations is based at a centralized control center, a facility used for command & control (C2), and related communication equipment (antennas, etc.). The human operators conduct the day-to-day operations for controlling the spacecraft. They control the spacecraft and its payloads, and carries out all activities related to mission planning and scheduling. For example, normal orbital operations are interrupted every six months to conduct orbital maneuvers. Launch operations begin with spacecraft integration and checked-out for launch. Once safely placed in orbit, command and control goes back and forth between the ground control station and the spacecraft or satellite. A key aspect of spacecraft operations is the transferring of data from the onboard instruments collected by its payload to the ground, eventually disseminating the data to concerned users and analysts through a ground data network. This requires an on-orbit communication architecture.

**ENGR 4991 Independent Study (1-5 Credits)****ENGR 4995 Independent Research (1-16 Credits)****ENGR 5991 Independent Study (0-10 Credits)****ENGR 5995 Independent Research (1-16 Credits)**

## Engineering, Bio (ENBI)

**ENBI 4200 Medical Device Development (4 Credits)**

Working in a fast-paced competitive biomedical R&D firm is a dramatic change of pace from most college classes. This course will create a realistic industry environment where students take on the role of development engineers to design and manufacture real-world medical devices. This course is intended to provide a working knowledge of the design and development process specifically for medical device applications.

**ENBI 4500 Biofluids (4 Credits)**

The application of fluid dynamics theory and design to problems within the biomedical community. Specific topics covered include the mechanics of inhaled therapeutic aerosols, basic theory of circulation and blood flow, foundations in biotechnology and bioprocessing, and controlled drug delivery. Cross listed with ENBI 3500.

**ENBI 4510 Biomechanics (4 Credits)**

An introduction to the mechanical behavior of biological tissues and systems. Specific topics covered include: Analysis of the human musculoskeletal system as sensors, levers, and actuators; Joint articulations and their mechanical equivalents; Kinematic and kinetic analysis of human motion; Introduction to modeling human body segments and active muscle loading for analysis of dynamic activities; Mechanical properties of hard and soft tissues; Mechanical and biological consideration for repair and replacement of soft and hard tissue and joints; Orthopedic implants. Cross listed with ENBI 3510.

**ENBI 4520 Introduction to Cardiovascular Engineering (4 Credits)**

An introduction to cardiovascular mechanics with a focus on the quantitative understanding of the mechanical phenomena that governs the cardiovascular system. Specific topics covered include: basic principles of circulation including macro and micro circulation, soft tissue mechanics, applications to cardiovascular diseases, modelling techniques, clinical and experimental methods, and design of cardiovascular devices. Recommended prerequisites: ENME 2541 and ENME 2661.

**ENBI 4530 Biomechanics of Human Movement (4 Credits)**

An introduction to engineering-based analysis of human movement. Topics include: musculoskeletal anatomy, neuromuscular physiology, muscle mechanics, electromyography, sensorimotor integration, anthropometry, kinematics and kinetics. Recommended pre-requisite material: knowledge of MATLAB, ENGR 1572.

**ENBI 4600 Biomedical Engineering: Technology, Research, and Design (4 Credits)**

Introduction to Biomedical Engineering is an interdisciplinary course that combines engineering principles with biological and medical sciences to advance healthcare in areas such as diagnosis, monitoring, and therapy. The course provides a foundational understanding of biomedical engineering and prepares students for further study or careers in the field.

**ENBI 4610 Experimental Design in Biomedical Sciences (4 Credits)**

This course offers an in-depth exploration of experimental design principles within the biomedical sciences, emphasizing statistical analysis, measurement techniques, and ethical considerations. It aims to provide students with practical skills necessary for designing, conducting, and analyzing biomedical research.

**ENBI 4620 Bioelectronics (4 Credits)**

This course introduces the principles and applications of bioelectronics, focusing on the interface between biological systems and electronic devices. It covers the fundamentals of electronic circuits, signal processing, and sensor technology, and their applications in areas like biometric monitoring, neuroprosthetics, and biosensing.

**ENBI 4630 Biomaterials (4 Credits)**

This course provides an introduction to the field of biomaterials science, focusing on the fundamental principles, properties, and applications of materials used in biomedical engineering and healthcare. Topics covered include the classification of biomaterials, biocompatibility, interactions with biological systems, surface modifications, fabrication techniques, characterization techniques and current applications in tissue engineering, regenerative medicine, drug delivery, and medical devices.

**ENBI 4800 Adv Topics (Bioengineering) (1-5 Credits)**

Various topics in Bioengineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENBI 4991 Independent Study (1-5 Credits)****ENBI 4995 Independent Research (1-18 Credits)**

## Engineering, Computer (ENCE)

**ENCE 3231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems. Prerequisite: ENCE 3210.

**ENCE 3250 HDL Modeling & Synthesis (3 Credits)**

Introduction to Hardware Design Language (HDL). Language syntax and synthesis. Applications related to digital system implementation are developed. Project. Prerequisite: ENCE 2101 or instructor's permission.

**ENCE 3321 Network Design (4 Credits)**

Introduction to network components. Layering of network architecture. Analysis of Local Area Network (LAN) concepts and architecture based on IEEE standards. Design principles including switching and multiplexing techniques, physical link, signal propagation, synchronization, framing and error control. Application of probability and statistics in error detecting and control. Ethernet, Token-ring, FDDI (Fiber Distributed Data Interface), ATM (Asynchronous Transfer Mode), ISDN (Integrated Service Data Networks). Prerequisite: ENEE 3111, ENCE 2101 or permission of instructor.

**ENCE 3501 VLSI Design (3 Credits)**

Design of Very Large Scale Integration systems. Examination of layout and simulation of digital VLSI circuits using a comprehensive set of CAD tools in a laboratory setting. Studies of layouts of CMOS combinational and sequential circuits using automatic layout generators. Fundamental structures of the layout of registers, adders, decoders, ROM, PLA's, counters, RAM and ALU. Application of statistics and probability to chip performance. CAD tools allow logic verification and timing simulation of the circuits designed. Cross listed with ENCE 4501. Prerequisite: ENCE 3231.

**ENCE 3620 Computer Vision (4 Credits)**

This course is an introduction to the basic concepts in image processing and computer vision. First, an introduction to low-level image analysis methods, including radiometry and geometric image formation, edge detection, feature detection, and image segmentation are presented. Then, geometric-based image transformations (e.g., image warping and morphing) for image synthesis will be presented in the course. Furthermore, methods for reconstructing three-dimensional scenes including camera calibration, Epipolar geometry, and stereo feature matching are introduced. Other important topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 4620. Prerequisite: ENEE 3111.

**ENCE 3630 Pattern Recognition (4 Credits)**

This class provides an introduction to classical pattern recognition. Pattern recognition is the assignment of a physical object or event to one of several prescribed categories. Applications includes automated object recognition in image and videos, face identification, and optical character recognition. Major topics include Bayesian decision theory, Parametric estimation and supervised learning, Linear discriminant functions, Nonparametric methods, Feature extraction for representation and classification, Support Vector Machines. Cross listed with ENCE 4630.

**ENCE 3631 Machine Learning (4 Credits)**

This class covers topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep learning, neural networks, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE-4631.

**ENCE 4110 Modern Digital Systems Design (4 Credits)**

This course focuses on the design of digital systems using combinational, sequential, and programmable logic devices and Hardware Description Languages (HDL). Techniques for logic design including asynchronous logic, physical world interfaces to digital systems, and system performance analysis methods are studied. Students also learn HDL-Verilog to program CPLD devices and FPGA systems. Cross listed with ENCE 3100.

**ENCE 4210 Microprocessor Systems I (4 Credits)**

Introduction to microprocessors and to the design and operation of computer systems. A study of the microprocessor and its basic support components. Analysis of CPU architectures of modern computers. Assembly language programming. Use of an assembler and other development tools for programming and developing microprocessor-based systems. Cross listed with ENCE 3210.

**ENCE 4231 Embedded Systems Programming (4 Credits)**

Design, construction and testing of microprocessor systems. Hardware limitations of the single-chip system. Includes micro-controllers, programming for small systems, interfacing, communications, validating hardware and software, microprogramming of controller chips, design methods and testing of embedded systems.

**ENCE 4250 Advanced Hardware Description Language (HDL) Modeling and Synthesis (4 Credits)**

This course covers advanced concepts in Hardware Description and Language (HDL) modeling and Synthesis. It covers topics including but not limited to digital system design, simulation, and synthesis using Verilog HDL and VHDL. The course also covers RTL design, behavioral description, system Verilog, and timing analysis using CAD tools.

**ENCE 4501 Advanced VLSI Design (4 Credits)**

Advanced techniques in the fabrication and design of VLSI circuits and systems. Modeling of parasitic components. Floor-planning, clock distribution, routing, and low power design. Cross listed with ENCE 3501. Prerequisite: ENCE 3501 or permission of instructor.

**ENCE 4620 Advanced Computer Vision (4 Credits)**

This course covers advanced concepts in image processing and computer vision including but not limited to image radiometry and geometric formation, edge detection, geometric based transformations (e.g., image warping and morphing), camera calibration, Epipolar geometry, and stereo feature matching. Other advanced topics include optical flow, shape from shading, and three-dimensional object recognition. In conclusion, students learn and practice advanced topics in image processing and computer vision techniques that can be used in other areas such as robotics, pattern recognition, and sensor networks. Cross listed with ENCE 3620. Prerequisite: ENEE 3311.

**ENCE 4630 Advanced Pattern Recognition (4 Credits)**

This class covers advanced topics in pattern recognition including but not limited to Bayesian decision theory, parametric estimation and supervised learning, linear discriminant functions, nonparametric methods, feature extraction for representation and classification, manifold learning, bag of words, and Support Vector Machines. Cross listed with.

**ENCE 4631 Advanced Machine Learning (4 Credits)**

This class covers advanced topics in machine learning including but not limited to Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, deep neural networks, deep learning, linear classification techniques, manifold learning, bag of words, and Support Vector Machines. Cross listed with ENCE 3631.

**ENCE 4800 Advanced Topics (CPE) (1-5 Credits)**

Various topics in computer engineering as announced. May be taken more than once. Cross-listed with ENCE 3321, ENCE 3620.

**ENCE 4991 Independent Study (1-10 Credits)****ENCE 4995 Independent Research (1-18 Credits)****ENCE 5995 Independent Research (1-18 Credits)**

## Engineering, Electrical (ENEE)

**ENEE 3011 Physical Electronics (4 Credits)**

The basic physical concepts of electronics, electrons and holes in semiconductors, transport and optical processes. Concentration on device concepts, including material synthesis and device processing, P-N junction diodes, junctions with other materials, bipolar transistors, field effect transistors (JFET, MESFET, MOSFET) and optoelectronic effect transistors (JFET, MESFET, MOSFET) and optoelectronic devices (lasers, detectors). Prerequisites: CHEM 1010 or CHEM 1610, PHYS 1213 or PHYS 1214 or permission of instructor.

**ENEE 3111 Signals & Systems (4 Credits)**

Introduces continuous time and discrete time linear system analysis, Fourier series, Fourier transforms and Laplace transforms. Specific engineering tools for discrete time linear system analysis include discrete time convolution, Z-transform techniques, discrete Fourier transform and fast Fourier transform (DFT/FFT), and the design and analysis of analog and digital filters for real-world signal processing applications. Prerequisites: ENEE 2012, MATH 2070.



**ENEE 3141 Digital Communications (3 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels. Prerequisites: ENEE 3111, ENGR 3611 or permission of instructor.

**ENEE 3620 Optical Fiber Communications (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users with a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA) and ultra-fast optical time-division multiplexing (OTDM). Laboratory. Cross listed with ENEE 4620. Prerequisite: ENEE 3030 or permission of instructor.

**ENEE 3641 Introduction to Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Cross listed with ENEE 4640. Prerequisites: ENEE 3111, ENEE 2611 and ENEE 2223.

**ENEE 3670 Introduction to Digital Signal Processing (4 Credits)**

Introduction to the theory and applications of Digital Signal Processing. Special attention is paid to the fast Fourier transform and convolution and to the design and implementation of both FIR and IIR digital filters. Prerequisite: ENEE 3111.

**ENEE 4030 Optoelectronics (4 Credits)**

Optical fibers: structures, waveguiding, and fabrication; attenuation and dispersion; optical sources (LED, LASER, Fiber laser); power launching and coupling; photodetectors (APD, PIN, MSM); and practical optical transmitter and receivers. Cross listed with ENEE 3030.

**ENEE 4141 Digital Communications (4 Credits)**

Introductory course on modern digital communication systems. The basic communication system theory, probability and random processes, baseband digital data transmission, coherent and non-coherent digital modulation techniques and analysis of bit error probability. Bandwidth efficiency and transmission of digital data through band-limited channels.

**ENEE 4620 Adv Optical Fiber Comm (4 Credits)**

A comprehensive treatment of the theory and behavior of basic constituents, such as optical fibers, light sources, photodetectors, connecting and coupling devices, and optical amplifiers. The basic design principles of digital and analog optical fiber transmission links. The operating principles of wavelength-division multiplexing (WDM) and the components needed for its realization. Descriptions of the architectures and performance characteristics of complex optical networks for connecting users who have a wide range of transmission needs (SONET/SDH). Discussions of advanced optical communication techniques, such as soliton transmission, optical code-division multiplexing (optical CDMA), and ultra-fast optical time division multiplexing (OTDM). Advanced Project. Cross listed with ENEE 3620. Prerequisite: instructor permission.

**ENEE 4630 Optical Networking (4 Credits)**

This course provides a technical overview of optical networking. It gives students a solid understanding of optical networking field principles and practice. Underlying principles are reviewed along with common optical solutions and practices. It explains and provides practical tips on how to design and implement Networks. Examples are used to demonstrate key concepts of ATM, SONET/SDH and DWDM implementation. Prerequisite: ENEE 3011 or instructor approval.

**ENEE 4640 Electromagnetic Compatibility (4 Credits)**

The study of the design of electronic systems so that they operate compatibly with other electronic systems and also comply with various governmental regulations on radiated and conducted emissions. Topics may include: Electromagnetic Compatibility (EMC) requirements for electronic systems; non-ideal behavior of components; radiated emissions and susceptibility; conducted emissions and susceptibility; shielding and system design for EMC. Final Project. Cross listed with ENEE 3641.

**ENEE 4800 Advanced Topics (EE) (1-5 Credits)**

Various advanced topics in electrical engineering as announced. May be taken more than once. Cross-listed with ENEE 3035.

**ENEE 4950 ECE Graduate Assessment (0 Credits)**

This class does not meet. All graduate (MS and PhD) ECE students will enroll in this class during their last quarter. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded. The purpose is to collect data for the assessment and continuous improvement of the graduate programs.

**ENEE 4991 Independent Study (1-10 Credits)****ENEE 4995 Independent Research (1-16 Credits)****ENEE 5995 PhD Independent Research (1-10 Credits)****ENEE 6991 Ph.D Independent Study (1-10 Credits)****ENEE 6995 Independent Research (1-16 Credits)**

# Engineering, Mechanical (ENME)

## **ENME 3320 Computer Aided Design and Analysis (4 Credits)**

Introduction to the use of computer aided design and analysis with applications to solid and fluid mechanics, heat transfer and vibrations; projects in one or more of the above areas. Emphasis on how to use the software to analyze engineering systems. Prerequisites: ENME 2541 and ENME 2651.

## **ENME 3511 Machine Design (3 Credits)**

Application of statics, dynamics, mechanics of materials and manufacturing processes to the design of machine elements and systems. Properties of materials and design criteria. Synthesis and analysis of a machine design project. Prerequisites: ENME 2520 and ENME 2541.

## **ENME 3545 Mechanisms (4 Credits)**

Synthesis, analysis and use of mechanisms. Mechanisms studied include cams, gears and planar linkages, with an emphasis on planar linkages. Prerequisites: ENME 2530 and ENGR 1572.

## **ENME 3651 Computational Fluid Dynamics (4 Credits)**

This course introduces principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer or two phase flow. The conservation equations, their discretizations and solutions, are presented. Convergence and validity of solutions along with computational efficiency are explored. Students learn to apply these techniques using the latest software packages. Prerequisites: ENME 2671.

## **ENME 3661 Mechanical Energy Systems Engineering (4 Credits)**

This course covers energy systems engineering analysis from a mechanical and materials engineering perspective. This course covers energy production from traditional energy systems that use fossil fuel combustion such as internal combustion engines, coal-fired plants, and natural gas turbines, to nuclear energy and renewable energy methods such as wind, solar, hydraulic, and geothermal. Lastly, the course will survey emerging technologies for future (21st century) energy systems. Students should have taken at a minimum Thermodynamics, Dynamics, and Fluid Dynamics courses. Prerequisites: ENME 2720, ENME 2510, ENME 2651.

## **ENME 3720 Aerospace Engineering: Atmospheric Flight Dynamics (4 Credits)**

This course provides an introduction to aerospace engineering analysis and design. In the atmospheric domain, the basics of aerodynamics are covered, followed by flight mechanics. The approach is from a practical perspective in which analysis and design are intertwined. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

## **ENME 3730 Aerospace Engineering: Space Flight Dynamics (4 Credits)**

This course is focused on the aerospace discipline of space environment and orbital mechanics. The topics in this discipline are discussed in detail and provide aid in designing spacecraft/space missions. Some of the topics covered in this course include space environment, satellite orbits, spacecraft configurations, transfer orbits, and elementary space propulsion. Prerequisites: ENME 2651 and ENME 2720 and ENME 2530.

## **ENME 3810 Mechanical Engineering Capstone Laboratory (3 Credits)**

This course is the capstone mechanical engineering laboratory course requiring independent experimental design by student teams. Using experimental equipment available in heat transfer, fluid mechanics, solid mechanics, thermodynamics, and measurement and control, the student team is required to design experiments to solve given problems which will be unique to each team. This course encourages students to develop experimental design and research techniques while continuing to improve skills in fundamental lab notebook keeping, uncertainty analysis in measurements, data acquisition, data analysis, report writing, oral presentations, and laboratory safety and procedures. Prerequisite: ENME 2810.

## **ENME 4020 Adv Finite Element Analysis (4 Credits)**

## **ENME 4310 Computational Methods for Mechanics and Materials (4 Credits)**

An introductory course for the general-purpose computational methods in advanced multiscale materials and mechanics. Students learn the fundamentals on the numerical methods used in mechanical and materials engineering. Cross listed with ENME 3310.

## **ENME 4360 Elasticity (4 Credits)**

Students will be able to apply the fundamental principles of elasticity to solve two- and three-dimensional mechanical engineering problems involved in modern applications of elastic structures, composite materials, tribology and contact mechanics. Dependence on previous knowledge of solid mechanics, continuum mechanics or mathematics is minimized. The emphasis is placed on the engineering applications of elasticity. Suggested prerequisite: ENME 2541.

## **ENME 4400 Fatigue (4 Credits)**

A detailed overview of fatigue. Topics include: stress life and strain life approaches, fracture mechanics, constant amplitude and spectrum loading, life prediction, fatigue at notches, microstructural effects, environmentally assisted fatigue, retardation and acceleration, multi-axial fatigue, design against fatigue and reliability. Cross listed with ENME 3400.

## **ENME 4520 Intermediate Dynamics (4 Credits)**

Development and analysis of dynamic systems through classical approaches. Topics will include: Vector algebraic/differential geometry for 3D translational and rotational kinematic analyses with motion constraints. Formulation of equations of motion for 3D multibody systems using: Newton/Euler equations; Angular momentum principle; and D'Alembert principle (aka road-maps). Some exposure to Euler-Lagrange and Kane's Methods calculations. Symbolic and numerical computational solutions to linear/nonlinear algebraic and differential equations governing the configuration, forces, and motion of systems with multiple degrees of freedom. Recommended prerequisites: MATH 2070.

**ENME 4530 Advanced Dynamics (4 Credits)**

Formulation of equations of motion for constrained 3D multibody systems with: D'Alembert principle (MG road-maps); power, work, and energy; Lagrange's equations; and Kane's method. Euler parameters/quaternions, specified motion, constraint force/torque calculations, feed-forward control, inequality constraints and/or intermittent contact. Tensors and mass property calculations. Symbolic and numerical computer skills for geometry/kinematic analysis, mass/inertia calculations, forces and motion, and simulation of multi-body dynamic systems. Training for advanced research and professional work. Recommended pre-requisite: ENME 4520.

**ENME 4541 Advanced Mechanics of Materials (4 Credits)**

This is a second-level course in mechanics of materials with an emphasis on techniques that are useful for mechanical design. Topics may include energy methods, non-symmetrical and nonlinear bending, shear and torsion of closed and open sections, beams in elastic foundations, membrane stress in axisymmetric shells, axisymmetric bending of cylindrical shells, thick-walled cylinders and disks, curved beams, and elastic stability. Recommended prerequisite: ENME 2541.

**ENME 4630 Viscous Flow (4 Credits)**

Course covers the fundamentals of fluid mechanics from an advanced point of view with emphasis on the mathematical treatment of viscous-flow phenomena. Topics cover the Navier-Stokes equations and its exact and similarity solutions, laminar boundary layer theory, free-shear flows, and the phenomena of instability and transition to turbulence. Recommended prerequisite: ENME 2661.

**ENME 4670 Advanced Computational Fluid Dynamics (4 Credits)**

Building on the principles and applications of computational methods in fluid flow and topics chosen from heat transfer, mass transfer and two phase flow. Specifically, Monte Carlo and volume of fluid techniques are discussed at length. Additionally, students learn how to set up automated design optimization using the latest software packages. Time permitting, students also are introduced to fluid-solid interaction modeling. Prerequisite: ENME 3651.

**ENME 4671 Convective Heat Transfer (4 Credits)**

The objective of this course is to examine the physical phenomena associated with heat transfer in the presence of fluid flow. We will develop a mathematical description of the processes (fluid flow and heat transfer) for laminar and turbulent flows for both internal and external situations. Exposure to the fundamentals of fluid mechanics and heat transfer is expected before taking this course.

**ENME 4800 Advanced Topics (ME) (0-5 Credits)**

Determined by interest and demand. May be taken more than once for credit.

**ENME 4900 Grad Professional Development (1 Credit)**

This course is required for all MME MS graduate students and all MME PhD graduate students who enter with a BS or enter with an MS but fail their first qualifying exam. One of our objectives is for all graduating students to have good written and verbal communication skills. This course is set up to meet those objectives. During this course, students write a mini-proposal and/or literature review. Students follow guidelines for a funding agency (e.g. NSF or NIH) for the mini-proposal. If students have a research advisor, students can coordinate with their advisor. If students do not have a research advisor, students may pick a topic that most interests them. Both a written proposal and an oral presentation are required of all students. Graduate standing is required.

**ENME 4950 Graduate Assessment (0 Credits)**

This graduate assessment course is required for all MME graduate students to be taken in their last quarter. All required assessment materials are uploaded to DU Assessment to meet the course requirements. Students will receive emails through the DU Assessment system notifying you of what is required to be uploaded.

**ENME 4991 Independent Study (1-10 Credits)****ENME 4995 Independent Research (1-16 Credits)****ENME 5991 Independent Study (1-10 Credits)****ENME 5995 Independent Research (1-16 Credits)**

## Engineering, Mechatronic Syst (ENMT)

**ENMT 3220 Mechatronics II - Real-Time Systems (4 Credits)**

Real-time systems require timely response by a computer to external stimuli. This course examines the issues associated with deterministic performance including basic computer architecture, scheduling algorithms, and software design techniques including data flow diagrams, real-time data flow diagrams, state transition diagrams, and petri nets. In the lab portion of this class, students program a microcontroller to interact with mechatronic devices. Prerequisite: ENCE 3210.

**ENMT 4000 Space Systems Design I (4 Credits)**

The application of advanced theory and concepts as they relate to the development of spacecraft and missile subsystems, and how those subsystems are related under the umbrella of systems engineering. The course emphasizes practical aspects of space systems design and integration, and is team-taught by faculty and functional experts in the various fields. Lecture topics include aerospace materials, mechanics, thermal control, embedded systems, distributed sensor networks and aerospace probability and statistics.

**ENMT 4010 Space Systems Design II (4 Credits)**

The continuation of Space Systems Design I. Lecture topics include payload communications, guidance and control, spacecraft electric power, propulsion systems, radiation and avionics and sensor subsystems. Prerequisite: Space Systems Design I.

**ENMT 4100 Systems Engineering (4 Credits)**

Systems engineering is an interdisciplinary field of engineering and engineering management that focuses on how to design and manage complex systems over their life cycles. At its core, systems engineering utilizes systems thinking principles to organize this body of knowledge. Systems follow systems theory by having the design interface with its environment. System design typically follow the “V-diagram”, a serial process with structured verification occurring at each level of abstraction (system-subsystem-component hierarchy levels). The V-diagram traces the basic design process, starting with a problem, developing requirements, definitized with a concept of operations, and accomplishing a functional analysis and decomposition. Systems engineering takes a holistic approach to design, taking an idea to a concept and detail design. This includes a functional architecture and physical architecture, with particular attention paid to interfaces. Having built or procured components and developing software, the system is assembled and integrated. Verification and Validation is accomplished at each level of decomposition, starting at the lowest level and moving up to a system level that can be validated with the customer or shareholders. There are a series of milestones that are used to monitor the progress of the design. Instructor permission required.

**ENMT 4220 Mechatronics II (4 Credits)**

This course combines systems design and integration with a real world project involving the design and fabrication of an integrated system.

Prerequisite: Mechatronics I or equivalent.

**ENMT 4225 System Models, Simulation & Tools (4 Credits)**

A physical model is a smaller or larger physical copy of an object. Physical models allow visualization, from examining the model, of information about the thing the model represents. A model can be a physical object such as a spacecraft or spacecraft subsystem. Modeling and simulation are a key enabler for systems engineering activities as the system representation in a computer readable (and possibly executable) model enables engineers to reproduce the system (or Systems of System) behavior. Modeling is a tool for diagramming and understanding complex processes; Model-Based Systems Engineering (MBSE) is a powerful engine for design growth. It's endlessly adaptable to human needs and technological trends, unlocking incredible potential for analysis, and helping solve tomorrow's grand engineering challenges such as in aerospace. Physics-based models can be combine for use with equations of mathematical physics, coupled with real-time sensor measurements, and their numerical solution in an effort to understand complex design and operations.

**ENMT 4270 Fundamentals of System Electrical, Mechanical and Software Design (4 Credits)**

Design of individual electrical and mechanical components comprising a system. Comprehensive integrated approach making the transition from design of individual electrical/mechanical components into a complete electrical-mechanical system design. Topics include systems engineering of complex electronics (FPGAs, ASICs, Hybrids), electromagnetic compatibility, electromagnetic interference, electrical compatibility analysis, system power modeling and energy efficiency, electrical systems integration and test methodologies, mechanical system modeling, system thermal/stress analysis methods and tools, mass management, mechanical systems integration and test methodologies. Prerequisites: ENMT 4000, ENMT 4010, or permission by the Instructor. Course Requirements: Assignments and projects.

**ENMT 4275 Applied System Electrical, Mechanical, and Software Design (4 Credits)**

This is a practice-centered course. Assess case studies of design, implementation and testing, validation and verification of complete complex (e.g. spacecraft) systems to meet mission requirements with performance guarantees. Prerequisites: It is recommended that the elective course ENMT 4270 is taken first, or permission by the Instructor.

**ENMT 4280 Design for Feasibility and Resilience (4 Credits)**

A feasible design is an activity based on selected testing and engineering analysis, which presents enough information to determine whether or not the project should be advanced to the final design and production fabrication stage. In the fields of engineering, resilience is the ability to absorb or avoid damage without suffering complete failure and is an objective of the design. Resilience is described as the ability to return to the steady-state condition following a perturbation of the control behavior. When thinking about resilience, system engineering typically refer to this as an alternative (or as a complement) to the conventional view of safety. But resilience (or more accurately, the ability to perform in a resilient manner) is not about avoiding failures and breakdowns, i.e., it is not just the opposite of a lack of safety. This has led to early discussions about resilience versus robustness, resilience versus brittleness, etc. The focus of resilience engineering is thus resilient performance, rather resilience as a property (or quality) or resilience in a 'X versus Y' dichotomy. Students enrolling in this course should have knowledge of probability and statistics, familiarity with MATLAB/Simulink, or permission of the instructor.

**ENMT 4285 Complex System Architectures, Models, and Tools (4 Credits)**

The course focuses on mission requirements and how an overall mission should function by examining different architecture configurations and tools for modeling purposes. Example architecture models include: executable, networked, distributed, real-time, information assurance, framework, and reference. Students learn about development and allocation of functional and non-functional requirements and how to analyze architecture issues. Emphasis is on development of Service Oriented Architecture (SOA) solutions and ability to modeling and analysis using Systems Modeling Language (SysML). Prerequisites: ENMT 4100, or permission by the instructor. Course Requirements: Assignments and projects.

**ENMT 4730 Advanced Ground Robotics (4 Credits)**

Introduction to path planning and sensing and estimation for robotic manipulations and mobile robots. Review of the mathematical preliminaries required to support robot theory. Topics include advanced sensors, mobile robot mechanisms, advanced manipulator mechanisms, path planning in 2-D and 3-D, and simultaneous localization and mapping. Applications include task and motion planning for idealized and real robots.

**ENMT 4800 Adv Topics (Mechatronics) (1-5 Credits)**

Various topics in Mechatronics System Engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENMT 4801 Adv Topics (Mechatronics) (1-5 Credits)**

Various topics in Mechatronics System Engineering as announced. May be taken more than once. Prerequisite: varies with offering.

**ENMT 4991 Independent Study (1-5 Credits)**

**ENMT 4995 Independent Research (1-18 Credits)**

## **Engineering, Systems (ENSY)**

**ENSY 4010 Systems Engineering Fundamentals (3 Credits)**

An overview of systems engineering, including V-diagrams, functional architecture, physical architecture, system assembly and integration, verification and validation, and milestones to monitor the progress of the design.

**ENSY 4012 Systems Engineering Requirements Development (3 Credits)**

The course covers fundamentals of design and requirements analysis of complex systems to meet overall mission requirements. Spanning the requirements engineering phase, topics include: decomposition, derivation, allocation, verification and validation planning. Prerequisite: ENSY 4010, or permission of instructor.

**ENSY 4014 Complex System Architectures (3 Credits)**

The course focuses on mission requirements and how an overall mission should function by examining different architecture configurations and tools for modeling purposes. Topics include: allocation of functional and non-functional requirements, Service Oriented Architecture (SOA) and architectural modeling using the System Modeling Language (SysML). Prerequisite: ENSY 4010.

**ENSY 4016 Conceptual Design of Systems (3 Credits)**

Conceptual design is the part of the design process that yields a basic solution path, which leads to the principle solution. The focus of the course is on two important decision making principles: understanding a problem and devising a plan. Topics include: intellectual property and the development of engineering drawings, schematics and 3D models.

**ENSY 4021 Design of Space Systems Part 1 (3 Credits)**

This course is part one of a two-part series on spacecraft design by integrated systems and subsystems. Topics include: spacecraft overview, subsystem interfaces, concepts of operation (CONOPS) and the systems engineer's role as a generalist as opposed to specialists.

**ENSY 4022 Design of Space Systems Part 2 (3 Credits)**

This course is part two of a two-part series on spacecraft design by integrated systems and subsystems. Topics correspond to decomposition of the spacecraft into classical spacecraft subsystems. Practical applications and core functionality of these subsystems are presented, including required testing and integration at the subsystem and spacecraft levels. Prerequisite: ENSY 4021.

**ENSY 4024 Applied Electrical, Mechanical and Software Systems (3 Credits)**

This is a practice-centered course. Assess case studies of design, implementation and testing, validation and verification of complete complex (e.g. spacecraft) systems to meet mission requirements with performance guarantees. Prerequisites: ENSY 4012, ENSY 4014, and ENSY 4016, or permission by the Instructor.

**ENSY 4030 Introduction to Aerospace Missions (3 Credits)**

This class is for individuals working in aerospace engineering and related fields. Topics include: design of orbital spacecraft, design for Moon missions (such as landers), design for Mars missions (including rovers), design of an unmanned drone for surveillance (high-altitudes), CubeSats (having large constellations), and rockets and missiles (including hypersonic).

**ENSY 4040 Systems Optimization (3 Credits)**

The development and application of various optimization techniques will be explored with engineering examples. Topics include: analytical and numerical methods, linear and non-linear programming techniques for unconstrained and constrained problems, and advanced optimization techniques, e.g. global optimization. Assignments are in context of Systems Engineering case studies.

**ENSY 4042 Optimization for Advanced Systems (3 Credits)**

Advanced optimization algorithms are presented, as a pillar of data science and machine learning. Topics include: linear, nonlinear and integer programming models. Students will learn to understand tractability of models, particularly complex models as are central to the discipline of Systems Engineering. Prerequisite: ENSY 4040.

**ENSY 4050 Digital Transformation for Advanced Integration (3 Credits)**

Digital engineering technologies address the difficulties of managing complex and evolving technologies over their lifecycles of (i) development and (ii) operations & maintenance. This course will focus on digital technologies to integrate data across the enterprise, break organizational silos, and drive culture to realize risk reduction. Topics include: elements of the digital thread, such as digital twins and simulation, as well as machine learning and data analytics to inform decision-making throughout the lifecycle.

**ENSY 4060 Practical Model Based Systems Engineering (3 Credits)**

MBSE is part of a long-term trend toward model-centric approaches adopted by other engineering disciplines, including mechanical, electrical and software. In this course, students will be given hands-on access to MBSE tools in order to learn the UML/SysML language of MBSE and to practice systems engineering methods using the digital thread that is enabled by MBSE. Students will also gain an understanding of MBSE being a subset of Model Based Design (MBD). Prerequisite: ENSY 4050, or permission of instructor.

**ENSY 4090 Project Management in Relation to Systems Engineering (3 Credits)**

An overview of the skills and strategies for managing people, risks, schedules, and information to meet goals and objectives in large, complicated engineering projects. Includes managing project constraints, and best practices for working with project managers. Emphasis is on People, Process and the Business Environment.

**ENSY 4112 Practical Validation and Verification Test Planning (3 Credits)**

In this course, students gain a practical understanding of V-diagrams, and the path that must be traveled to fully validate and verify any system. Topics include: traceability between requirements and validation and verification test plans, including practical development of detailed test procedures at any level of integration. Prerequisite ENSY 4012, or permission by the instructor.

**ENSY 4170 Practical Approaches to Continuous Improvement (3 Credits)**

In this course, students learn practical differences between Continuous Improvement (CI) methods, such as Kaizen, Lean, Six Sigma, and Total Quality Management (TQM). Current events will be used as case studies to apply practical understanding of these CI methods. Practical application of the methods will leverage principles taught in ENSY 4010, ENSY 4071 and ENSY 4072. Case studies and assignments are based on illustrations of value added CI engineering in the Systems Engineering discipline. Prerequisites: ENSY 4010, ENSY 4071 and ENSY 4072; or instructor approval.

**ENSY 4180 Applied Mathematics for Systems Engineering (3 Credits)**

The course reviews topics in continuous and discrete mathematics (integral and differential calculus, matrices, vector calculus, discrete math: matrices, graphs, sets) and introductory probability, as they apply to engineering, and introduces students to more advanced concepts aiding the understanding and design of complex engineering systems. Examples are drawn from engineering systems applications. Students apply the techniques using engineering computing platform.

**ENSY 4181 Introductory Probability and Statistics for Systems Engineering (3 Credits)**

This course introduces fundamentals of probability for Systems Engineers. Students survey data visualization methods and summary statistics, develop models for data, and apply statistical techniques to assess the validity of the models. Techniques include parametric and nonparametric methods for parameter estimation and hypothesis testing for a single sample mean and two sample means, for proportions, and for simple linear regression. Students will apply methods to real-world engineering data, primarily using R.

**ENSY 4182 Data Analytics for Systems Engineering (3 Credits)**

This course is designed for students to develop skills in data analytics specifically tailored for systems engineering applications. It combines theoretical understanding with practical applications, covering various models for data inference, statistical methodologies, and the use of data analytics tools and software.

**ENSY 4200 Applied Machine Learning for Advanced Systems Modeling (3 Credits)**

This course covers topics in Machine Learning including Bayesian decision theory, supervised learning, unsupervised learning and clustering, linear discriminant functions, linear classification techniques such as Support Vector Machines, as well as Artificial Neural Networks and Deep Learning methods.

**ENSY 4950 Graduate Assessment for Master of Science degree in Systems Engineering (0 Credits)**

This class does not meet. All MS in Systems Engineering (MSSY) graduate students will enroll in this class during their last quarter. The purpose is to collect data for the assessment and continuous improvement of the graduate programs. All required assessment materials will be uploaded online in Canvas Assignments to meet the course requirements. Students will receive Canvas course announcements and or emails from the instructor notifying the students of what are required to be uploaded.

## English (ENGL)

**ENGL 3000 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3001 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3002 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3003 Advanced Creative Writing-Poetry (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3010 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3011 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3012 Advanced Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3013 Adv Creative Writing-Fiction (4 Credits)**

Technique, writing practice and criticism.

**ENGL 3015 Advanced Creative Writing: Non-Fiction (4 Credits)****ENGL 3017 Travel Writing-Fiction & Fact (4 Credits)**

A study of European, American and other narratives of travel. This course examines relevant postcolonial and literary theories of travel and nationhood.

**ENGL 3040 Introduction to Publishing (4 Credits)**

Cross listed with ENGL 2040, MFJS 3140.

**ENGL 3121 Chaucer: Canterbury Tales (4 Credits)**

Life, culture, language and literary trends of Chaucer's age as reflected in "The Canterbury Tales".

**ENGL 3320 Oral Literature and Orality in Literature (4 Credits)**

The term "oral literature" generally refers to narratives and poems (including songs) performed and disseminated orally from one generation to the other. Oral literature is, in some respects, the foundational 'text' of written literature. The questions that we explore in this course include: How did oral literature develop, and what are the characteristics? How has oral literature been shaped by time and place? How is it distinct from as well as related to written literature? To answer these questions, we explore different forms of oral literature and also study the use of orality in written literature. Our studies involve the examination of material and texts from different parts of the world.

**ENGL 3402 Early Romantics (4 Credits)**

**ENGL 3405 Postmodern Visions of Israel (4 Credits)**

This course investigates how representation of Israel as a modernist utopia have been replaced in contemporary literature with images of Israel as a dystopia. The class discusses the historical context that gave rise to visions of an idealized Israel, and the role the Hebrew language played in consolidating and connecting narration to nation. Next the class considers how belles-lettres from recent decades have reimagined Israel as a series of multilingual "multiverses." A selection of fiction translated from Hebrew forms the core of class reading. Theoretical exploration of postmodernism help us conceptualize the poetics of postmodern literature. No knowledge of Israeli history or Jewish culture is necessary to succeed in this course. Cross listed with JUST 3405.

**ENGL 3706 Writing the American West (4 Credits)**

Explores historical and contemporary writing produced in and about the American West.

**ENGL 3711 20th-Century American Fiction (4 Credits)**

Fiction, poetry, drama, and non-fiction on selected themes by 20th and 21st century American writers. Topics for study may include issues related to regionalism, ethnicity and gender, as well as specific social and historical concerns.

**ENGL 3730 Literature and Medicine: Addiction and Modernity (4 Credits)**

This course introduces students to accounts of substance use and addiction from the nineteenth century through the present day. We will examine canonical and contemporary literary texts, medical writings, visual representations, smartphone applications, and films alongside topics such as liberalism, inequality, imperial expansion, consumerism, "digital drugs," and the pathologization of addiction. We will consider our readings in light of the following questions: What role do substance use and addiction play in constructing the modern self and society? What can representations of addiction teach us about our relationship with the external world? How does addiction act as a metaphor, a narrative device, or even a political sign? How do gender, class, and race affect narratives of addiction? How do accounts of addiction interact with philosophical texts, medical treatises, and imperial and colonial discourses? In addition to writing critical essays, students will evaluate smartphone addiction treatment apps and devise a creative project on a topic relevant to this course.

**ENGL 3731 Topics in English (1-4 Credits)**

**ENGL 3732 Topics in English (1-4 Credits)**

**ENGL 3733 Topics in English (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**ENGL 3742 Jesus in Jewish Literature (4 Credits)**

This course surveys literary depictions of Jesus in Jewish literature. Readers are often surprised to learn that throughout the twentieth century and into the twenty-first century, major Jewish writers have incorporated the figure of Jesus of Nazareth into their work. This class explores the historical, aesthetic, and spiritual reasons for the many Jewish literary representations of Jesus and of his literary foil, Judas. A selection of materials including short stories, poems, novels, scholarly essays and polemics in English and in translation from Hebrew and Yiddish demonstrate the depth of Jewish literary culture's engagement with Jesus' life and teachings. Among the many writers we will read are: S.Y. Agnon, Sholem Asch, Uri Zvi Greenberg, Haim Hazaz, Emma Lazarus, Amos Oz, Philip Roth, and L. Shapiro. Ultimately, this class will consider how literary representations of Jesus can destabilize perceived distinctions between Jews and Christians. While helpful, no knowledge of Jewish languages, religious tradition, or cultural practice is necessary to succeed in this course. This course is cross-listed as JUST 3742.

**ENGL 3743 Modern Jewish Literature (4 Credits)**

Stories, novels and memoirs by 20th-century Jewish writers; consideration of issues of generation, gender and idea of Jewish literature as a genre. Cross listed with JUST 3743.

**ENGL 3744 African American Literature (4 Credits)**

This course examines fiction, poetry, autobiography, and drama by African American writers, with strong consideration on the socio-historical conditions that gave rise to and continue to inform this literary tradition.

**ENGL 3800 Bibliography/Research Method (4 Credits)**

**ENGL 3803 Modernism/Postmodernism (4 Credits)**

**ENGL 3813 History and Structure of the English Language (4 Credits)**

A composite course studying both the structure of modern English and the history of the English language.

**ENGL 3815 Studies in Rhetoric (4 Credits)**

This course will examine the history and principles of rhetoric and how they pertain to theory and practice in the field of composition and rhetoric.

**ENGL 3817 History of Rhetoric (4 Credits)****ENGL 3818 Composition Theory (4 Credits)****ENGL 3819 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 3200.

**ENGL 3821 Literary Criticism: 19th Century-Present (4 Credits)****ENGL 3822 Literary Criticism: 20th Century (4 Credits)**

Critical methods and philosophies of 20th-century critics; their relationship to traditions.

**ENGL 3823 Interpretation Theory (4 Credits)****ENGL 3825 Cultural Criticism (4 Credits)**

Cross listed with ENGL 2835.

**ENGL 3852 Topics in Poetics (4 Credits)****ENGL 3982 Writers in the Schools (2,4 Credits)**

This course operates mostly "in the field." Following the models of California Poets in the Schools and Teachers & Writers Collaborative, students are in training with a poet-in-residence, observing him as he conducts a residency in a public school. In addition, we have our own meetings to discuss pedagogy, classroom practices and management, teacher-writer relations, and all other necessary logistical planning. Placement in public schools is facilitated by Denver SCORES, an education program dedicated to increasing literacy in Denver's at-risk school population. For those wishing to work with middle or high school students, or in other community settings (e.g., homeless or women's shelters), special arrangements can be made. This course is a collaborative effort between CO Humanities, Denver SCORES, and the University of Denver.

**ENGL 3991 Independent Study (1-17 Credits)****ENGL 3995 Independent Research (1-10 Credits)****ENGL 4000 Colloquium (2 Credits)****ENGL 4001 Sem Creative Writing-Poetry (4 Credits)****ENGL 4009 Seminar -- Creative Nonfiction (4 Credits)**

Advanced writing and study of creative nonfiction, including prose development and structure.

**ENGL 4011 Sem Creative Writing-Fiction (4 Credits)****ENGL 4012 History/Theory of Genre-Poetry (4 Credits)****ENGL 4017 Travel Writing (4 Credits)****ENGL 4050 The Critical Imagination (2 Credits)**

This graduate level course explores poetry, fiction, and criticism as different facets of the imagination. This is a large and a necessarily vaguely defined topic. But in the world of literary studies, creativity and criticism are clearly symbiotic. Reading and writing are connected activities. The poet or fiction writer is often a critic, and there are numerous treatments of interpretation in the critical canon suggesting that the act of reading and interpreting is itself an imaginative and creative act. The course explores genre signatures and possibilities, as well as provides an introduction to some of the analytics through which texts, literary and otherwise, are interpreted.

**ENGL 4100 Graduate Tutorial (2-4 Credits)****ENGL 4120 Beowulf (4 Credits)**

Reading and translation of the Old English Beowulf. Prerequisite: ENGL 4125.

**ENGL 4125 Old English (4 Credits)**

This class introduces students to Old English grammar, prose, and poetry. This course is a prerequisite for ENGL 4120.

**ENGL 4150 Special Topics in Medieval Lit (4 Credits)****ENGL 4200 Special Topics-Early Mod Lit (4 Credits)****ENGL 4210 Holocaust Literature (4 Credits)**

This seminar presents a multidisciplinary and transnational approach to literature of the Holocaust. Students consider memoir, fiction, and poetry drawn from a variety of national literatures and linguistic traditions. Works written by victims, survivors and 'witnesses through the imagination' are all considered. These readings are supplemented by secondary texts, including historical and philosophical materials, as well as relevant works from the social sciences.



**ENGL 4213 Advanced Studies in Early Modern Literature (4 Credits)****ENGL 4220 Seminar-Studies in Shakespeare (4 Credits)****ENGL 4300 Advanced Studies in 18th Century Literature (4 Credits)****ENGL 4424 Topics in English: 19th Century Literature (4 Credits)**

Special Topics courses will explore specific topics within historical periods, single authors, or theoretical/critical/ scholarly issues.

**ENGL 4510 ISL Dharamsala: Tibet, Global Citizenship, & Community Literacies (4 Credits)**

ISL Dharamsala presents DU students with the unique opportunity to study international community literacies as a practical component of global citizenship through service-learning placements and study in Dharamsala, India. Home of the Dalai Lama and the Tibetan government-in-exile, Dharamsala is a multi-generational community located in the northern Indian foothills of the Himalayas. During fall quarter, students will study community literacies in the practice of global citizenship and service while immersed in the geo-political, religious, and other contexts experienced by Tibetans in exile. During their time in Dharamsala, cultural immersion and a service-learning placement will give students insight into the complexities of social justice issues and cultural nuances they have been studying and provide opportunities to contribute to local and global society through informed and reflective practice.

**ENGL 4511 Translingualism and Multilingualism (4 Credits)**

The course starts with an introduction to the field of Translation Studies and Practice but continues to focus on two particular aspects of the field: translingualism and multilingualism. We delve into the various phenomena of language porousness, such as linguistic elements existing in and moving across multiple languages as well as language users morphing multiple languages or navigating between several. We discuss theoretical debates about these phenomena and their impact on the praxis of translating and writing, in the context of language pedagogy and creative practices. We also study examples of creative work that embody translingualism and multilingualism to different extents using various methodologies. Students write critically in conversation with the theoretical material and create their own works implementing and exploring linguistic porousness offered by translingualism and multilingualism.

**ENGL 4600 Adv Studies -20th Cent Lit (4 Credits)****ENGL 4621 Adv Studies-20th C. Literature (2-4 Credits)**

This course will offer (and be required of) graduate students an advanced foundation in 20th century literature; the primary texts and their cultural/ historical/ theoretical contexts.

**ENGL 4650 Special Topics: 20th Cent Lit (4 Credits)****ENGL 4660 The Black Imagination (4 Credits)**

Focusing mainly on Africa, Asia, Europe, and the Americas (especially the USA and the Caribbean/Latin America), this course explores and connects aspects of the black imagination. These aspects include oral performances, thought systems, literature, art, cinema, and critical discourses in different eras and in various places. Studied together, these existential and intellectual signposts provide an expanded insight into black (African and African diasporic) aesthetics from an intercontinental and an interdisciplinary perspective.

**ENGL 4675 Theories of Narrative: Formalism, Narratology, Cybertext (4 Credits)**

This class traces developments in narrative theory from Russian Formalism through "classical" narratology and on to examine the border between traditional narrative texts and texts that require a higher degree of interactivity, sometimes called "cyber texts." The goal is to identify significant contributions to narrative theory and to suggest the possibilities for the future of the field. Seminal articles, key works, and critical introductions survey key advances in narrative theory to present an overview of the field from its inception to contemporary trends.

**ENGL 4700 Antebellum American Literature (4 Credits)****ENGL 4701 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4702 Topics in English (2-5 Credits)**

A topics class; topics may change.

**ENGL 4730 American Romanticism (4 Credits)****ENGL 4732 Spc Tpc: Antebellum Amer Lit (4 Credits)****ENGL 4743 Black Feminist Criticism (4 Credits)**

This course examines the discursive reach of black feminist criticism by journeying into the creative terrain of literature, visual art, music, and performance produced by black women in the United States and throughout the black diaspora, from the nineteenth century to the present.

**ENGL 4830 Seminar: Teaching and Writing Literature (2-4 Credits)****ENGL 4840 Topics in Composition Studies (2-4 Credits)**

Each offering of this course focuses on specific issues in theory, research, or pedagogy within the broad field of composition studies. Examples of topics include the development of writing abilities; genre theory and composing; multimodal texts and their intersections and disjunctions of rhetoric and composition; the history of composing theories and practices; realms of composing, including the academic, civic, vocational, aesthetic, and interpersonal; institutional formations and settings of composing; discourse theories; stylistics; race, gender, class and composing; and so on.

**ENGL 4851 Publishing Institute (6 Credits)****ENGL 4852 Dissertation Colloquium (2 Credits)**

This two-credit dissertation colloquium is offered in the winter and spring for third-year PhD students in English who are in the process of researching and writing their dissertations. In addition to having weekly presentations and discussions of work in progress, the group will peruse prefaces and introductions to former English Department dissertations, write and abstract for their own dissertation, and possibly revise and send out a piece from their dissertation. The class is open to both literary studies and creative writing students. Restricted to doctoral students in English.

**ENGL 4991 Independent Study (1-17 Credits)****ENGL 4995 Independent Research (1-17 Credits)****ENGL 5991 Independent Study (1-17 Credits)****ENGL 5995 Independent Research (1-17 Credits)****ENGL 5999 American Literary Marketplace (0-2 Credits)**

"American Literary Marketplace" bridges the culture of writing within the Department of English and Literary Arts with the culture of publishing in the United States. As an experiential learning course, it offers graduate students a formal, structured opportunity—as an internship, externship, or cooperative educational experience, depending on the student's need—to deepen their writing practice and enact curricular learning outside and beyond the literary classroom.

## Entrepreneurship & Venture Mgt (EVM)

**EVM 4040 Social Entrp in Global Mrkt (4 Credits)**

This is a dynamic hybrid course with online readings, cases, quizzes, and blogs, as well as in-class experiential interactions with social enterprises in the community. The distance component of this course is guest speakers from other countries. Students will have the opportunity to network, interact, and work with local social enterprises. A value added component of this course is the coverage of global and cross-cultural concepts and issues critical for successfully running social enterprises in a global context.

**EVM 4250 Global Entrepreneurship Interterm (2 Credits)**

This course provides you with the opportunity to explore and discover what makes for an effective entrepreneurial ecosystem. You will travel to a foreign country and meet with key actors throughout the entrepreneurial ecosystem. Additionally, you will learn about and engage with the local culture, learning how religion, customs, and culture all influence global entrepreneurship.

**EVM 4350 Big Challenges, Big Solutions: The Emerging Start-Up (4 Credits)**

Students in the experiential course will start a firm in which they formulate an idea, gather basic data, formulate hypotheses, and then test these hypotheses with potential market participants. Students are likely to pivot several times in this course as the experimentation process helps them shape the emerging firm.

**EVM 4351 Designing the Start-Up (4 Credits)**

In this class, students will develop an executive summary that outlines the core business concept and the type of governance that will be needed, how the business will scale both in terms of product/service and customers. This executive summary will be used to fund the business and determine how the business will be funded—friends and family, credit cards, second mortgages, crowd funding, angel, or VC.

**EVM 4355 Entrepreneurship: Ideation to Creation (2 Credits)**

Entrepreneurship: Ideation to Creation is designed as a general introduction to the basic concepts of entrepreneurship as a business discipline, whether you are interested in starting a business, working for an entrepreneurial company, launching an entrepreneurial venture within an existing organization or working with startups as an investor or advisor. The course is a broad overview of early-stage entrepreneurial activities and issues, including identifying business opportunities, structuring and funding, early stage operations and exit strategies. The class will include exercises on developing a creative and innovative mindset and the basics of design thinking and business model development as one approach to entrepreneurial venture development.

**EVM 4356 Entrepreneurship II: Ideation to Creation (1 Credit)**

Entrepreneurship II builds on Entrepreneurship I, requiring students to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business. This is the second of two classes, taken with at least one quarter separating EVM 4355 and EVM 4356.

**EVM 4360 Entrepreneurship: Ideation to Creation (2 Credits)**

Entrepreneurship is designed as a general introduction to sustainable entrepreneurship and the application of basic business skills to the creation of innovative enterprises which incorporate renewable, reusable and sustainable approaches to business. Sustainability is unleashing a new wave of innovative and disruptive forces to create new profitable business enterprises. In this course, we will explore the creation of new enterprises that embrace the triple-bottom line of profits, people and planet. Students are then required to use their knowledge of sustainable entrepreneurship and the application of basic business skills to create an innovative enterprise which incorporates renewable, reusable and sustainable approaches to business.

**EVM 4400 The Innovation Amphitheater (1 Credit)**

As a self-employed entrepreneur or as an employee who works for someone else, an innovative outlook and entrepreneurial mindset is key to solving the problems our companies and society face now, and in the future. Innovators are everywhere and can add value from any role or department within their company, for example: c-suite leaders, facilities staff, IT administrators, and human resource trainers. Innovators share common traits: they see emerging opportunities where others see hopeless problems, they solve problems with creative ideas, and they evaluate ideas for their merits and shortcomings. This course is designed to teach the tools, strategies, and mindset of an innovator to help students ideate, evaluate, and innovate quickly. Students will collaborate using proven strategies and techniques to solve problems in new and unique ways.

**EVM 4402 Creating Your Digital Presence (1 Credit)**

LinkedIn isn't enough. Your digital presence is a reflection of you, personally and professionally that expands to many social venues online. Your goal is to show customers, strategic partners and stakeholders who you are with a focus on authenticity and transparency. We'll cover content best practices and how your personal brand parallels your business's digital presence. This is a fun class and times goes very fast!.

**EVM 4403 Ethics in Entrepreneurship (1 Credit)**

Creating a business for the sake of generating profit is not enough. Businesses must contribute to the betterment of society through social, environmental and financial gains. This course will help you build the right vision for your business by engaging you in ongoing reflection and dialogue about your ethical responsibilities in product and service innovation, and helping you understand cognitive, behavioral and principled approaches to ethical issues in product and service innovation.

**EVM 4404 Primary Research (1 Credit)**

To be successful in your business venture, you need to make data-driven decisions. Much of that data can come from internal operations or perhaps secondary sources. But, to truly be successful, you need to gather, analyze, and make decisions based on primary research. In this course, you'll learn the basic tenets of performing primary research activities including defining your business problem, developing research questions, identifying your market segment, building a primary research instrument(s), gathering data using a primary research instrument, analyzing the data, and making recommendations.

**EVM 4407 The Perfect Pitch (1 Credit)**

Essential to most new business ventures is the ability to raise capital, initially from friend/families, angel investors, and then from venture capitalists (VCs). The capital raising process usually starts with the "pitch", a presentation that is compelling, exciting, informative, and addresses what funds are required by the venture, how they will be used, and how the investor will financially benefit from their investment. Pitching is an important part of sales, which can be applied towards most aspects of life where major decisions are to be made, especially by a group or committee. It is the process of collecting your persuasive thoughts and the proper ability of presenting them, drawing your audience towards a conclusion, ideally one that you want to have happen. This course will help you learn how to pitch, and ultimately create a perfect pitch for your new business venture or other life goals. We will review the elements of both successful and unsuccessful historical pitch presentations, plus elements of ones that you create during the class.

**EVM 4408 Accounting For Entrepreneurs (1 Credit)**

Accounting is critical to the success of every business—large or small, private or public. Even governments and nonprofits need accounting. In fact, accounting is so important that it's often referred to as the "language of business." This course will introduce you to that language, the process that accountants use to create records of a business's operations and how that information is communicated to decision-makers, including you. An entrepreneur needs relevant, accurate and timely financial information in order to make the best decisions for their business, and you are the one person best suited to make this happen, especially early in the life of your business. Understanding this "language" will also help you become a better business partner to others, a better investor and a better consumer of business news.

**EVM 4409 Financial Statement for Entrepreneurs (1 Credit)**

The course is designed to help current and future entrepreneurs understand the essential role played by financial statements in measuring a company's performance and planning for its future. Students will key learn key concepts such as tracking/forecasting revenue, operating expenses and profitability. Students will become familiar with financial statements and their sections, learn relevant financial metrics/ratios and how they can be used to inform better decision making. It will then be shown that these same concepts can be used as building blocks in a forward looking financial model. Lastly, students learn to gauge the feasibility of purchasing the equipment needed to maintain and grow the business.

**EVM 4413 Design Thinking (1 Credit)**

Design Thinking is a creative problem solving process that builds your ability to first see and then solve human-centered opportunities. It starts with empathically looking at frustrations inside and around your organization, then moves through a variety of brainstorming sessions to build customer centric solutions. Design Thinking is a wonderful tool to help you monetize the human capital in your organization. Once we know the process, we will ask students to bring real challenges into the classroom where we will use Design Thinking to build potential new products, services and solutions.

**EVM 4414 Market Discovery & Product Market Fit (1 Credit)**

Market discovery is about identifying opportunities that you believe are worth exploring. Some markets have already been established; others have yet to be created. Is the product right for the market? Is the market right for the product you want to build? This course is for people who are eager to use their existing ideas or develop new ideas to improve an existing market or discover a new market. We will study the market discovery and product-market fit for companies such as Uber, AirBnB, Tesla, Snap and Slack. You will learn how to quickly identify and test product-fit for your target market.

**EVM 4417 Branding & Messaging (1 Credit)**

Branding is an essential element for any startup. Your brand is created by you and grows as your business grows. It's more than a logo, colors, and fonts contained in a style guide. It's the experience that you create for your customers. It's something your business should aspire to. Something memorable. And as you work through this course, you will get an understanding of what it takes to build the brand for your business.

**EVM 4420 Cloud Technologies (1 Credit)**

Welcome to the Cloud! What is the cloud, is it a thing, a concept, a nifty term? If you are starting a new business, thinking about starting a new business or improving the efficiencies in an existing business, you need to understand the available technologies and tools in the Cloud. Where do I host my website, how do I handle accounting, where is the email server, how do I track customers, how do I share information, what tools are available for customer support? These are just a few questions the Cloud will solve efficiently and cost effectively. The Cloud has dramatically changed the competitive landscape for startups by reducing the cost of starting a new business. The Cloud removes costly equipment, software and support expenditures; with the Cloud, you pay for what you use. This course will focus on identifying, analyzing, and implementing Cloud technologies to help run your business. Here are some of the topics we will explore and discuss: flexible costs, how and when to implement these tools, is your data safe, comparing similar services, improving collaboration.

**EVM 4421 Intellectual Property Issues for Startup Businesses (1 Credit)**

This Intellectual Properties sprint is about identifying, securing, and protecting your intangible, intellectual business assets in order to add monetary value to your business. The course teaches how to apply for trademarks, copyrights, and patents; how to identify what technology is patentable; and how to protect trade secrets. The course includes brand protection issues like domain disputes, DMCA take downs, Amazon counterfeit notifications, and social media infringement. Students will learn what makes a trademark protectable, what it means to have the "freedom to operate", ways that contracts can protect your intellectual property, and make sure you are not infringing on someone else's intellectual property as you start a business of your own. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4422 Startup Legal Issues (1 Credit)**

Learning about law has a certain reputation for being dull, hard, confusing, boring, dated, stuffy, and so on. If you grasp the key concepts in this course, you'll realize nothing could be further from the truth. The moment you begin working on an idea that may turn into a business, you are entering a legal system that is fascinating, vibrant, controversial, and engaging, and more importantly something you must be prepared to engage with if you are to be successful. Unfortunately, our primary education provides us with precious few tools to understand and interact with a legal system that affects us whether we want it to or not. This course attempts to change that, with the primary goal being to provide students with a basic, yet comprehensive understanding of the US legal system, and the knowledge necessary to make informed and proactive business decisions. Startup Legal Issues is designed with three groups of people in mind: (1) those who have or intend to start a business, (2) those who want to work at early stage companies, and (3) those who are considering a career in law. The course is meant to be enjoyably challenging and push students to consider and reflect on assumptions they hold. Rest assured, however, that you will not be graded on your ability to grasp complex topics in a short amount of time, and instead will be rewarded for your willingness to engage with the material and display a humility and thoughtfulness appropriate for the subject.

**EVM 4424 Visualizing & Presenting Data (1 Credit)**

Throughout the last few decades, report development has moved from being a strictly an IT function with a long turnaround time, to company-wide function where the expectation is that anyone can create a report. To that end, it is important that everyone understands the fundamentals of what goes into making a "good report". This course will focus on giving you the tools to create purposeful reports by helping you understand Form, Fit and Function ... components of any good report design.

**EVM 4425 Rapid Prototyping - 3D Printing and Laser Engraving (1 Credit)**

The purpose of this course is to empower students to more effectively develop their creative and entrepreneurial capacities utilizing the tools of rapid prototyping. Students will identify appropriate rapid prototyping technologies to apply to unique situations. Curriculum over the course of the day progressively builds by presenting more challenging problems. At the conclusion of the course, students will be able to turn ideas into solutions that add value to a product, process, or service.

**EVM 4428 Developing a WordPress Website (1 Credit)**

What is WordPress, what is a CMS, what is Open Source.... , a concept, a nifty term? If you are starting a new business, thinking about starting a new business you need to understand the available technologies and tools to build and manage a website. Where do I host the website, how do I create and update the website, what tools are available? These are just a few questions we will answer in the WordPress Grind. The WordPress Grind has been designed from a beginner's perspective. The goal is to provide a step-by-step tutorial for creating and publishing a WordPress website. The class will cover the conceptual framework of Open Source and Content Management Systems (CMS) and lead into the fundamentals and tools required to build and manage a WordPress website. At the conclusion of this grind, you will be able to develop, publish, and manage you own WordPress website.

**EVM 4431 Emotionally Effective Leader (1 Credit)**

Did you know emotional and social skills are four times more important than IQ when considering success and prestige in professional settings? Emotional Intelligence (EI) can be confusing. What does it mean? Is it fluffy stuff or something really tangible? Now more than ever, employers and clients are seeking leaders who display emotionally intelligent thinking, decision making and actions. How do you know if you meet those requirements? Up until recently, EI was a "gut assessment" of someone's ability to control their emotions or care about someone or something. Now, we have a valid and reliable way of understanding our emotional intelligence and that of others. We can even measure the EI of teams! It turns out EI is quite complex. Research has distinguished 12 components of EI including: self regard, self actualization, self awareness, emotional expression, assertiveness, independence, interpersonal relationships, empathy, social responsibility, problem solving, reality testing, impulse control, flexibility, stress tolerance and optimism. Want to know how you score in these areas? EI is a "talent" that, unlike IQ, can be learned and improved throughout one's life. In the Emotionally Effective Leader Grind, you will have the opportunity to assess your own EI through a valid and reliable EI talent assessment. Revealing your strengths and weaknesses, you will learn how to build your own EI and maximize the magnitude of your impact within the organizations or teams you lead.

**EVM 4432 Getting to Know Your Customer (1 Credit)**

Developing lasting relationships with customers requires time and energy up front. You need to get to know who your customers are and what they value before they will develop lasting relationships with your brand. This course on Getting to Know Your Customer will introduce students to tools and data sources that can help with segmenting and targeting and developing personas that represent different customer groups.

**EVM 4433 The Sales Process for Entrepreneurs (1 Credit)**

Sales is all about getting a person to make a purchase. Each business needs a unique step-by-step sales process that aligns with the buyer's journey. We will discuss the key aspects of the top, middle and bottom of a sales process: We will learn the key metrics and activities, both human and digital for sales teams in today's modern world. We will learn about lead generation, prospecting, lead nurturing, deal qualification, designing a sales process, sales pipeline, and forecasting, managing customer relationships, negotiating, converting leads to clients. As a self-employed entrepreneur or as an employee who works for someone else, an innovative outlook and entrepreneurial mindset is key to solving the problems our companies and society face now, and in the future. Innovators are everywhere and can add value from any role or department within their company, for example: c-suite leaders, facilities staff, IT administrators, and human resource trainers. Innovators share common traits: they see emerging opportunities where others see hopeless problems, they solve problems with creative ideas, and they evaluate ideas for their merits and shortcomings. This course is designed to teach the tools, strategies, and mindset of an innovator to help students ideate, evaluate, and innovate quickly. Students will collaborate using proven strategies and techniques to solve problems in new and unique ways. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class meeting. There is a project that is due two weeks after the in-person class meeting.

**EVM 4435 How To Realistically Fund Your Business (1 Credit)**

Essential to most new ventures is the ability to raise capital ("funding"), initially from angel investors and then from venture capitalists (VCs). The capital raising process usually starts with the "pitch", a presentation that is compelling, exciting, informative, and addresses what funds are required by the venture, how they will be used, and how the investor will financially benefit from their investment. But not all new companies are the same and the ways to fund a new business, business idea or a good old-fashioned startup are many. In this class we will discuss the different funding sources from a check from a friend or family member to loans, credit cards, equity investment, crowd funding and more. This course will help you learn how to identify and determine the best source capital for your business. You will also learn how to present and speak about basic and intermediate funding sources. We will define & review the basic elements of business funding while also listening to the perspectives of several entrepreneurs (small & big) and even a Venture Capitalist. You will ultimately work in groups around a hypothetical business idea. Please feel free to use an existing idea (particularly if you were in my pitch class) or feel free to choose one from the list I have posted in Canvas. Throughout class you and your group members will have several working session moments to create and draft your capital plan for your business. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4436 High Performing Teams (1 Credit)**

Success in any business venture is often predicated on the strength of collaboration in and between high performing teams. But teams also come with their own unique set of challenges that can often hinder group productivity and cause friction, such as interpersonal issues, ambiguous goals and objectives, and competing agendas. There are techniques that team and group leaders can use to alleviate those challenges in the current era of volatility, uncertainty, complexity, and ambiguity. The High Performing Teams class is for students who are eager to build their capacity to connect as leaders more effectively and learn to leverage psychological safety to create cultures of connection where risk-taking leads to team success. Together we'll explore how you can implement the latest trends in remote and hybrid team management in a post-COVID era as well as how to incorporate the principles of diversity, equity and inclusion (DEI) to improve team performance and cohesion. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4437 The Art of Branding: Design Tactics for Entrepreneurs (1 Credit)**

Join us on a journey of crafting compelling brands through a practical approach to design and strategy. This course immerses students in the brand design process, analyzing both successful and unsuccessful brand campaigns to extract valuable insights. By refining their aesthetic sensibilities, students will become adept at creating captivating designs. Leveraging cutting-edge digital technologies, students will master the creation of a brand style guide. In the final project, students will showcase their skills by developing a captivating style guide for a new or existing business, strategically positioning it in the market. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4438 How to Identify, Evaluate & Beat Your Competition (1 Credit)**

Every business has competitors, from large corporations, "main street" businesses, start-ups... they all compete for customers and market-share. Even The University of Denver competes for students. Leave The Competition Behind is for people who like to win and don't like to lose. In this class, you will study strategic frameworks and tools that you can use to identify, understand, and dissect your competitors, the levers that you can pull to beat them (like price, quality, service). We will identify and discuss front-line tactics you can use to outwork your competition. We will explore and discuss real life cases and personal stories from various industries to illustrate the key concepts used by professionals in competitive analysis and strategy. You will apply these concepts during the breakout sessions where we will take on the Media & Entertainment industry.

**EVM 4439 Social Entrepreneurship (1 Credit)**

Social entrepreneurship is simply applying entrepreneurship principles to societal challenges. This can be for-profit, non-profit, social business, or even not an official organization at all. The consistency across all these is the desire to make society better. Finding a problem that gives you purpose is a challenge in itself, as you cannot simply think about it. You need to create a life that allows you the freedom to find this purpose, and then successfully devote yourself to this purpose. In addition, if your goal is to make society better, you want to avoid the trap of working on one problem while actively contributing to others. So the ideal social entrepreneur creates an organization and life that offers a net improvement to society. This involves learning to “socially” manage others, environmental impact, finances, etc. The Social Entrepreneurship course is for people that are eager to improve the world. We will incorporate concepts from finance, management, psychology, and even neurobiology. You will learn how to find the problem you wish to work on, and how to be more successful in addressing that problem.

**EVM 4440 How to Effectively Negotiate in Business (1 Credit)**

Every day, and sometimes multiple times a day, we persuade and negotiate with people such as funders, classmates, friends, family members, potential employers, merchants, and coworkers. However, most of us know little about what it takes to be effective negotiators. This class teaches you proven methods to support your desire to reach principled agreements by broadening your basic negotiation skills. We will learn theory-driven negotiation skills, engage in simulated negotiations, and make concrete plans to conduct a future negotiation.

**EVM 4441 How To Create A Business Startup Budget & Forecast (1 Credit)**

For many people creating and evaluating business budgets and forecasts is intimidating. This applied course is designed to demystify the subject as students study, create, and evaluate budgets and forecasts. This course will provide students tools as they create an entrepreneurial budget and forecast. In addition, you will learn about metrics that entrepreneurs, investors, and banks use to evaluate these financial materials. Along the way we will consider budgets for different types of businesses, including B2B, B2C, products, subscriptions, and services. We will cover budget topics such as unit economics, breakeven, margin analysis, customer acquisition cost, and marketing efficiency plus forecast topics like burn rates, scaling, margin creep, and north star metrics. Plus, we will touch on the basics of valuation and how budget materials relate to valuation. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4442 Selling Online: Using Amazon as a Framework (1 Credit)**

Amazon has become the de facto tool for selling Consumer Packaged Goods (CPG) online. If you're not selling your product on Amazon, chances are that someone else is already doing it for you. Unlike real estate, Amazon squatters may have (and, retain) first-mover advantages in selling products and securing organic listing authority. Anyone planning to sell products for themselves or for an employer needs to understand the Amazon landscape. Amazon has become a ubiquitous metaverse for commerce. Everything known tangibly in bricks-and-mortar retail has a virtual analogue expected to move faster and cheaper, all while subject to the scrutiny of customer reviews. The Amazon eco-system includes an army of gig workers and service providers such as lawyers and marketing professionals, subject to the same constraints. Whether you wish to become a third-party seller on Amazon or plan to work for a CPG company, understanding the power of Amazon (and, related tools) has universal application. We plan to cover the risks of entering Amazon, the criteria to evaluate successful products, protecting your brand, organic and pay-per click strategies, third-party tools, and the broad market for trading in Amazon businesses. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4443 The Marketing Mix: Converting Prospects Across the B2B and B2C Buyer's Journey (1 Credit)**

How do people who have never heard of a product or company become loyal customers? Marketing leaders use a variety of tactics—from social media, digital advertising, content, customer service, reviews, emails, events, and more—to convert prospective customers to loyal ones. Converting prospects across the buyer's journey from awareness to consideration to purchase in a cost-effective manner is core to every B2B and B2C marketing campaign. During this Sprint we will learn the key elements of the marketing mix and the stages of the buyer's journey they apply to. We'll showcase common tactics and metrics used at each stage, and focus on the importance of using attribution data to improve the effectiveness of each conversion. We will also evaluate how marketing and sales leaders effectively partner across the buyer's journey, learn how the marketing mix can vary across B2B and B2C organizations, and showcase organizations that have developed highly effective marketing mixes. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class.

**EVM 4444 Using Sustainability to Drive Innovation (1 Credit)**

Want to learn how to make a difference in the world using Sustainability? This course is designed to give you the entrepreneurial skills to incorporate sustainability into a company's products, services, and day to day operations. If you want to learn how to innovate and develop sustainability initiatives that make massive societal and environmental impacts while tackling current challenges like climate change, water scarcity, equity & inclusion, this course is for you. This course provides an essential overview of the challenges that our planet and society are facing and provides you the tools you'll need to ignite your sustainable business vision and bring it to reality. If you have a passion for making a positive impact in the world and an entrepreneurial idea for a new business or a product or business solution within an existing company, come join us! Students will walk away with a working knowledge of sustainability issues and the tools to build sustainable programs into new and existing business ventures that address both a societal and market need. At the end of this sprint course, students should feel empowered with the ability to incorporate sustainable thinking into whatever their future careers hold – whether that be an entrepreneurial venture, the development of a new product, or helping businesses drive business value through sustainability. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class. Cross listed with EVM 3444.

**EVM 4446 Entrepreneurship in the Arts (1 Credit)**

Whether you are a visual artist, musician, dancer, or other member of the arts community, entrepreneurial capabilities will be crucial for monetizing your artistic mission and interests. In this class, we will explore how to find gigs, successfully manage your arts-focused endeavors as a profitable business, negotiate compensation, and channel a range of experiences into career development. In addition to ensuring this foundational knowledge, we will go beyond entrepreneurial basics to help you develop the tools to support your artistic and entrepreneurial endeavors. We will bridge the gap between artistic and business training to provide an expanded perspective on arts entrepreneurship. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class. Cross listed with EVM 3446.

**EVM 4448 Navigating the Gig Economy: Turn Your Passion into Profit (1 Credit)**

Through the emerging gig economy, individuals have many opportunities not previously available to them. Many are turning hobbies, skills, and passions into income-generating side hustles, supplementing their regular income, achieving a flexible work-life balance, experiencing an easier financial transition into a new career, having extra time to obtain additional education, or growing a side hustle into a new business venture. Gig workers provide temporary, short-term services or products to consumers, and over the next five years, this economy is expected to grow from 35% to 50%. As the entire U.S. economy continues to rely less on employees and more on technology, the decline in traditional employment requires a shift in how individuals make money. Whatever your goals, let's turn what you are already good at into a profitable activity that brings additional flexibility and independence to your life. This sprint provides a thorough understanding of the gig economy, including the benefits, challenges, opportunities, and, ultimately, how one can succeed as a gig worker. At the end of this sprint, students will be ready to participate in the gig economy by learning how to leverage freelancing platforms, develop a gig economy pitch, manage finances as a freelancer, enhance marketability, and ultimately understand gig work. This Sprint has asynchronous work that is available 2-weeks prior to the in-person class. The asynchronous work, up to 40% of the total work for the class, is required to be completed prior to the in-person class. There is a post class project that is due two weeks after the in-person class. Cross listed with EVM 3448.

**EVM 4700 Funding the Business (2,4 Credits)**

This course will focus exclusively on financing the business, including crowdfunding, angel investments, and private equity, the documents needed for such funding and the valuation of the firm as a result of funding.

**EVM 4704 Topics in EVM (1-8 Credits)****EVM 4710 Innovation/Creativity-Business (4 Credits)**

Cross listed with EVM 3710.

**EVM 4980 Internship (1-5 Credits)****EVM 4991 Independent Study (1-10 Credits)**

## Environmental Policy & Mgmt (EPM)

**EPM 4001 Environmental Foundations and Principles (4 Credits)**

This course investigates the field's history, current activities and issues, ethics, systems, and economics; and an overview of key necessary knowledge and skills to work and learn within the field. Students will: gain a strong historical understanding of how environmental and natural resource issues have influenced economic development and societal growth throughout the ages; learn about the complexity of environmental issues and the value of interdisciplinary and systems thinking when applied to making decisions about natural resource usage; understand the role that empirical science, policy analysis and advocacy play in how governments and private companies address complex environmental issues; become aware of the stressors that ecosystems around the globe are experiencing and the value of multidisciplinary approaches to addressing these challenges; and understand the diverse organizations and employment opportunities available in the environmental field.

**EPM 4002 Integrated Environmental Systems (4 Credits)**

The earth as a whole is comprised of many systems that affect the environment. Some have large wide ranging reach, while others are restricted to a relatively small area. Included is everything in between. Actions in one area or system may have unintended secondary and tertiary consequences in that system or others. This course uses various tools and materials to study a few environmental systems and determine connections, consequences, impacts, barriers, decision making, life cycle costs, etc.

**EPM 4003 Environmental Finance and Economics (4 Credits)**

The class provides an overview of economics, finance, and sustainability in an environmental and social context. The class examines traditional and alternative performance metrics, such as "Green GDP", and explores the relationship between risk and return, return on investments, including environmental, social, and governance (ESG) investing. The course emphasizes relationships between business management and environmental quality, and provides students with a financial and economic decision-making framework for understanding and analyzing environmental issues. The course utilizes a case-study approach to cover economic and finance concepts in real world scenarios involving natural resource and environmental decisions. Students will leave this course with the ability to confidently converse regarding sustainability in a finance and economics context.

**EPM 4040 Wetland Ecology and Management (4 Credits)**

This course provides a detailed examination of wetlands and deepwater habitats of the United States, with an emphasis on wetlands. The definition, identification, classification, and management requirements of various wetland communities are stressed. Students identify and classify wetlands and analyze wetlands in the context of federal, state, and local regulatory processes. Students evaluate activities with adverse and beneficial effects to wetlands. Students explore concepts related to wetland management in the public, private and non-profit sectors.

**EPM 4108 Impacts of Recreational Use (4 Credits)**

The practical and managerial theoretical basis of recreational use of public and private lands is examined in the context of ecosystem management. #The statutory and regulatory policies and current issues regarding the management and use of lands in wilderness systems, wild and scenic river corridors, parks, and open spaces are discussed in detail. #The impacts of recreational uses on the environment and conflicts with other uses of land and resources are discussed. Land use planning policies and decisions, decisions which respond to recreation, wilderness, wilderness and open space issues will be examined. At this end of this course, students will create a visitor impact use assessment using the Inter-agency Visitor Use Management Framework (IVUMF).

**EPM 4115 Introduction to Ecology (4 Credits)**

This course examines the concepts of the ecosystem, populations, communities, the flows of energy, material cycles, and biotic diversity. Students will analyze ecological concepts including the unity of organisms and inseparable interactions with the physical environment. Class discussions include topics such as the formation, distribution, and organization of ecological communities, plant succession, and nutrient cycling. Students will also evaluate aspects of evolutionary trends within plant and animal communities as they relate to ecological principles. The goals of this class are to transmit the principles, methods, and vocabulary of ecology. Students will critically analyze and discuss issues concerning population ecology, community ecology, and ecosystem ecology. Students will relate concepts of ecology to their personal and professional interests in environmental issues. The ability and necessity of communicating ecological principles within a commercial and/or regulatory environment will be developed. An assignment will provide experience in the collection, interpretation, and analysis of data. The skills learned will be relevant in environmental reporting, discussions, and presentations within a professional environment.

**EPM 4120 Introduction to Natural Resource Management (4 Credits)**

In this course, students gain an understanding of the roles and responsibilities of federal, state, and local agencies, environmental and wildlife interest groups, and other organizations involved in natural resources management. Students will learn the content and purpose of natural resources management plans, then apply this knowledge to assess and develop policies that will improve natural resources management.

**EPM 4140 National Environmental Policy Act (NEPA) (4 Credits)**

This course examines the National Environmental Policy Act (NEPA) and its applications. Students will gain both academic and practical experience in studying the intent and application of NEPA by federal agencies. Students will gain practical application by critically reviewing various NEPA documents and examining the components of NEPA documents. Students will prepare an Environmental Assessment (EA) of their choosing for their final project in this course.

**EPM 4150 Global Environmental Law and Policy (4 Credits)**

International environmental agreements provide a mechanism to address domestic environmental issues caused by foreign countries. However, some agreements have been more successful than others based on various aspects within the agreement and a country's domestic actions taken to enforce the agreement. This course teaches students how international environmental agreements are created, managed, and improved in order to improve environmental issues in different countries and international waters. Students will analyze and comment on existing agreements and create strategies for improving the agreements to strengthen agreements to be more effective in addressing environmental issues. Students learn about the stakeholders involved in creating and improving these agreements. Students will develop marketable analytical skills that help guide organizations toward more robust advocacy strategies designed to make the agreements more enforceable and effective in addressing environmental issues. Prerequisite: Recommended - EPM 4200.

**EPM 4200 Environmental Protection Law (4 Credits)**

This course provides an examination of the fundamental laws which protect our environment and health. Students will analyze the purpose, context, implementation, and implications of the most important laws, regulations, policies, and court cases that affect the environment, human health, and our economy. Coverage includes: National Environmental Policy Act (NEPA), Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), related toxics laws, and species and habitat protection statutes. It provides an examination of the legal system and the roles of Congress, the President, executive agencies, states, and courts in shaping and implementing environmental laws. The course also asks students to apply this knowledge to current events in environmental policy and litigation.

**EPM 4220 Endangered Species and Wildlife (4 Credits)**

This course provides an examination of the basic principles, trends, challenges, and controversies surrounding the administration of maintaining certain wildlife species, specifically through the administration of the Endangered Species Act. Students gain an understanding of the roles and responsibilities of various federal, state and local agencies, environmental and wildlife interest groups, and other organizations involved in endangered species and wildlife management issues. This course will also apply the principles of human dimensions to understand the complex social systems at work to conserve endangered species.

**EPM 4230 Renewable and Alternative Energies (4 Credits)**

This course provides a well-rounded primer on energy as a resource and its importance in the economy and the world today. Students will examine renewable and alternative energies and alternative transportation fuels. This course analyzes issues surrounding the development, enforcement and application of energy regulatory policies.



**EPM 4232 Sustainability: Policy and Practice (4 Credits)**

This course teaches students how organizations practice sustainability and how they plan for, shape, and react to the emerging environmental policies necessary to limit global warming. The investment community continues its quest to identify strong sustainability organizations, making public reporting more important than ever. NGOs and governments are pushing for higher ambition. Students will learn to make sustainability reports more meaningful to garner support from NGOs and attract investors. Students will develop marketable analytical skills that help guide organizations toward more robust sustainability actions and reporting, or help NGOs evaluate corporate reports for strengths and gaps.

**EPM 4233 Sustainable Transportation (4 Credits)**

21st Century transportation planning on the local and global scale involves consideration of environmental policies and sustainable practices. Development of an efficient system for moving goods and people along highways, airways and public transit networks must coordinate with legal requirements governing automobile source emissions, water pollution, mitigation of congestion, and crisis management. Conflicts occur along political fault lines between public interest groups, environmental justice advocates, the business community, government regulators, and the ordinary commuter. Consideration is given to different fuel sources, including carbon-based, hydrogen, electricity, and biofuels. The course also examines fuel efficiency (CAFE) and trends in emission science and regulation.

**EPM 4234 Climate Change and Science (4 Credits)**

Global Warming" is a cause celebre, but how much do we really know about the science involved in studying the earth's climate? Moving beyond the social and political opinions espoused in the current debate on climate change, this course delves into the chemical and physical forces at play in the arena. This course covers scientific processes used in measuring climate dynamics, among them ozone chemistry, carbon and oxygen cycles, and heat and water budgets. It explores scales and methods for detecting climate change, including analyzing ice cores, instrumental records, and time series. Some attention will be dedicated to "climate forcing" caused by such things as orbital variations, volcanism, plate tectonics, and solar variability.

**EPM 4235 Green Building (4 Credits)**

Builders, developers and designers increasingly are promoting the use of green construction practices in the pursuit of healthier, smarter buildings. Students in this course examine sustainable building strategies and tools, including LEED (Leadership in Energy and Environmental Design), the nationally-accepted benchmark for the design, construction and operation of high-performance green buildings. LEED promotes a whole-building approach by recognizing performance in five areas: sustainable site development water savings, energy efficiency, materials selection and indoor air quality. What materials are best in the design and operation of green building? How can a designer or building owner make better use of power and water efficiency programs? What are the recent developments, trends and case studies of green buildings and materials?.

**EPM 4236 Nuclear, Hydrogen, and Energy Storage Technologies (4 Credits)**

The necessity and urgency of moving away from fossil fuels-based energy production to reduce global warming has been well documented. Renewable energy technologies (solar, wind, and water-based) have been widely embraced as alternative energy solutions. However, like all energy production technologies, renewable energy technologies have shortcomings that prevent them from being standalone energy production solutions. Nuclear and fuel cell energy production technologies address the shortcomings of renewable energy technologies and can be considered symbiotic options in the move away from fossil fuels. Improving energy storage technologies will also be required to complete this symbiosis. This course will examine renewable energy technologies shortcomings and how nuclear, fuel cell, and energy storage technologies may be implemented to further facilitate the move away from fossil fuels-based energy production.

**EPM 4238 Water and Food Sustainability (4 Credits)**

Concurrent food, water, and climate crises amidst widespread hunger and undernutrition have re-focused public attention on the deficiencies and complexities of global food and water systems. This course examines the science and sustainability of our water resources as well as food production with an emphasis on the connections between the two. Increasing water and food system sustainability requires working along multiple disciplines, reconnecting agriculture with ecological systems and ensuring that policies and institutions that impact food and water systems protect social equity and the environment. The course draws from interdisciplinary research and education bridging worldviews and values implicit in different disciplinary and theoretical perspectives. Linking theory and practice is also essential thus the course will incorporate multiple perspectives and case studies from local to global levels. Demand is growing for interdisciplinary scholars and other professionals who are equipped to analyze and address the complex challenges of sustainable water resources, sustainable food production, and water and food security. Students will synthesize information from water, food, and the environment from a systems perspective. They will examine the interactions between science, policy, and ethics and analyze the trade-offs and synergies between different objectives, solutions, and outcomes. Students will devise solutions to problems that incorporate the intricacies and interdependencies of water and food systems.

**EPM 4280 Resource Conservation and Recovery Act (RCRA) (4 Credits)**

The Resource Conservation and Recovery Act (RCRA) course is a detailed review of the Resource Conservation and Recovery Act that was passed in 1976 and has been continuously updated since that time. RCRA is also known as "the cradle to grave law" dealing with hazardous waste generation and disposal. This course not only covers the important parts of the regulation, but students will also learn how to navigate and practically apply the law and regulations.

**EPM 4355 Systems, Standards, and Certifications for Environmental Management (4 Credits)**

Students will analyze and apply common environmental management systems, which can be used to ensure and improve quality during the management of a wide range of environmental operations. They will synthesize this knowledge via a project which establishes portions of an environmental management system. Students will execute the plan-do-check-act cycle to improve quality. They will evaluate options to minimize environmental impacts using root cause analysis and generalize common system components that are necessary for an environmental organization to achieve its objectives (establishing environmental policy, establishing performance objectives, monitoring results, evaluating performance, understanding and managing risks, etc.) Course assignments will allow students to practice systemizing and standardizing environmental management processes to improve performance (common procedures, data management, analytical methods, performance monitoring, etc.) Throughout the course, students will discover that management systems beyond subject matter expertise are necessary to do well in environmental careers.

**EPM 4390 Environmental Policy Analysis (4 Credits)**

This course investigates key issues in environmental policy analysis, including the importance of environmental justice, federalism versus state policy, techniques of environmental assessment, the impacts of politics and case law on environmental policy, and policy decision-making. The class sets a foundation with an overview of the U.S. and international environmental movements. Students look at stakeholder engagement, policy formulation and implementation, and policy evaluation in different institutions. The course emphasizes the important role that the political and judicial process plays in the creation of policy solutions, and assesses the strengths and weaknesses of different techniques of environmental analysis including environmental impact assessments, modeling and simulation, sustainability analysis, and how best to weave environmental justice/equity throughout policy development and implementation.

**EPM 4400 Environmental Values and Ethics (4 Credits)**

Students examine ethical considerations in environmental management and decision making. Discussions cover personal versus organizational attitudes; cultural, economic, and historic values; science versus politics; and international and intergenerational policies. The course also explores various philosophies of humankind's relationship with the environment. Students are encouraged to develop and express a personal philosophy relative to their role in the regulatory, technical, scientific, and financial management of the environment.

**EPM 4465 Environmental Restoration and Waste Management (4 Credits)**

Environmental Restoration is the identification and elimination of hazardous materials from a designated site such that the risks to human health and the environment are reduced to an acceptable level for an intended future land use. This course examines successful environmental restoration activities that were used to reduce and mitigate risk associated with past operations of nuclear and nuclear-related facilities and the significant potential to release harmful contaminants. Environmental restoration effects on the ecological and human health risk assessments and analyses related to the transport, treatment, storage, and disposal of waste from the contaminated site are presented. Remediation processes for radioactive materials and other hazardous wastes and the eventual storage, processing, and disposal and the potential effect on humans and the environment is studied. An overview is given on the development of a radiological protection program for an EIS report. External and internal hazards: control measures and monitoring, and other important limits and measurements are explored.

**EPM 4500 Leadership for Environmental Managers (4 Credits)**

This course provides students with fundamental leadership skills with an emphasis on topics and contexts relevant to environmental professionals. It addresses three main subject areas: leadership principles necessary to positively influence their work environment; how to effectively communicate; and developing a vision and mission for their personal leadership success. Students will assess their own leadership attributes, characteristics, and skills and construct a personal leadership development plan. The class will make use of reading assignments, written assignments, video assignments, situational role-play, and class participation.

**EPM 4510 Environmental, and Health & Safety Management (4 Credits)**

This course presents the intricacies of establishing environmental and health and safety programs in the workplace. The course is divided into specific environmental and health and safety topics that are relevant to environmental and safety management. There are multiple topics that address the benefits and barriers to designing, implementing, and maintaining environmental and health and safety programs.

**EPM 4520 Occupational Safety and Health Act (OSHA) (4 Credits)**

This course provides an in-depth review of the laws and regulations that govern the safety and health of workers. The course is of value to students seeking to expand knowledge of the Occupational Safety and Health Act. Emphasis is on the areas of overlap between safety and environmental laws, OSHA's inspection and enforcement authority, employee and employer rights, record keeping requirements and an outline of labor's interest in OSHA cases. Current topics such as OSHA reform legislation and regulatory agenda are discussed.

**EPM 4525 Workplace Safety Management (4 Credits)**

This course introduces students to core elements in a health and safety management systems approach to identifying and preventing workplace injuries and illnesses. Students examine the five elements of developing an effective occupational health and safety management program. The course also explores the common challenges and obstacles encountered during the development and implementation of these programs. This course includes a general overview of common OSHA regulations, rights, and responsibilities for developing a safety and health program. The format of this class is highly interactive, affording students an opportunity to engage with case studies and their peers, as well as to practice developing health, safety, and environmental programs at their respective establishments.

**EPM 4610 Analytics I (4 Credits)**

Data and analytics are key for any business domain; data tells us about our customers and markets and analytics make information and knowledge out of data. It's now possible to be inundated with data but gain no new knowledge from it. Analytics help companies demonstrate their ESG behavior and its impact. Companies that can prove and display the environmental impact gain a market advantage. Analytics also demonstrate real environmental impact versus greenwashing. This course has a managerial focus rather than a technical one, though students will perform some data analytics in this course. It is designed to provide managers with sufficient background on the potential value of data analytics, the business process change associated with data analytics, and the underlying technologies, to enable them to interface effectively with analysts and data scientists.

**EPM 4615 Analytics II (4 Credits)**

Business professionals including those in environmental health and safety (EHS) management, use statistics every day in making decisions. In this graduate-level course, you will gain an overview of the data analytic process and data mining techniques used for discovery knowledge from datasets. The course is designed to highlight the practical aspects of data mining methods and their applications, rather than theoretical aspects of statistical machine learning or optimization. The course also introduces emerging trends in Data Analytics and their applications in decision making process on environmental issues such as sustainability which includes waste management, water, and energy conservation. In summary, data is now an integral part of our lives and to be successful in today's business landscape, we need to be able to leverage data to make critical business decisions on environmental sustainability. This course will teach students how to use data to make those decisions confidently. Prerequisite: EPM 4610.

**EPM 4620 Environmental Reporting Standards and Models (4 Credits)**

Students learn the reporting requirements of existing and emerging environmental reporting standards, e.g., SEC requirements, EU standards, NGO standards, Global Reporting Initiative environmental performance indicators, and Sustainability Accounting Standards Board recommendations, and how to craft mandatory and optional reports that conform to these standards and requirements.

**EPM 4625 Environmental Analysis and Reporting Project (4 Credits)**

This is the concluding class for the Environment Analytics and Reporting concentration and graduate certificate. The class centers on performing sophisticated investigations of sustainability-related data sets utilizing the tools and insights of the data analytics revolution. The focus of the course is on applying advanced data analytics techniques (e.g., data mining, predictive analytics, and prescriptive analytics) to support innovative approaches for organizational sustainability, business performance, stakeholder relations, and/or environmental policy. Students will engage in readings, develop an analysis project using Watson Analytics, and prepare a report covering conclusions and recommendations. Prerequisites: EPM 4610, 4615, and 4620.

**EPM 4701 Topics in EPM (2-5 Credits)**

The content of this course will vary each time it is offered. The topics may include time-sensitive issues in the field of environmental policy and management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content will be announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**EPM 4705 Land Use Planning (4 Credits)**

This course provides a comprehensive examination of land use planning efforts by federal, state, and local governments. The legal authorities, responsibilities, and conflicts held by these governmental entities are examined in detail. The course examines the interrelationship between home rule authority, local zoning and planning requirements, and federal/state natural resource plans, as well as public participation in land use plans. Students will learn how to set goals and objectives for specific components of ecosystems, design projects to achieve desired ecologic conditions, and use new technologies in planning.

**EPM 4710 Environmental Project Management (4 Credits)**

In this course, students will learn about project management concepts and gain practical experience applying basic project management skills. As a part of class assignments, students will work on selected projects while covering the entire project management process, from project initiation to close-out. These projects will cover a range of environmental and / or sustainability project management perspectives, including governmental, industry, and advocacy or non-profit organizations. By the end of the course, students should have a strong understanding of project management skills and terminology, and be able to successfully complete some requirements for project manager certification. They will also understand the similarities and differences in project management for environmental professionals. Please note that while this course will provide a foundation in project management, it will not cover all concepts and terminology in depth or provide the required work hours necessary for project manager certification.

**EPM 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**EPM 4902 Capstone Seminar (4 Credits)**

The purpose of the Capstone Seminar is to develop and apply transferable professional skills to persuade decision-makers. The course requires students to identify a Capstone subject matter, develop a premise, and argue for an applied solution. Students will conduct research to create a strong argument that supports their premise by considering purpose, need, and audience and will provide evidence that the premise can be implemented. Tasks include gathering and evaluating appropriate source information, writing a strong solution in support of the premise, and then defending the solution. Students will write a Capstone paper and prepare a presentation suitable for professional exposure through publication and/or presentation.

**EPM 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**EPM 4980 Internship (0-4 Credits)**

The EPM Internship is designed to offer students a purposeful experience in the field of environmental policy and management. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**EPM 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed it with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## **Executive MBA (XMBA)**

**XMBA 4010 Strategic Management (2 Credits)**

This course is aimed at providing you some foundations of strategic thinking. As a business leader, your challenge is how to align the aspirations and actions of multiples of employees engaged in diverse activities so as to ensure its long-term performance. One of the founding fathers of the field of corporate strategy, Kenneth Andrews, defined corporate strategy as "the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals. It also defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers, and communities" (Andrews 1971: 18-19). Strategy is shaped not only by the market and competitive conditions that prevail in your industry, but also by the resources and capabilities of your organization. My goal in this course is to help you gain a new understanding of what strategy is, why it is needed, and what you must do to lead that effort.

**XMBA 4011 Executive Leadership I-Leading Self (2 Credits)**

John Maxwell, a well-known leadership writer and speaker, says, "Self-leadership comes first. It makes every other type of leadership possible." In this course, we will explore self-leadership in depth. You began this process in orientation with the Insights session. Your Insights colors should have provided you with a better understanding of yourself—your strengths as well as your development opportunities. But that's just a beginning. In this course we will explore several questions about self-leadership. Among them are: \*Why can self-leadership seem more difficult than leading others? \*What are the most important values and habits a leader should possess? \*How transparent should a leader be about their personal challenges? How can leaders overcome the feelings of loneliness that inevitably come up? \*How can leaders develop the ability to filter their emotions in order to make good leadership decisions? We will take an experiential learning approach, making use of self-assessments, student sharing, readings, case studies, video clips, and experiential exercises to keep the classroom a lively, interactive, learning atmosphere and to maximize your learning experience.

**XMBA 4013 Ethical Frameworks for Decision-Making (4 Credits)**

This course synthesizes major ethical frameworks with real-world business and policy applications. Personal and professional ethical dilemmas are covered helping leaders navigate the grey areas of their lives and careers. The material covers the primary ethical frameworks dealing with the greatest good, duty ethics, virtues, libertarianism, social contract and more. The student will evaluate issues that often interfere with their moral compass such as stress, pressure, and ethical crisis management. Students also will examine what it means to live an authentic life.

**XMBA 4014 Business and Economic Context (3 Credits)**

This course presents the fundamental concepts of microeconomics and macroeconomics and approaches them from a managerial decision-making perspective. The first half of the course emphasizes applying microeconomic theory to decision-making to help achieve a firm's objective-increasing profit, market share, or growth. In contrast to traditional economics courses, this course emphasizes practical implementation to solve sophisticated abstract problems. The focus is on how economics affects business decision-making. The second half of the course discusses macroeconomics and factors that affect the economy. The goal is to develop an understanding of macro-economic concepts such as GDP, inflation, exchange rates, and trade balances, to obtain a framework to model a firm's behavior according to an informed understanding of what the economy is doing. Armed with an understanding of the cycle of economic activity, one can formulate a firm understanding of policy alternatives by both the Federal Reserve and Congress.

**XMBA 4015 Business Ethics (2 Credits)**

Business Ethics is an intermediate level graduate course delivering a rigorous introduction to major ethical topics, theories, and issues relevant to the elements of the 21st century business environment. This course also focuses on ethical reasoning and strives to enhance each student's ability to integrate these perspectives into appropriate business decisions. Beyond these overarching goals, this course will encourage students to:

- Acquire the basic analytical tools necessary to engage in ethical analyses of business problems and decisions
- Apply basic ethical concepts to today's business environment
- Appreciate the distinction between an ethical and a legal judgment and deduce useful methods of integrating such perspectives into business decisions
- Attain a knowledge base steeped in major ethical frameworks that will prove invaluable in each individual's course of study, professional career and personal endeavors.

**XMBA 4016 Integration: Board Advisory Analysis (1 Credit)**

This course is the first of three explicit integration courses in the EMBA curriculum. Coming at the end of the the second quarter (of 6) of the program, it is designed to provide you an opportunity to integrate your learnings across the courses and disciplines that have come so far: Leadership, Ethics, Economics, Financial Accounting, Managerial Accounting, and Introductory Finance. You will be placed in teams to act as consultants to a fictitious company, for which you will analyze a problem situation across all of the above disciplines and present recommendations in written and verbal form to their board of directors. The work will be done offline in the three weeks leading up to the class session with a formal presentation to the board, including Q&A, live on the last day of Quarter 6.

**XMBA 4017 Integration: The CFO's Perspective (1 Credit)**

This course is the second of three explicit integration courses in the EMBA curriculum. Coming at the end of the third quarter (of 6) of the program, it is designed to provide you an opportunity to integrate your learnings across the courses and disciplines that have come so far with an emphasis on Finance, Accounting, and Strategy. The CFO is the financial strategist of the organization and, as such, they consider issues in an integrated fashion. So, this day allows you to sit in the CFO's seat and take that same integrated perspective. The day is broken into three main components. The day will start with a discussion of Strategic Finance, in essence how do the topics and departments of Finance and Strategy come together to chart the direction of the organization? Next, we will engage in a specific case discussion that illuminates these issues in "real time." Finally, the day will conclude with a roundtable discussion with current CFOs to, again, bring this set of nuanced issues to light.

**XMBA 4018 Integration: Your Personal Development (1 Credit)**

This course is the third of three explicit integration courses in the EMBA curriculum. Coming at the end of the the fourth quarter (of 6) of the program, it is designed to provide you an opportunity to integrate your learnings and plan for personal growth and development throughout the program. This is aligned with the core objectives of the EMBA program to facilitate your personal development beyond the curriculum in the classroom. The course is designed to return your attention to the your Individual Development Plan (developed in the Executive Leadership cours) and your World Vision work (developed in the Business Ethics course) and to update them as appropriate. The session will unfold in three parts. In the pre-work phase, you will be asked to review your two documents from prior quarters and write a short reflection paper that addresses your progress to date, any issues you see in the plan (weaknesses or pivot opportunities) and any possible changes you might want to make. During class session itself, we will cover additional concepts in personal development (including building accountability mechanisms into your plan) and engage in some peer coaching to help you push your thinking and planning. The post class phase will involve your updating the goals section of your IDP to account for changes in direction and accountability mechanisms, thus adding effectiveness to your plan.

**XMBA 4019 Social Impact Project (2 Credits)**

The vision of the Executive MBA Social Impact Project is to provide an impactful culminating experience in the MBA curriculum in which students offer their time and business acumen to a local non-profit organization. Through this course students will develop themselves as purpose-driven professionals by choosing a non-profit challenge that is aligned with their values and reflecting on the impact of the work they complete with the organization. Students will work in teams on a critical business issue facing a non-profit organization, develop milestones and an execution timeline for applying their business expertise, and set metrics for evaluating their impact on the organization during the six-month long project. The Social Impact Project kicks off during a non-profit showcase in the second or third quarter where non-profit organizations share their purpose and the project in which students can best assist them over the course of the next six months on a part-time basis. Students will work with their organization outside of the classroom to apply their business acumen to the problem or opportunity identified. The progress of student teams will be evaluated based on the milestones, execution timeline, and metrics agreed upon with the non-profit organization. The Social Impact Project will conclude in quarter five with student presentations highlighting their impact on their organization accompanied by a personal reflection on the learning objectives below.

**XMBA 4020 Executive Leadership III-Leading the Organization (2 Credits)**

We live in a VUCA (volatile, uncertain, complex and ambiguous) world. Effective leaders are skilled in navigating the challenges presented by this world. This course will introduce you to a framework that will help you navigate our VUCA world. You will come to understand how some decisions that seem to make no sense when viewed from one perspective make eminent sense when viewed from a different perspective. You will be provided a framework for examining and understanding organizations. You will learn your particular perspective on organizations and how it can limit your ability to truly understand leadership situations with which you are faced. This course approaches leadership from a general management perspective; integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include organizational design, processes, and systems; issues in creating individual and organizational fit; organizational culture; power and influence dynamics in organizations; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors. This course is organized around four integrative perspectives on organizations or "Frames". • The Structural Frame examines the challenges of organizing work activities. • The Human Resources Frame examines the challenges of integrating individuals and organizations. • The Political Frame examines the role of power, conflict and coalitions in organizations. • The Symbolic Frame examines organizational culture, leadership and change. Drawing on several disciplines – Sociology, Social Psychology, Political Science, Cultural Anthropology, Symbology – this course is designed to assist you in developing the skills necessary to understand why things happen the way they do, and how to adapt your style to be a successful and influential executive leader. This is a case based course. As such, you need to come to class prepared having read the cases and assigned readings. Being a case based class, your participation is very important. I will reserve the right to alter your grade up or down depending on the level and quality of your contributions to class discussions.

**XMBA 4102 Business & Economic Context (2 Credits)**

This introductory course is designed to provide a survey of essential economic concepts and frameworks for executives. Economics provides a clear lens to intelligently evaluate and understand the world around us. Disciplines including finance, strategy, international business and marketing all share a foundation in economic principles. Business decisions require knowledge of economic principles in order to effectively evaluate impact. This course provides a survey of these economic principles, with an emphasis on teaching via case studies and examples.

**XMBA 4231 Marketing III - Supply Chain/Digital Marketing (2.5 Credits)**

This course captures the executive-level understanding of both basic Supply Chain Management (SCM) and more broadly, Value Chain (VC). Students will analyze a firm's SCM and VC and identify opportunities and challenges. Industry experts and case studies will bring topics to life. The Digital Marketing component of this course will provide executive-level insight into the frameworks used by marketing executives to make decisions on how to spend their budgets to achieve maximum ROI. The digital era has permanently changed the face of marketing and this course will prepare executives to understand how (and where) digital dollars can be spent. Through a detailed overview and hands-on exercises, students can expect to develop the understanding needed to better engage their own marketing departments as well as navigate the online advertising industry as a whole.

**XMBA 4234 Digital Marketing (2 Credits)**

The Digital Marketing course provides executive-level insight into the frameworks used by marketing executives to make decisions on how to spend their budgets to achieve maximum ROI. The digital era has permanently changed the face of marketing and this course will prepare executives to understand how (and where) digital dollars can be spent. Through a detailed overview and hands-on exercises, students can expect to develop the understanding needed to better engage their own marketing departments as well as navigate the online advertising industry as a whole.

**XMBA 4301 Mastering Fourth Industrial Revolution (2 Credits)**

This course has two primary objectives. The first is to expose students in a coherent way to current exploding new technologies that create possibilities and challenges for businesses, organizations, and individuals alike. Key 4th industrial revolution technologies such as artificial intelligence (AI), the Internet of Things (IoT), Blockchain technology and cryptocurrency, extended reality (augmented, mixed, and virtual), additive manufacturing, and autonomous vehicles and drones are also introduced. The second objective is to have students digest and think through what these technologies mean for the organizations they do and will lead in the future. Notably, what does it mean to lead an organization and be a well informed customer/user of technology without being a technology expert themselves. In essence, how do you lead a 21st century enterprise that is increasingly shaped by 4th Industrial Revolution technologies?

**XMBA 4330 Financial Accounting (2 Credits)**

This is a study of the fundamental concepts of financial accounting and reporting by business entities in accordance with generally accepted accounting principles (GAAP). The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

**XMBA 4331 Foundations of Financial Analysis (2 Credits)**

This course introduces the tools and techniques for financial analysis and planning. Topics include the tax implications of financial decisions, financial ratio analysis, operating and financial break-even analysis, operating and financial leverage, time value of money, and interest rates in the financial markets.

**XMBA 4332 Management Accounting (2 Credits)**

This is a study of the fundamental concepts of financial accounting and reporting by business entities in accordance with generally accepted accounting principles (GAAP). The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

**XMBA 4333 Entrepreneurial Mindset II (2.5 Credits)**

Entrepreneurial Mindset II applies the concepts of entrepreneurship to an established company. By contrast, Intrapreneurship refers to a 'start up' style of management (characterized by flexibility, innovation, and risk taking) to fast track product development in order to take advantage of a new opportunity or to assess feasibility of a new process or design. The content of this course is designed to help identify the differences and similarities between entrepreneurship and intrapreneurship by looking at such factors as risk/reward systems; corporate culture; autonomy within the context of a large organization; gaining commitment and funding; as well as resource allocation. Intrapreneurs are not just entrepreneurs who happen to work inside an organization; there are some fundamental differences in their motivations, the skills they possess and the environment they need to thrive. From within a company, successful intrapreneurs understand trends and how to develop industry disruptive strategies. In this respect good intrapreneurs are the most important asset a company has: they do more than just commit their time to a company, they also invest their skills. Intrapreneurs see the ability to grow personally along with the company and in this sense, should be seen as investors in a company, rather than just employees.

**XMBA 4334 Accounting III - Strategic Management of Costs (2.5 Credits)**

Effective cost management is at the core of nearly every successful enterprise. Through this course, students will better understand why, when, and how cost management affects operations. The course materials (including lectures, cases, problems and simulations) provide real-world applications that include cost behavior, budgeting and variance analysis, cost-volume-profit relations, pricing, quality, Activity Based Costing, Target Costing, the Balanced Score Card, ISO 9000, and using relevant costs and revenues in decision making.

**XMBA 4336 Finance II - Financial Decision Making (2 Credits)**

This course applies the tools of financial analysis to financial decisions. Topics include the valuation of financial assets, capital budgeting, cost of capital, Performance financial statements, business valuations and mergers, return on equity analysis, EPS and stock prices, and cash flow statement analysis.

**XMBA 4337 Finance III - Strategic Finance (2.5 Credits)**

This course applies the tools of financial analysis to financial decisions. Topics include the valuation of financial assets, capital budgeting, cost of capital, Performance financial statements, business valuations and mergers, return on equity analysis, EPS and stock prices, and cash flow statement analysis.

**XMBA 4340 Executive Leadership I (4 Credits)**

It is appropriate that the EMBA begins with Executive Leadership. This course sets the tone and framework for what follows. This course in executive leadership has a clear perspective: being a leader in any organization at this time is more than just "managing," especially at the upper levels of an organization: leadership at the executive level is a profession. The Executive Leadership course is all about the essential role of leadership at a time when society faces major challenges and uncertainties. What does it take to be a successful leader of an organization in the current and future environment? Organizations are complex systems that are embedded in larger complex systems. Simple formulas will not provide you with effective solutions covering all situations. We will emphasize the practice of perspective-taking and diagnosis for making better decisions. This course also applies and reflects what is happening in all types of organizations—whether public or private, large or small, and whether product or service oriented. Personal, interpersonal, team and organizational leadership, along with concepts of business execution and performance, are themes that will be woven throughout the course content. Executive Leadership is a two term course. Executive Leadership I includes the Team Sailing Challenge experiential exercise.

**XMBA 4341 Executive Leadership II (2 Credits)**

This class focuses on an often-overlooked leadership skill – the ability to use power and influence effectively, and to negotiate the relationships critical to being a successful leader. Class time focuses on not only understanding the basics of this critical leadership skill, but also on honing skills through case studies and exercises. Particular attention is given to ethical issues connected with power and negotiation. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

**XMBA 4342 Talent, People, & Culture (2 Credits)**

The course will focus on the role of Human Capital Management as it relates to a firm's performance. The course follows the cycle of business planning and execution and focuses on the key human capital considerations at each step in the cycle. It addresses Talent Management processes while also exploring current and emerging practices. The course has a global focus and gives significant attention to new trends that relate to human capital.

**XMBA 4343 Evolving as an Impactful Leader (2 Credits)**

In the gap between a brilliant idea and the successful organization lies the discipline of execution. Execution is built on three key processes: the people process, the strategy process, and the operations process. In this course, we study the methods of successful leaders and organizations known for execution, self-evaluate execution skills and reinforce learning via case methodology.

**XMBA 4350 Executive Leadership II (2.5 Credits)**

In today's world, working with teams is a necessity, yet few of us understand how to do this well. In this class, you will address how high performance teams are built, sustained and integrated through practice and competition. The class will participate in a team building weekend in San Diego (sailing) to gain hands-on experience with these skills. Leadership is about effectively achieving results through others. Technical business knowledge, emotional intelligence competencies, and the ability to execute are all required to achieve this objective. This course examines these elements within the context of developing personal and organizational 'leadership intelligence'. Students will explore ethical, legal, social, and public policy challenges frequently encountered by executives and business leaders in the workplace.

**XMBA 4351 Marketing II - Product Innovation (2.5 Credits)**

The second course in the marketing sequence shifts from left brain activity to whole brain activity. Building on the tools and disciplines learned in Strategic Marketing, Product Innovation shifts to focus on the art of marketing. The course enables students to understand the role of innovation in delivering value to customers and stakeholders, to acquire the executive competence necessary to secure the innovation investment, and to realize how executives propel and assess innovation through all the stages of the innovation life cycle – from idea exploration to bringing a product/service to market successfully.

**XMBA 4353 Global Business Environment (2 Credits)**

This course series and global experiential learning is about making well-informed decisions in a global environment. Students will use critical thinking skills along with the cumulative tools gained from this course sequence to build a feasibility study with international implications. Conducting business outside the United States involves a unique set of challenges. Diverse cultures, laws, languages, risks and currencies add to the complexity of putting together and managing international business ventures. This course will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. The primary vehicles for accomplishing this will be with class discussions built around presentations by the instructors and students as well as cases dealing with a range of issues, countries and industries. For the culmination of this course series, you will travel abroad for two weeks to two different countries and witness their contrasting markets/economies. You will meet international business leaders in each country and learn hands-on about emerging markets and developing economies – which will stretch the limits of your comfort zone!

**XMBA 4354 Global Business Strategy (5 Credits)**

This course series and global experiential learning is about making well-informed decisions in a global environment. Students will use critical thinking skills along with the cumulative tools gained from this course sequence to build a feasibility study with international implications. Conducting business outside the United States involves a unique set of challenges. Diverse cultures, laws, languages, risks and currencies add to the complexity of putting together and managing international business ventures. This course will help you prepare for these types of activities by exploring the basic questions which focus on various aspects of international business. The primary vehicles for accomplishing this will be with class discussions built around presentations by the instructors and students as well as cases dealing with a range of issues, countries and industries. For the culmination of this course series, you will travel abroad for two weeks to two different countries and witness their contrasting markets/economies. You will meet international business leaders in each country and learn hands-on about emerging markets and developing economies – which will stretch the limits of your comfort zone!

**XMBA 4355 Executive MBA Summit Series (2.5 Credits)**

The last five weeks of the 18-month program consists of a series of class sessions centered on topics of particular relevance in today's business environment. The content in this "multi-part course" is designed to be fluid, reflecting the shared interests of the cohort. For example, topics may include subjects such as Board Membership (how to secure a Board position; roles and responsibilities etc.), Crisis Management/Media Relations, Executive Career Development and/or Leadership in Non-Profit Entities. Final presentations for EMBA co-curricular projects (Social Impact Project, Business Plan/New Venture Project) also occur in these final weeks, representing the "summit" of EMBA learning outcomes.

**XMBA 4360 Marketing I - Strategic Marketing (2 Credits)**

Focused on creating customers, this course will build decision tools, mental models and a holistic framework for finding the right market, the right price, the right communication and the right partners for your product or service. Through market research and competitive intelligence, students will learn to provide customer value, customer information, customer solutions and organizational profitability. Strategic Marketing in a Dynamic Environment explores the science of marketing. Students will acquire a detailed understanding of strategic business- and decision support models that helps executives navigate and lead an enterprise towards sustainable competitive advantage and differentiation. The course allows executives to develop and internalize business acumen as relates to translating the voice of the customer to strategy and orchestrating stakeholders in a way that add value.

**XMBA 4361 Go-to-Market Strategy (2.5 Credits)**

This course focuses on Go-To-Market strategy as a framework for effectively implementing a business plan. The key areas of Go-To-Market strategies evaluated in this class include approaches to segmentation of key markets, sales organizational and compensation considerations, channel and distribution considerations, and the overall corporate culture to sustain the GTM strategy. The focus is on developing the customer experience while sustaining long-term profitable growth.

**XMBA 4362 Strategic Management (2 Credits)**

This strategy course covers a range of concepts and analytical techniques relating to creating and sustaining competitive advantage as the basis for superior performance. It deals with contemporary issues such as industry analysis, core competence of organizations, value chain analysis, and strategy implementation. The emphasis is on the application of analytical tools and frameworks to understand complex strategic issues. Competitive Strategy integrates concepts from finance, marketing, accounting, general management, information technology, and operations management.

**XMBA 4364 Business Data & Analytics (2 Credits)**

This course will familiarize the student with data management and analytic methodologies that are prevalent across most industries today, and will suggest a way-ahead as electrons continue to get cheaper to collect and maintain. A well-designed architecture for collecting, storing, and accessing data is essential for all businesses that want to compete successfully as the pace of the decision-making cycle continues to increase. Traditional statistical techniques are still prevalent (and useful!) with proper mining or sampling of big data, and these remain the workhorses of Business Analytics. Analytic modeling is an integral part of business decision-making, and knowing and identifying the appropriate technique can make the difference between discovering the truth and running into a data wall. With the right toolset, the data analyst can tackle large volumes of data with a "divide and conquer" approach. However, the decisions that lead to parsing the data appropriately require not only an understanding of the data and the available tools, but the question being answered as well.



**XMBA 4365 Entrepreneurship & Innovation (2 Credits)**

This course provides students with the analytical skills needed to identify and evaluate new business opportunities and the skill set to prepare a business plan for an entrepreneurial venture. The curriculum incorporates insights from successful entrepreneurs and covers topics such as crafting a value proposition, market and sales forecasting, exploration of financing options, and building an effective team. The course concludes with the presentation of student business plans.

**XMBA 4366 Stakeholders Beyond the Shareholder (2.5 Credits)**

For 100 years, the business community has operated under an increasingly well defined and developed framework of shareholder capitalism. In shareholder capitalism, the purpose of business is to generate profits for shareholders. As such, we have developed well defined and refined processes and frameworks for developing strategies, executing plans, and measuring success and progress against this objective. This course challenges us to examine the other stakeholders who are affected by and affect our organizations and their work, to including (but not exclusively) customers, employees, governments, suppliers, the global environment and the communities in which we do business. What does it mean for a business or organization to consider the wants and needs of these (and other) stakeholders? What are the issues that we as leaders need to be attuned to when considering these stakeholders? Which stakeholders have (or should have) primacy and why? How do we develop strategies and plans to account for a much broader array of stakeholders? And how do we and others measure success? This course provides a framework for considering these questions and three main thrusts to it: • An exploration of Environmental, Social, and Governance (ESG) issues within and around corporations • A deeper dive into the issues of Diversity, Equity, and Inclusion (DEI) in organizations • A bridge to the EMBA Social Impact Project which will proceed through quarters 5 and 6.

**XMBA 4367 Stakeholders Beyond the Shareholder I (1 Credit)**

For 100 years, the business community has operated under an increasingly well-defined and developed framework of shareholder capitalism. In shareholder capitalism, the purpose of business is to generate profits for shareholders. As such, we have developed well defined and refined processes and frameworks for developing strategies, executing plans, and measuring success and progress against this objective. This course challenges us to examine the other stakeholders who are affected by and affect our organizations and their work, including (but not exclusively) customers, employees, governments, suppliers, the global environment and the communities in which we do business. What does it mean for a business or organization to consider the wants and needs of these (and other) stakeholders? What are the issues that we as leaders need to be attuned to when considering these stakeholders? Which stakeholders have (or should have) primacy and why? How do we develop strategies and plans to account for a much broad array of stakeholders? And how do we and others measure success? This course provides a framework for considering an exploration of Environmental, Social, and Governance (ESG) issues within and around corporations.

**XMBA 4368 Stakeholders Beyond the Shareholder II (1 Credit)**

For 100 years, the business community has operated under an increasingly well-defined and developed framework of shareholder capitalism. In shareholder capitalism, the purpose of business is to generate profits for shareholders. As such, we have developed well defined and refined processes and frameworks for developing strategies, executing plans, and measuring success and progress against this objective. This course challenges us to examine the other stakeholders who are affected by and affect our organizations and their work, including (but not exclusively) customers, employees, governments, suppliers, the global environment and the communities in which we do business. What does it mean for a business or organization to consider the wants and needs of these (and other) stakeholders? What are the issues that we as leaders need to be attuned to when considering these stakeholders? Which stakeholders have (or should have) primacy and why? How do we develop strategies and plans to account for a much broad array of stakeholders? And how do we and others measure success? This course provides a framework for considering the issues of Diversity, Equity, and Inclusion (DEI) in organizations.

**XMBA 4369 Supply Chain Management (2 Credits)**

This course captures the executive-level understanding of both basic Supply Chain Management (SCM) and more broadly, Value Chain (VC). Students will analyze a firm's SCM and VC and identify opportunities and challenges. Industry experts and case studies will bring topics to life.

**XMBA 4401 Design Thinking (2 Credits)**

Design Thinking The course examines the Design Thinking's systematic approach for developing solutions using creative problem-solving techniques and will also build on the concepts introduced in the Marketing and Entrepreneurship classes. We will discuss its application to multiple business domains, the language of design thinking and how this applies to leadership and a broader business mindset. This course will include an immersive activity to understand design thinking, guest speakers, and articles to re-enforce each learning topic. We will discuss several academic models for design thinking.

**XMBA 4700 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4701 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4702 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4703 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4704 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4705 Topics in Executive MBA (1 Credit)**

This is topics course. The focus is on specialized areas of interest.

**XMBA 4720 Executive Business Law (2 Credits)**

This course is designed to provide executives and entrepreneurs with practical, applied legal information that will lead to better decision-making in the business environment. It also highlights the importance of managing legal professionals and creating a sound legal strategy – both key components of business strategy – and crucial for business success. Emphasis is placed on teaching applied knowledge and using this knowledge to make difficult, real-world business decisions. This course provides a safe learning environment in which management decisions can be carefully analyzed and studied without real world consequences.

**XMBA 4900 Integration (1 Credit)**

This course will vary from quarter-to-quarter to reflect the integration of learning during the quarter. A variety of activities will be used to effect the integration such as working with a client or visiting a site and speaking with executives.

**XMBA 4991 Independent Study (1-10 Credits)****XMBA 4995 Independent Research (1-10 Credits)**

## Executive RCM (XRCM)

**XRCM 4000 Triple Bottom Line and the Built Environment (4 Credits)**

An exploration of the importance of real estate and the built environment through triple bottom line analysis of its social, environmental, and economic impacts. The course considers a "cradle to cradle" sustainability model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value-generating solutions for society. Professional practices/skill sets associated with the many career options that engage the built environment are demonstrated.

**XRCM 4007 Real Estate Financial Analysis (4 Credits)**

Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: XRCM 4407.

**XRCM 4010 Real Estate Capital Markets (4 Credits)**

This course will expose students to the Commercial Real Estate Capital Markets that have evolved from exclusively private in the 1980s to a mix of private and public, including commercial mortgage backed securities (CMBS) and real estate investment trusts (REITs), in the 1990s. Any person involved in real estate today must understand all the alternative capital sources available and their requirements. Students will be exposed to the positives and pitfalls of all the capital market products. This course will provide students with the general concepts and definitions. A combination of lectures, guest lectures from industry experts, text & article readings, class discussions, and case studies using real life examples. Prerequisite: REAL 4007.

**XRCM 4110 Preconstruction Integration and Planning (4 Credits)**

This course examines the role of preconstruction services, team integration, and joint design planning in various Integrated Project Delivery (IPD) approaches. Various tools and techniques associated with preconstruction services and design planning from the proposal stage through the design stages of a project are considered.

**XRCM 4115 Corporate Real Estate and Management (4 Credits)**

This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. The course addresses key CRE issues including globalization, technology, sustainability and the enterprise business model. Within the framework of a corporate or agency structure, facility management is addressed as a distinct and critical component of successful performance. Topics include facility planning and forecasting, lease administration, space planning, allocation, and management, workplace planning, budgeting, and economic justification, real estate acquisition and disposal, sustainability management, construction project management, move, add, change (MAC) management, operations, maintenance and repair, technology management, emergency, security and life-safety management, and general administrative services.

**XRCM 4120 Construction Planning and Scheduling (4 Credits)**

Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite: XRCM 4420.

**XRCM 4140 Global Perspectives in Real Estate (4 Credits)**

Cross listed with REAL 4140.

**XRCM 4155 Sustainable Development/LEED (4 Credits)**

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

**XRCM 4177 Environmental Systems and MEP Coordination (4 Credits)**

A study of electrical and mechanical systems used in the construction of buildings. Course content includes system design, component selection and utilization for energy conservation, cost estimating or systems, coordination and management of installation. Specific systems included are electrical, air conditioning, heating, ventilation and plumbing, fire protection, life safety, communication, power systems and lighting. The course also considers coordination of MEP systems and explores emerging technology and environmental issues related to mechanical and electrical systems in buildings. Cross listed with CMGT 4177.

**XRCM 4180 Construction, Layout and Surveying (4 Credits)**

Theory, principles and techniques of constructing layout and surveying; field procedures in fundamental surveying; site, foundation and frame layout.

**XRCM 4200 Lean Const Project Mgmt (4 Credits)**

This advanced course focuses on cutting edge lean tools and other productive strategies for the management of people and processes in the construction industry. The tools and strategies presented draw on the very successful Toyota Production System adapted to the construction industry. Lean construction methodologies such as the Last Planner System, the Lean Project Delivery System, and Integrated Project Delivery are discussed. Topics also include sustainability and the emerging interest in "green construction," as well as the use of Building Information Modeling to enhance the development and management of integrated projects. This course also looks at the human element in relation to motivation, safety, and environmental stresses. A number of case studies are presented to highlight best practices in Lean Construction Project Management. Prerequisite: XRCM 4480.

**XRCM 4210 Planning, Entitlements, and Public Finance (4 Credits)**

Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

**XRCM 4230 Design Management and Schedule Control (4 Credits)**

This course examines the various strategies and techniques associated with managing the design delivery process to align with the construction budget and schedule needs in an integrated fashion. Design planning, scheduling, and resource allocation are considered along with design value determination and management of the design-construct interfaces. Constructability, value engineering, design performance.

**XRCM 4250 Construction Job Site Management (4 Credits)**

This course addresses how a successful construction project is managed and administered from design through construction to closeout. Emphasis will focus on how to unite the key stakeholders (contractors, architects, engineers, etc.) to provide them with a workable system for operating as an effective project team. The latest technology, laws and regulations associated with contract administration will be presented. Topics pertinent to each stage of a project are introduced and discussed as they occur throughout the life of the project. Numerous real-world examples will be utilized throughout the course. Various electronic project administration tools and techniques will be demonstrated including Building Information Modeling.

**XRCM 4310 Cost Modeling and Trend Management (4 Credits)**

This course covers various approaches to construction cost estimating at the conceptual stages of planning and design through detailed construction. Students learn parametric estimating techniques and how they are applied to construct and predict reliable budgets at the earliest stages of design. Students build cost models and refine those models with greater detail as design develops through a project. Building information modeling is introduced and used to create massing models to demonstrate design impacts on project costs. Cost trending techniques are presented to manage, monitor and document project performance relative to cost. Prerequisite: XRCM 4410.

**XRCM 4320 Introduction to Architecture and Design Management (4 Credits)**

This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

**XRCM 4337 RE Securities/Syn/Entrep (4 Credits)**

Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing of the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations. Cross listed with REAL 4337.

**XRCM 4347 Management - Income Properties (0-4 Credits)**

Complex problems of managing apartments, condominiums, office buildings, industrial property and shopping centers; rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, owner relations.

**XRCM 4357 Corporate Real Estate and Management (4 Credits)**

This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

**XRCM 4369 Real Estate Taxation (4 Credits)**

Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate.

**XRCM 4407 Income Property Finance (4 Credits)**

Conventional and alternative (creative) financing techniques, mortgage banking, law and markets, loan underwriting analysis, the impact of monetary and fiscal policies on the real estate and mortgage markets, emphasis on case studies and microcomputer applications.

**XRCM 4410 Construction Building Systems (4 Credits)**

A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced.

**XRCM 4417 Income Property Valuation and Appraisal (4 Credits)**

Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: XRCM 4407.

**XRCM 4420 Construction Estimating (4 Credits)**

Integrated approach addressing construction accounting, estimating, purchasing, and management reporting systems. Cross listed with CMGT 4420. Prerequisite: XRCM 4320 & 4410.

**XRCM 4438 Legal Issues & Risk Management (4 Credits)**

General contract and real estate law, including property rights, title concepts, deeds, purchase contracts, law of agency, environmental issues and disclosures, basics finance concerns, tax law, landlord-tenant law, construction contracts, indemnity agreements, rights and remedies of property owners, contractors and subcontractors issues, and various areas of liability for real estate practitioners and property owners.

**XRCM 4467 Property Development and Feasibility (4 Credits)**

Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: XRCM 4007.

**XRCM 4477 Income Property Investment (4 Credits)**

Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Prerequisite: XRCM 4007.

**XRCM 4480 Construction Project Mgmt (4 Credits)**

This course introduces the student to project management scheduling techniques and methodologies. The student will be exposed to different scheduling techniques, how to develop a project schedule of limited scope, and how to utilize the project schedule for planning and monitoring job progress.

**XRCM 4490 Residential Development (4 Credits)**

A course sequence designed to emphasize the practical application of the theories and concepts of residential development. Students are expected to apply their knowledge of general business, real estate, and construction management practices by forming a student business entity, acquiring land, building and selling a residential property in a case format. Students apply accounting, finance, marketing, real estate, and construction management techniques in the planning for a residential development.

**XRCM 4560 Relational Contracting and Risk Mitigation (4 Credits)**

Relational contracting is a construction project delivery framework for multidisciplinary, integrated projects that focuses on aligned goals, high performance, innovation, mutual respect, open communication and a "no blame" culture between Client, Contractor, and Design Team. This approach to contracting, also known as Alliance Contracting, is becoming more prevalent in the United States and is often applied when using integrated project delivery systems. This course compares and contrasts transactional contracting methods with relational contracting methods and the influences on the project team and projects outcomes. Relational contracting is also considered in the context of risk mitigation and project optimization.

**XRCM 4580 Strategic Intelligence and Integrated Project Leadership (4 Credits)**

This course examines the unique leadership skills and talents associated with leading and facilitating multidisciplinary, integrated design and construction teams. The focus of the course is on applying strategic intelligence and a system of leadership in the development of integrated solutions for the built environment. This leadership model is driven by a compelling purpose and supported by people who share practical values and have excellent processes, to look into the future, create a vision, and bring that vision to reality. Effective strategies for supporting high performance teams are explored.

**XRCM 4700 Topics in RE & Const Mgmt (1-5 Credits)**

This course will be used for experimental purposes. A way to trial the content of course, relevancy, interest, etc. prior to developing the permanent course.

**XRCM 4701 Global Persp in Real Estate II (4 Credits)**

This course focuses on inbound U.S. and outbound U.S. real estate issues, with a mix of cultural issues that impact real estate transactions.

**XRCM 4702 Argus Financial Analysis (4 Credits)**

Using Argus Financial Software to solve complex Real Estate Investment problems. Cross listed with REAL 4500. Prerequisite: XRCM 4007.

**XRCM 4705 Risk Management in the Built Environment (4 Credits)**

Decision making and risk analysis concepts in the context of real estate and the built environment. This includes, but is not limited to, liability issues as to persons and property, casualty and property damage questions, employee and employer insurance areas, auto insurance, professional liability insurance, directors' and owners' liability issues, medical insurance, life insurance, environmental risks, and much more in areas of exposure that one can face in the business world. The course further examines means to minimize such areas of exposure.

**XRCM 4777 Real Estate Principles and Practices (4 Credits)**

Introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer's points of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits. Partially satisfies Colorado real estate sales licensing requirements.

**XRCM 4980 Adv Valuation/Report Writing (4 Credits)**

Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: XRCM 4417.

**XRCM 4981 Internship (1-10 Credits)****XRCM 4991 Independent Study (1-10 Credits)**

## Finance (FIN)

**FIN 4000 Financial Modeling and Databases Bootcamp (1 Credit)**

This bootcamp is designed to introduce students to financial databases and to familiarize them with basic financial data analysis using Excel. The goal is for students to become comfortable with platforms such as Capital IQ and WRDS, which they will be using throughout their academic and/or professional careers. In addition, students will acquire a basic command of Excel functionality and efficiency in data analysis, together with modeling best practices and practical finance applications.

**FIN 4030 Personal Finance (4 Credits)**

This course provides an overview of topics which are critical to lifetime personal financial planning. The premise of the course is that personal financial planning starts early in life and especially as a new college graduate begins a professional career. The main topics in the course include Principles of Taxation, Basics of Estate Planning, Lifetime Asset Allocation, Principles of Insurance, Proper Debt Management, the Real Estate Housing Decision, and College Financial Planning for Children.

**FIN 4060 Life Cycle/Financial Planning (4 Credits)**

This course is designed for students who are interested in Financial Planning, possibly as a profession. We will cover six of the areas of financial planning: cash flows, protection (insurance), investments, goals (education and retirement), income taxation, and estate planning. This course is part of University of Denver CFP® Certification Financial Planning Education Program.

**FIN 4090 Wealth Management (4 Credits)**

Wealth Management offers students important skills to become a part of the growing wealth management industry. It includes such topics as the Financial Planning Process, Insurance Basics, Investment Basics and Strategies, Retirement Planning, and Estate Planning. We are pleased to work with the College for Financial Planning (CFFP), located in Denver, to provide instruction from their The Foundations in Financial Planning<sup>SM</sup> program. This can lead to the Financial Paraplanner Qualified Professional™ or FPQP™ designation upon successful completion of an Examination. The Examination is administered through the CFFP. The FPQP™ will be a valuable addition to your resume.

**FIN 4110 Ethics in Finance (4 Credits)**

The objective of this course is to discuss the ethical issues facing financial institutions and professionals and apply ethical principles to the analysis of these issues.

**FIN 4150 Advanced Business Valuation (4 Credits)**

In this course, students will learn theoretical development, analytical tools and practical approaches to analyze and tackle business valuation issues at the core of the financial professions. The theoretical section of the course provides indepth coverage of the financial theories and models essential to value businesses. The application section provides students with opportunities to apply the valuation principles and techniques to assess business value and develop strategies to create value in a real-world context.

**FIN 4160 Treasury Management (4 Credits)**

The objective of the course is to provide students with a comprehensive understanding of how various treasury functions are managed in a corporation and build students' capabilities to assume the role of a proficient treasury manager. This course will cover techniques used by major corporations to manage cash, the capital structure, financial risk and working capital. Prerequisite: FIN 4630.

**FIN 4180 Global Finance (2 Credits)**

This course explores financial management in the international arena. Principal content elements include: The market for foreign exchange, interest rate parity, hedging currency risk, international portfolio management. Prerequisites: FIN 4630.

**FIN 4200 Financial Investments and Markets (4 Credits)**

Students will learn how households, institutions, firms, and governments interact in financial markets to channel funds from savers to productive uses of capital and provide firms with opportunities to hedge certain risks. This comprehensive understanding of how markets function is essential for anyone with a finance or high-level management role. We will begin by identifying the key institutions in financial markets and how securities come into existence and subsequently trade. We will then learn to measure the risk and return of financial assets while identifying techniques to improve and assess the performance of investment portfolios. Finally, we will introduce derivatives and techniques to wisely hedge firm risks. Prerequisite: FIN 4630.

**FIN 4201 MS Management Managerial Finance (2 Credits)**

FIN 4201 introduces concepts and analytical techniques to identify and solve financial management problems. The focus on Performance Metrics (Ratios and Du Pont Analysis), Time Value of Money and Opportunity Costs, and Project Analysis prepares managers to operate in an environment that can at times be driven by the financial performance of the company.

**FIN 4320 Equity Analysis (4 Credits)**

This course is an advanced finance course that focuses on the analysis of equity securities. The curriculum is primarily derived from the Candidate Body of Knowledge (CBOK) from the Chartered Financial Analyst® (CFA®) Program. The goal is to teach students how to implement objective, unbiased valuations through an understanding of the valuation process in theory and practice. Prerequisite: FIN 4200.

**FIN 4330 Portfolio Management and Risk Analytics (4 Credits)**

Case and project approach to foundation of investment portfolio management. This course emphasizes the application of modern portfolio management concepts and risk management principles. Prerequisite: FIN 4200.

**FIN 4410 Financial Planning & Analysis (4 Credits)**

Advanced course in financial planning and decision-making focusing on capital structure, working capital management, long-range and short-term financial planning, and other corporate events such as mergers and IPOs. Prerequisite: FIN 4630.

**FIN 4420 Capital Expenditure Analysis (4 Credits)**

Advanced course in capital budgeting examining capital allocation processes and procedures and the theory and applied techniques of capital spending and divestment under conditions of certainty and uncertainty. Related issues of cost of capital and leasing also included. Prerequisite: FIN 4630.

**FIN 4500 Financial Modeling (4 Credits)**

Use of various financial software applications to construct models from corporate finance, investments, and financial markets. In particular, the course will cover the application of Excel spreadsheet functions and R programming to various topics including the time value of money, investment projects analysis, financial statements analysis, capital budgeting, portfolio analysis, and data & pivot tables. Prerequisites: FIN 4630.

**FIN 4610 Multinational Financial Management (4 Credits)**

Financial analysis of multinational corporation operating in international markets, including exchange rates, international instruments, markets, institutions and futures. Prerequisite: MBA 4112.

**FIN 4620 Financial Forecasting (4 Credits)****FIN 4630 Managerial Finance (4 Credits)**

This course covers analytical skills and tools of finance managers; theoretical concepts and practical applications are included. Topics include ratio analysis, breakeven analysis and leverage, securities valuation, capital budgeting, financial forecasting, and working capital management. Corequisite: ACTG 4610.

**FIN 4700 Topics in Finance (0-4 Credits)**

Topics vary each quarter. Course may be taken more than once if topics are different.

**FIN 4701 Topics in Finance (1-10 Credits)**

Topics vary. For new/experimental courses taught within the Reiman School of Finance.

**FIN 4710 Marsico Investment Fund I (4 Credits)**

A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4630 (or MBA 4285).

**FIN 4720 Marsico Investment Fund II (4 Credits)**

A securities analysis and portfolio management practicum in which students manage a University endowment gift donated by Tom and Cydney Marsico. Prerequisite: FIN 4710.

**FIN 4730 Marsico Investment Fund III (4 Credits)**

This course is an elective course that is the third in the series of classes involving the Graduate investment fund class: Marsico Investment Fund I & II. This course allows students to apply the investment, security analysis, and portfolio management tools and techniques that they have learned in their Finance classes. The students manage an actual portfolio, a portion of the University's endowment originally gifted by Tom and Cydney Marsico. The selection of students for this class is competitive. Students must agree to participate for 2 consecutive quarters, and they must be willing to address portfolio issues during the between-quarter periods if necessary. Because the course involves the application of tools and concepts learned in other classes, the best time to take the course is in the last year of a student's program. Prerequisites: FIN 4710 and FIN 4720.

**FIN 4740 Managerial Microeconomics (2 Credits)**

This course combines the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics, game theory, and industrial organization that they need to make sound managerial decisions. The course uses case studies to develop practical insights into managing the firm's resources to achieve competitive advantage. The course is divided into two principle modules based on market structure: perfect competition and imperfect competition. Both modules cover optimal behavior and strategies.

**FIN 4750 Managerial Macroeconomics (2 Credits)**

This course covers the theory and practice of modern macroeconomics. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rate, business cycles, and monetary and fiscal policies. The course uses case studies to analyze real-life macroeconomic issues, and students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems. The course is divided into two principle modules: the economy in the long run, and the economy in the short run. Both modules cover impacts of government policies on the business environment in a closed economy and an open economy.

**FIN 4760 Managerial Economics (4 Credits)**

This course presents the fundamental concepts of microeconomics and macroeconomics and approaches them from a managerial decision-making perspective. The first half of the course emphasizes applying microeconomic theory to decision-making to help achieve a firm's objective – increasing profit, market share, or growth. In contrast to traditional economics course, this course emphasizes practical implementation AND how economics affects business decision making. The second half of the course discusses macroeconomics and factors that affect the economy. The goal is to develop an understanding of macro-economic concepts such as GDP, inflation, and government policy such as Federal Reserve actions and government spending, to obtain a framework to model a firm's behavior according to an informed understanding of what the economy is doing. Armed with an understanding of the cycle of economic activity, one can formulate a firm understanding of policy alternatives by both the Federal Reserve and Congress.

**FIN 4800 An Organized Walk Down Wall Street (4 Credits)**

After four class sessions in Denver, participants will spend five days in New York visiting exchanges, brokerage firms, investment bankers, commercial banks, asset managers, and other institutions.

**FIN 4830 Econometrics for Finance (4 Credits)**

Econometrics for Finance is designed to teach applied statistical tools relevant to understanding financial and economic data. It is designed to cover essential tools for working with financial data, including return forecasting, volatility and econometrics of asset pricing, such as testing market models. The emphasis is on empirical techniques which are used in the analysis of financial markets and how they are applied to actual data. It teaches how to use and apply techniques using R, a free software that is used by many finance professionals. The course is intended to prepare students to possess the quantitative tools to evaluate and implement in the finance arena. Prerequisite: STAT 4610 and FIN 4500 (If no experience in R).

**FIN 4835 Executive Education - Finance for Non-Financial Managers (2 Credits)**

This Executive Education workshop introduces you to the essential finance skills any business professional needs to know. You will learn the language, tools and techniques to become a more intelligent user of financial reports. Through hands-on learning exercises, you will learn how to simplify, understand and apply data from financial reports and budgets. You will gain the confidence to ask better questions and make more informed financial decisions. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**FIN 4860 Derivatives (4 Credits)**

This course provides a theoretical foundation for the pricing of contingent claims and for designing risk-management strategies. It discusses more advanced material in financial derivatives and is intended for students who have a quantitative background and are interested in enhancing their knowledge of the way in which derivatives can be analyzed. This course covers option pricing models, hedging techniques, and trading strategies. It also includes portfolio insurance, value-at-risk measure, multistep binomial trees to value American options, interest rate options, and other exotic options. Prerequisite: FIN 4200.

**FIN 4870 Strategic Finance (4 Credits)**

Addresses theory, concepts, and techniques associated with asset management and creation of value from a strategic orientation. Links financial theory and practice to strategic and operational objectives of the firm, prepares student to incorporate risk and uncertainty into analytical decision-making process and to analyze divestiture, restructuring, and liquidation decisions. Prerequisite: FIN 4410.

**FIN 4875 Executive Education – Strategic Finance (2 Credits)**

Today's leading organizations require executives to use rigorous financial analysis in order to make strategic decisions that affect growth, profitability and competitive market advantage. Strategic Finance is a multidimensional Executive Education workshop that uses real simulations and an acquisition case study to map the connections between business strategy, finance and enterprise value creation. The goal of the course is to make you a more intelligent user of finance and strategy. It will enable you to ask better questions and to make better decisions. You will become a more sophisticated manager, particularly when focusing on the interplay and interdependence of strategy, finance & management. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](https://daniels.du.edu/executive-education) for class dates and formats.

**FIN 4885 Investment Banking and External Financing (4 Credits)**

This course is an advanced Corporate Finance course, focusing on the decisions by companies related to external sources of financing. There will be a mix of theory and practice, with outside speakers providing insight into the practice component. Topics will include business valuation, mergers and acquisitions, startup financing, angel investing and venture capital, bank loans, private equity, stock issuance and going private. Prerequisite: FIN 4410.

**FIN 4890 Fixed Income Analysis (4 Credits)**

Emphasizes valuation and management of fixed income securities in prevailing environment of complex and innovative financial arrangements. Study of the nature of evolving markets, both domestically and internationally. Prerequisite: FIN 4200.

**FIN 4980 Finance Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

**FIN 4991 Independent Study (1-10 Credits)**

Individual study and report. Hours and times arranged by student.

**FIN 6305 Applied Quantitative Methods in Finance (4 Credits)**

"Applied Quantitative Methods in Finance" is a PhD-level seminar designed to immerse students in the techniques essential for quantitative research in Finance and other disciplines. This course offers a journey through the application of empirical methods and analytical frameworks using the Python programming language and key analytical packages. The examples and assignments cover topics including corporate governance, executive compensation, risk/return analysis, and the exploration of decentralized finance. Students will gain hands-on experience working with real-world data sets and get an introduction to the Finance literature. Structured around hands-on student research assignments, presentations and immersive sessions, the course covers a broad spectrum of quantitative methods including cross-sectional linear regression, two-stage least squares, forecasting and machine learning techniques such as variable selection. Each module is crafted to further the understanding of financial theories through empirical research and data analysis.

## Gender and Women's Studies (GWST)

**GWST 4991 Independent Study (1-10 Credits)****GWST 4995 Independent Research (1-10 Credits)**

## Geographic Information Systems (GIS)

**GIS 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**GIS 4080 Python Programming in GIS (4 Credits)**

This course introduces Python concepts and the Python scripting environment in a GIS environment. Python is a free, open-source scripting language that has been integrated with GIS. Python is a dynamic, interpreted language that can be used to automate redundant tasks and workflows in GIS. Students learn tools and techniques and proper Python syntax, script flow, and error handling. Students learn to write scripts that allow them to automate redundant tasks and workflows in GIS. Students learn to write scripts that allow them to automate geoprocessing processes and GIS work more efficiently. This course teaches fundamental concepts needed to create Python scripts in ArcGIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4085 Python Programming II (4 Credits)**

GIS 4085 builds on GIS Python fundamentals from GIS 4080, covering advanced applications of Python for developing and customizing GIS software, designing user interfaces, and solving complex geoprocessing tasks. Participants will engage with peers in weekly discussions and code reviews. Weekly exercises and assignments provide practical application of concepts. Prerequisites: GIS 4080.



**GIS 4100 Geospatial Technologies (4 Credits)**

This course is designed to familiarize students with the tools and technology needed to access, manipulate, and display geographic information. Students will also learn how to think spatially in order to help students know when to apply these tools. This course is a combined introduction to geographic information systems (GIS), remote sensing (RS), global positioning systems (GPS), and cartography (the science and art of mapmaking). Students will also learn about ethical issues regarding the use of geospatial technologies, as well as trends in the practical applications of these important tools.

**GIS 4101 Introduction to Geographic Information Systems (4 Credits)**

This introductory course is designed to provide a general overview of geographic information systems (GIS) including background, development, trends, and prospects in this rapidly evolving technological field. Basic components and functions of GIS as well as fundamental spatial and geographic concepts are explored through lecture notes, assigned readings, videos, discussions, and applied practical experience using GIS software.

**GIS 4110 Geographic Statistics (4 Credits)**

This course offers an overview of spatial statistics using GIS and publicly available data. This course provides information on the following: spatial statistics, methods, and interpretation; spatial data, collection methods, and resources; and GIS techniques to map and analyze spatial data. Using a popular PC-based desktop mapping software program and statistical package, students learn how to navigate through spatial data, identify data issues, statistically analyze spatial data, map the data, and interpret results from these analyses. Topics include descriptive spatial statistics, hypothesis testing, interpolation, clustering, and spatial regression. Several application areas, such as demographic analysis and facility planning, are used in sample exercises and ethical considerations, such as masking, are discussed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4200 Geospatial Intelligence (4 Credits)**

Geospatial intelligence (GEOINT) is pivotal in linking geography to events and helping us gain insight into what is happening, where it's happening, and why it's happening. GEOINT is derived from the exploitation and analysis of imagery and geospatial information about features and events, with reference to space and time. This course serves as an introduction to the fundamentals of the geospatial intelligence community, core GEOINT technologies and operations, and the role of GEOINT in national, regional and local security affairs. This course is built on a framework of data, technology, and analysis in support of the GEOINT community, which may include natural disasters, first responders, military personnel, homeland defense, and law enforcement. Prerequisite: GIS-4101 Introduction to GIS.

**GIS 4504 Cartography and Geovisualization (4 Credits)**

The theory and art of map making developed over several thousand years and has been revolutionized by computer technology. This course is designed to expose students to the use of computer techniques in assessing technical design issues in the compilation of accurate and meaningful automated geographic mapping products. GIS software will be used in a series of hands-on lab exercises to produce typical GIS mapping products.

**GIS 4510 GIS in Business (4 Credits)**

Businesses continue to embrace GIS as an effective alternative to traditional manual mapping analysis methods. GIS has emerged as an affordable solution for performing essential revenue producing and expense reducing functions. Many years ago, successful GIS implementation required huge capital investment and a large staff of GIS experts; however, with the introduction of more powerful inexpensive computers and easier to use software, companies of all sizes are unleashing the business potential of GIS on the marketplace. This course exposes students to various business applications and uses of GIS as well as the underlying theories and technology behind the applications. This course emphasizes various business disciplines including Marketing, Real Estate, Transportation, and Oil & Gas using GIS in practical, hands-on exercises that demonstrate the theories and concepts discussed in the lectures. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4520 GIS in Telecommunications (4 Credits)**

Telecommunications is a thriving technology and business, accounting for a significant percentage of technical advances and revenue around the globe. GIS has emerged as a crucial tool in the telecommunications field for maintaining existing entities, planning for additional ones, and for gaining an advantage in this very competitive marketplace. The use of GIS in the telecom industry continues to grow because GIS technology accommodates the many CAD programs and drawings representing plant and transmission towers/coverage as well as the geographic representations of those items. Only a few years ago, introducing GIS into a telecom business required significant cash outlay, but through less expensive hardware and more user-friendly software, now even a modest CLEC can implement an effective GIS. This course exposes students to the various applications and uses for GIS in the telecom arena by breaking down the miscellaneous telecom requirements into GIS components and technological solutions. This course emphasizes specific telecom technology application requirements and allows students, through hands-on-lab work, to discover the power of GIS in delivering superior telecom solutions. This course also focuses on OSP/ISP applications and solutions, network connectivity issues as well as the exploding future of wireless technology. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4530 Crime Mapping (4 Credits)**

Municipal police departments, county sheriff departments, and other state and federal law enforcement agencies use GIS technology as a tool to analyze crime statistics and patterns. This course examines how GIS technology is used in law enforcement to provide strategic, tactical, and administrative crime analysis.

**GIS 4540 Conservation GIS (4 Credits)**

This course is designed to provide students with an introduction to the use of geographic information systems (GIS) in conservation. Students receive an introduction to the use of GIS in various types of conservation studies and preservation. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support planning and management of land, species, and habitats. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4570 Geographic Information Systems in Public Health (4 Credits)**

GIS offers many applications and functionality that are tremendously beneficial to the Public Health industry. The ability to visualize cases in space (geographically) and time is invaluable in analyzing spatial clusters of health related events. Further the ability to model the spread of a potential epidemic can literally be a life saver. GIS is a natural choice for solving many Public Health issues including: analyzing the location of diseases; the spread of contagious diseases (both vector borne as well as the spread through human contact); the cause and effect of environmental factors; as well as the availability of Health facilities. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4610 Open Source GIS (4 Credits)**

This applied course guides students in their investigation and research of special topics and current events through Open Source geographic information systems (GIS). It builds upon geospatial skills previously acquired and is designed for participants to learn how geospatial work can be done when presented with a proposal or problem but given little to no data, budget, or access to commercial, off-the-shelf software, or other resources. In this course, students will choose their own topic and learn to navigate it by planning, implementing, and disseminating the outcomes of a geospatial project. Prerequisite: GIS 4101 Intro to GIS and additional coursework or experience with GIS Projects. Prerequisite: GIS 4101.

**GIS 4620 Geodatabase Application (4 Credits)**

This course in Geodatabase Application is logically broken into two separate component parts; the first section deals with Geodatabase concepts and provides a general overview of the Geodatabase structure and implementation including; background, object classes, feature classes, relationship classes, domains, validation rules, and Geodatabase topology. The second portion of the course focuses on Geodatabase Application introducing advanced features of Geodatabase, providing a solid foundation for the application of the Geodatabase to model and address complex real world issues. Geodatabase Linear Referencing, Geodatabase Surface Modeling, and Geocoding Services in the Geodatabase, are explored. This course incorporates a hands-on lab component. Computer lab exercises are designed to introduce the student to concepts and Geodatabase application. Strong emphasis is placed on Geodatabase design. Design objectives, design guidelines and functional requirements of the resulting Geodatabase model are addressed. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4630 Public Domain Data for GIS (4 Credits)**

Geospatial data are the foundation upon which GIS and spatial analysis rests. As GIS has matured, the challenge has evolved from generating data to managing the enormous volume of data from government agencies, nonprofit organizations, and industry, and increasingly, from ordinary citizens through citizen science and volunteered geographic information efforts. Key to working with this volume of data are essential issues such as privacy, copyright, public domain, cost recovery, metadata standards, and data quality that GIS professionals must grapple with to be effective in the 21st Century. This class discusses and applies these issues and works with a rich array of data sources to enable effective decision-making in a Geographic Information System. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4650 Demographic Analysis Using GIS (4 Credits)**

This course offers an overview of demographic analysis using GIS and U.S. Census data. This course provides pertinent information on the following: demographic concepts and methods; U.S. Census data, collection methods, and reports; and GIS and spatial statistical methods to analyze demographic data. Using a popular PC-based desktop GIS software program, students learn how to navigate through census files and create a variety of thematic maps. Several application areas, such as demographic analysis and facility planning, are used in sample exercises. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4655 Community Intel (4 Credits)**

Community Intelligence is about using geospatial data to gain insights and to make informed decisions regarding community demographics, opportunities, risks, and an overall deeper understanding of communities. Whether one is a small business owner, the CEO of fortune 500 companies, an Emergency Manager, or running a non-profit environmental organization, having insights into local and regional communities, and understanding how to engage in this public provides an incredible advantage while maximizing effort, time, and resources. In this course, you will learn how to capture and discover key insights often hidden in complex datasets, and how to strategize and communicate with these data for maximum organizational impact. Course Pre-requisites: GIS-4101 Introduction to GIS. Prerequisites: GIS 4101.

**GIS 4660 GIS in Municipal Government (4 Credits)**

There are many areas of government where desktop mapping can be extremely helpful in solving problems that are spatial in nature. This course explores the many types of data collected by city and county government agencies from crime and election data to building, assessment, and zoning data and how it can be displayed in map form. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4670 GIS and the Law (4 Credits)**

This course explores the legal and technical ramifications created by Geographic Information Systems (GIS), Mobility and the Law, including the legal and policy issues related to the science of GIS, the sharing of geographic information, the data generated by mobile devices, the intellectual property issues, security and privacy issues, business and contractual issues related to GIS, and the standards of care and liability related to GIS. This course also examines the types of issues and concerns that exist in the U.S. and the world created by geographic information science and the mobile device. The evolution of GIS and the mobile device directly impacts governments, companies, and individuals on a daily basis. In today's world, more than three billion people have smart phones in their hands constantly. This creates issues about how to handle data, security and privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries and parts of the world. All of these issues need to be balanced by the differing cultural standards and mores from all over the world and legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing "always-connected" world created by GIS and the mobile device. Prerequisite: GIS 4101 - Intro to GIS, and GIS 4700 - Remote Sensing I and/or similar GIS course and/or work experience.

**GIS 4680 Environmental Applications (4 Credits)**

This class provides students with an introduction to practical applications of computerized Geographic Information Systems (GIS) in environmental assessment and natural resource management. Emphasis is placed on automated analytical techniques and data presentation methods that support facility site selection, environmental impact analyses, resource management, and characterization of environmental hazards. This course is designed to provide students who participate in environmental assessment projects with introductory preparation for practice as GIS professionals in public agencies or in the private sector. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4683 GIS for Disaster Management (4 Credits)**

This course serves as an introduction to Geographic Information Systems and their application in Emergency Operations. The basic concepts of geography, cartography and Global Positioning Systems will be covered, along with the basic components and capabilities of a geographic information system. Students will learn about the fundamental types of GIS analysis and applications, focusing on those used in Emergency Operations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4685 GIS and Natural Hazards (4 Credits)**

This course is designed to provide students with an introduction to the use of GIS in natural hazard assessment. Students receive an introduction to the use of geographical information systems (GIS) in various types of natural disasters and response management. Emphasis is placed on the types of applications and analytical techniques in environmental fields where GIS is commonly used as a mapping and analytical tool. The analytical techniques used in lab exercises consist of practical applications that support hazard risk and assessment, mitigation, and emergency response planning. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4687 Hydrologic Modeling in GIS (4 Credits)**

Hydrology is concerned with movement of the earth's waters through the hydrologic cycle, and the transport of constituents carried in its flow. In GIS, the landscape is represented by means of geographically referenced data describing the character and shape of relief features. A spatial hydrology model simulates the water flow and transport in a specific locale using GIS data structures. Hydrologic modeling in GIS allows us to automatically delineate a drainage system and quantify the characteristics of the system. It focuses on the movement of water across a land surface. This course looks at the basic inputs to hydrological modeling in GIS, walks students through established modeling procedures, and has students work on projects that are real and relevant as model applications. Instruction is largely hands-on, project-oriented. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4690 GPS for GIS (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Lab exercises include planning a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, and data integration into a GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4700 Remote Sensing I (4 Credits)**

This course provides a survey of remote sensing technologies, applications, and the industry. This course is designed for GIS, Geography and Geoscience students who seek to broaden their understanding of remote sensing in support of Geographic Information Systems. Introductions to the electromagnetic spectrum, energy sources, radiation principles, aerial cameras, and electronic imaging provide the student with the initial building blocks to a thorough understanding of remote sensing. This course provides an overview of the various high altitude and space-based collection systems and their characteristics, with a view toward future systems and capabilities. In addition, this course exposes students to the techniques of extracting relevant information from both hard copy and digital imagery. Pre-requisite: This course is a pre-requisite for GIS 4740 – Remote Sensing II.

**GIS 4701 Topics in Geographic Information Systems (2-5 Credits)**

The content of this course varies each time it is offered, depending on the interests and needs of the students. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GIS 4740 Remote Sensing II (4 Credits)**

The curriculum is a rigorous presentation of digital imaging processing theory with emphasis on its application to airborne and space borne imagery. The course includes computer laboratory exercises and workshops, where the students apply theory to satellite and air photo data. Interpretation of the digitally processed data is also included in the class exercises. Examples of vector and raster data integration are shown as well. Prerequisite: GIS 4700.

**GIS 4750 UAS for GIS (4 Credits)**

The purpose of this course is to introduce GIS students to the emerging world of using Unmanned Aircraft Systems (UAS) in the GIS workplace for data collection, reconnaissance, and research. UASs are in the news every day, highlighting their use in a military context. The Federal Aviation Administration (FAA) has released new rules and regulations governing the use of UASs in the civilian sector. This course will prepare students to be conversant in the world of UASs, basic aviation, safety, flying, mission planning, and general data gathering techniques for use in GIS. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4760 UAS Photogrammetry (4 Credits)**

Surveying, photogrammetric mapping, GPS, and remote sensing are critical components to working in the UAV and GIS domain. The second course in this two-course sequence will expand on the data collection process highlighted in the first class and deliver the foundations required by GIS professionals working with UAVs. Prerequisite: GIS 4101 or similar GIS course and/or work experience and GIS 4750-UAVS and GIS.

**GIS 4770 UAS Ground School Practical (4 Credits)**

The purpose of this course is to provide skills and abilities to become a remote pilot in command (RPIC) within the United States. The class content will focus on 14 CFR 107, the rules and regulations that allow RPICs to operate Unmanned Aircraft Systems (UASs) safely and legally. In addition, students will be given hands-on training in the best practices for flying UASs. Course Overview/Purpose: The release of 14 CFR 107 by the FAA has set a legal framework for commercial UAS operations in the United States. The purpose of this course is to help students become well versed in 107 and gain hands-on experience operating UASs. Students will become proficient with UAS aeronautical operation standards, discover the rules and regulations of airspace that all RPICs must comply with, and evaluate the effects that weather has on UASs as well as sources of weather information. Students will also assess the performance abilities and limitations of UASs and explore standard UAS operations as outlined in the 107 regulations. Prerequisite: GIS 4101 or similar GIS course and/or work experience.

**GIS 4860 Web GIS (4 Credits)**

Creating web-based maps allows government entities, businesses, and other organizations to publish, discover, and share geospatial information. This course examines web and mobile GIS software applications, where students will learn the framework for creating web apps. Students publish comprehensive projects resulting in the creation of a fully-developed web GIS.

**GIS 4980 Internship (0-4 Credits)**

GIS students may fulfill up to four quarter hours of electives by enrolling in a GIS internship with a GIS company or an agency actively engaged in GIS activities. Students incorporating professional work experience must work with an approved mentor, who evaluates the student's performance and learning. The internship is designed to provide practical experience to students without prior professional experience in the field. Students who are employed on a full-time basis in the GIS industry may not use paid work experience as part of the academic program.

**GIS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Geography (GEOG)

**GEOG 3000 Advanced Geographic Statistics (4 Credits)**

The second in a sequence of two courses that address general statistical applications particular to geography, environmental science and other disciplines dealing with a spatial dimension in the data they work with. The focus of this second course is on the more advanced multivariate statistical techniques. The course has a strong applied orientation as particular attention is given to which technique is the most appropriate to use for a given type of problem and how to interpret and apply the resulting statistics. Extensive use is made of computer statistics packages. Homework exercises involving such statistical techniques as multiple correlation and regression analysis, principle components analysis, discriminate analysis and canonical correlation. Prerequisite: GEOG 2000.

**GEOG 3010 Geographic Information Analysis (4 Credits)**

Reviews many basic statistical methods and applies them to various spatial datasets. In addition, several spatial statistical methods are applied to spatial datasets. This course is an in-depth study of the interface between GIS, spatial data, and statistical analysis. Preferred prerequisite: GEOG 2000. Prerequisite: GEOG 2100.

**GEOG 3030 Advanced Field Methods (4 Credits)**

Various field methods used by researchers in physical geography; techniques include field mapping, laboratory analyses, geologic field methods. Prerequisite: GEOG 1201 or equivalent.

**GEOG 3040 GPS for Resource Mapping (4 Credits)**

This course is an introduction to GPS (Global Positioning Systems) concepts, techniques, and applications as they relate to GIS data collection. Lectures focus on satellite surveying, GPS technology, error sources, program planning, data collection design, and Quality Control and Quality Assurance issues for data collection programs. Hands-on lab exercises include navigation, mission planning for a GPS survey, designing a field data collection plan and associated data dictionary, field data collection, differential correction, and data integration into a GIS and map production.

**GEOG 3100 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 3110 GIS Modeling (4 Credits)**

This course focuses on the concepts and procedures used in discovering and applying relationships within and among maps. It extends the mapping and geo-query capabilities of GIS to map analysis and construction of spatial models. The course establishes a comprehensive framework that addresses a wide range of applications from natural resources to retail marketing. Topics include the nature of spatial data introduction to spatial statistics and surface modeling in the first five weeks followed by spatial analysis operations and modeling techniques in the second five weeks. The lectures, discussions and independent exercises provide a foundation for creative application of GIS technology in spatial reasoning and decision making.

**GEOG 3120 Environmental/GIS Modeling (4 Credits)**

Facing challenges brought by the dramatically changing global environment, environmental modeling is increasingly used to support geographical and environmental decision making (e.g., spatial conservation prioritization). Environmental modeling is concerned with the characterization, modeling and simulation of environmental phenomena and processes using conceptual and mathematical models. Environmental phenomena and processes taking place in the geographic space are regulated by spatial principles. They also interact with other phenomena or processes in the attribute space. For example, species distribution is not only constrained by spatial factors such as proximity to other species, but also influenced by environmental factors such as terrain and climatic conditions. Due to its superior capabilities of handling spatial data and modeling spatial and attribute relationships, geographic information system (GIS) provides the ideal tools for environmental modeling. This upper-level undergraduate/graduate-level course surveys the concepts and techniques of GIS supported environmental modeling in three general categories: 1) Modeling in the spatial domain where the focus is on modeling spatial principles (e.g., spatial autocorrelation); 2) Modeling in the attribute domain where the emphasis is on environmental correlations (e.g., environmental niche modeling); 3) Modeling in the combined spatial and attribute domain where both spatial principles and environmental correlations are exploited (e.g., geographically weighted regression). Throughout this course, several real-world applications are used to demonstrate the ideas, concepts, and techniques of GIS supported environmental modeling, including crime spatial pattern modeling, species distribution modeling, and soil-landscape modeling and mapping. Prerequisites: GEOG 2000 and GEOG 2100.

**GEOG 3130 GIS Programming with Python (4 Credits)**

This advanced course explores the more technical aspects of GIS functions and data structures. Students have hands-on access to both raster (grid-cell) and vector-based software packages in the form of lab exercises that culminate in a small student-designed GIS project. Prerequisite: GEOG 2100.

**GEOG 3140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products. Prerequisite: GEOG 2100 or GEOG 3100.

**GEOG 3150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.

**GEOG 3160 Web GIS (4 Credits)**

With the development of internet technologies, the architecture of Geographic Information System (GIS) has evolved from the centralized desktop architecture to the distributed web architecture. Numerous web GIS applications are available (e.g., Google Map, Earth Explorer, and National Map). A web GIS application allows GIS analysts to access, manipulate, and visualize geospatial data from the web without the installation of GIS software. To facilitate the development of web GIS applications, geospatial technology vendors have provided application programming interfaces (APIs) through which GIS professionals can build customized web applications. This course focuses on the concepts and the development of web based GIS applications using industry-relevant geospatial APIs and core web technologies of HTML, CSS, and JavaScript. This is an upper-level undergraduate, to graduate-level course in GIS that introduces fundamental Web GIS concepts, applications and development kits. Concepts and techniques to be covered in this course include: • Web GIS concepts: system architecture, components, and workflow • Web programming languages: Hypertext Transfer Markup Language (HTML), Cascading Style Sheet (CSS) and JavaScript • Web mapping tools: ArcGIS online, Leaflet and their APIs. Prerequisites: GEOG 2100 and GEOG 3130.

**GEOG 3190 Lidar: Theory and Applications (4 Credits)**

Overview: Lidar (Light Detection and Ranging) is an active remote sensing system that uses laser pulses to measure the distance between the sensor and a surface or objects. Lidar has become an established method for collecting very dense and accurate elevation values, as well as for characterizing the three-dimensional structure of vegetation and urban land cover. In this course, we will build an understanding of the physical principles behind lidar, develop experience working with Lidar datasets, and survey a wide array of lidar applications for mapping and natural resource management. The course will cumulate with a student-directed final projects. Prerequisites: GEOG 2100 or GEOG 3200.

**GEOG 3200 Remote Sensing (4 Credits)**

This course acquaints students with the basic techniques of the collection, processing and interpretation of information about the character of the earth's surface from remote locations. Students become familiar with the use of the visible, infrared, thermal and microwave portions of the electromagnetic spectrum as a means of determining land cover and/or land use. Both manual and computer-assisted techniques are discussed and include hands-on applications.

**GEOG 3230 Advanced Remote Sensing (4 Credits)**

This course will build on the basic remote sensing concepts presented in GEOG 3200. Students will explore more in-depth concepts relevant to satellite and airborne remote sensing, including radiative transfer and information extraction. In addition, students will be introduced to two cutting-edge sources of data about the Earth's surface: hyperspectral and lidar (Light Detection and Ranging) sensors. Students will study specific applications of advanced digital image processing techniques for environmental monitoring, natural resource management, and land-use planning. Finally, students will integrate remote sensing and other spatial datasets in the context of Geographic Information System (GIS) analysis. Prerequisite: GEOG 3200.

**GEOG 3300 Cultural Geography (4 Credits)**

Themes and methods of cultural geography including cultural area, landscape, history and ecology.

**GEOG 3310 Culture/Nature/Economics-Human Ecology (4 Credits)**

Cultural adaptation, livelihood strategies and environmental modification among subsistence and peasant societies: responses of such groups to technological change and economic integration.

**GEOG 3330 Political Geography (4 Credits)****GEOG 3340 Geographies of Migration (4 Credits)**

This course explores contemporary movement of people across international borders and the social, cultural, political, economic, and environmental repercussions of such movements. The class looks at the global flow of people across national boundaries and the ways in which these dispersed peoples build and maintain social networks across national borders. While doing so, we address the role of globalization in international migration processes. What motivates people to move long distances, often across several international borders and at considerable financial and psychological cost? How do migrants change—and how in turn do they bring change, social as well as economic, to new destinations as well as places left behind? This course examines politics and patterns of migration, transnational migration, and immigration to the United States.

**GEOG 3350 Qualitative Methods in Geography (4 Credits)**

This course focuses upon qualitative methods in the production of geographic knowledge. Qualitative methods are widely employed by geographers to understand patterns and underlying processes of human and human-environment issues in society. The course is designed to expose participants to the theories, purpose, scope, and procedures of qualitative research. Specific topics include: epistemological theories (ways of knowing); ethics and power in research; research design; data collection techniques in interviewing, participant observation and landscape interpretation, discourse and archive analysis, and case studies; data analysis; and writing and disseminating qualitative findings.

**GEOG 3400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 3410 Urban Applications in GIS (4 Credits)**

This course uses the tools of geographic information systems (GIS) to explore concepts of traditional urban geography, including defining cities/metropolis, internal urban structures, urban systems, industrial location, social and residential patterns, urban form, environmental problems, and urban planning. The course allows students to practice fundamental skills in GIS (e.g., working with attribute tables, spatial analysis, spatial queries) and cartography (map design, color theory, display of information). Depending on the quarter, students pursue individual projects of interest or client-based projects. Prerequisite: GEOG 2100 or GEOG 3100 or equivalent.

**GEOG 3420 Urban and Regional Planning (4 Credits)**

Historical evolution of planning theory and practices; comprehensive planning process; legal, political, economic, social, environmental aspects of urban planning; urban design; urban renewal and community development; transportation planning; economic development planning; growth management; environmental and energy planning; planning for metropolitan regions; national planning.

**GEOG 3425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city'. Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course explores what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course focuses on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 3440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 3445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 3450 Transportation and Mobilities (4 Credits)**

The geographical study of transport has grown considerably and become more diverse, encompassing new areas of inquiry generated from economic, urban, environmental, political, social, and cultural geography, as well as from transport geography itself. The most notable expansion has been in the area of 'mobilities' research, which is focused on the social aspects of mobility, including both the large-scale movements of people, objects, capital, and information across the world, as well as the more local processes of daily transportation, movement through public space and the travel of material things within everyday life.

**GEOG 3500 Reconstructing Quaternary Environments (4 Credits)**

Nature, magnitude, sequence and causes of Pleistocene and Holocene climatic changes; effects of climatic change on plant/animal distributions and human populations; paleoclimatic research methods. Laboratory and field trips. Prerequisites: GEOG core, ENVI 3000.

**GEOG 3510 Biogeography (4 Credits)**

Biogeography focuses on present and past distributions of plants and animals. In this course we consider a number of themes central to biogeography, including plate tectonics and biogeography, the effects of climate change of plant and animal distributions, biogeographic realms, island biogeography, biodiversity, human impacts on plants and animals, and the origins of agriculture.

**GEOG 3520 Geography of Soils (4 Credits)**

Spatial variation in soil characteristics; soil processes, soil morphology, their application in soil studies. Prerequisite: GEOG 1201-1203 Environmental Systems or instructor's permission.

**GEOG 3550 Topics in Physical Geography (1-5 Credits)**

Investigations into various aspects of physical environment.

**GEOG 3560 Fluvial Geomorphology (4 Credits)**

Examines how water and sediment interact at Earth's surface to create a variety of landforms ranging from small rills to continental-scale river systems. Introduces fundamental fluvial processes or channel hydraulics and sediment transport. Examines common fluvial landforms including alluvial streams, bedrock streams, floodplains and alluvial fans. Combines traditional lectures and in-class discussions with numerous field excursions to rivers in the Rocky Mountains and Great Plains. Prerequisite: GEOG 1203, GEOG 1218, or GEOG 1266.

**GEOG 3600 Meteorology (4 Credits)**

The basic theory and skills of weather forecasting. Topics include thorough coverage of atmosphere dynamics and thermodynamics, the evolution of various weather types, the mechanics of storm systems (cyclones, severe storms, hurricanes), creation and interpretation of weather maps, and forecasting techniques.

**GEOG 3610 Climatology (4 Credits)**

Climatology is the study of the processes that result in spatial and temporal variation of weather. This course introduces the student to the processes responsible for the transfer of matter and energy between the Earth's surface and the atmosphere and the average weather conditions that result. In addition, topics of global concern, such as greenhouse effect, El Nino, urban heat islands and acid rain, are discussed. Laboratory exercises provide an opportunity to investigate climate variation and climatic change through the use of a variety of computer simulations. Prerequisites: GEOG 1201, GEOG 1216, & GEOG 1264.

**GEOG 3620 Applied Climatology (4 Credits)**

Climatic impact on environmental systems and human behavior; techniques to investigate climatic characteristics of environmental extremes (floods, blizzards), urban climatology and socioeconomic impacts of climate. Prerequisite: GEOG 1201. Recommended Prerequisite: GEOG 3600 or GEOG 3610.

**GEOG 3630 Dendroclimatology (2-4 Credits)**

Systematic variations in tree ring width and/or density can be used to reconstruct changes in precipitation or temperature well before humans were around to record the variability. This class utilizes hands on methods to introduce the fundamental principles of dendroclimatology. Through readings and lectures, students will learn how tree ring growth can be correlated to climate change. Students will then undertake several research projects to reconstruct past climate variability in the Denver metro area using tree rings. Prerequisite: permission of instructor.

**GEOG 3640 Climate Change and Society (4 Credits)**

The science of anthropogenic climate change will be presented with an emphasis on critical evaluation of the evidence of climate change and future scenarios and migration strategies. Students will be introduced to the latest climate change research, including the Intergovernmental Panel on Climate Change report, and the most recent literature from the field. The societal and cultural implications of climate change will also be discussed. Prerequisites: GEOG 1201, GEOG 1216, or GEOG 1264.

**GEOG 3701 Topics in Geographic Information Science (1-4 Credits)**

Topics vary by instructor.

**GEOG 3720 Mountain Environments and Sustainability (4 Credits)**

Mountain Environments and Sustainability explores the unique physical and cultural aspects of high relief and/or high altitude environments. Covering one quarter of the Earth's land surface, mountains directly or indirectly impact the lives of millions of people. We examine the significance of mountains to climate, water resources, and human activities, and discuss the sustainability of these environments and communities in light of rapid changes in many mountain regions resulting from anthropogenic factors and global change. GEOG 1201, 1202, and 1203 or instructor approval.

**GEOG 3750 Topics in Human-Environment Interactions (1-4 Credits)**

This course investigates various aspects of the relationships between human societies and the natural environment.

**GEOG 3755 Geography of Health (4 Credits)**

The geography of health is a thriving area of study that considers the impact of natural, built, and social environments on human health. This course introduces students to three geographical contributions to health studies. First, it emphasizes the importance of ecological approaches to health, which consider interactions between humans and their environments, including topics such as how climate change might influence disease distributions, and how the built environment can influence patterns of physical activity. A second focus is social theory, exploring how aspects such as race, socioeconomic status, and identity play a critical role in influencing human health. A third section of the course considers how spatial methods (cartography, GIS, and spatial statistics) can help answer health-related questions.

**GEOG 3800 Geography of Colorado (4 Credits)**

This course focuses on the physical and human geography of Colorado, a state that includes the western Great Plains, the southern Rocky Mountains, and the eastern Colorado Plateau. Colorado's varied natural landscapes provide equally varied settings for human settlement and resource use. Recommended Prerequisites: GEOG 1201, GEOG 1202, and GEOG 1203.

**GEOG 3820 Kiwis and Kauris: Sustainability in New Zealand (4 Credits)**

With its tourist tagline of "100% Pure New Zealand," New Zealand prides itself as a world leader in sustainability, with great efforts made towards sustainable use of resources and renewable energy, conservation of indigenous species, and integration of indigenous Maori understandings of the land into sustainability approaches. At the same time, New Zealand faces significant sustainability challenges, particularly related to climate change, invasive species, continued reliance on extractive industries, and histories of oppression/exploitation of native peoples. This class uses a field-based case study approach to unpick some of these complex issues, as we visit local sites and explore topics such as preserving native species, sustainable resource use, ecotourism, and indigeneity.

**GEOG 3840 Water Resource Analysis (4 Credits)**

The focus of this course is on complex policy, economic and local, national and international, and political issues surrounding resource use in the western U.S. Issues include exploitation of nonrenewable and renewable energy and mineral resources; and flexible responses to changing public policy.

**GEOG 3860 GIS Applications and Natural Resources (4 Credits)**

In this course we will use a case study approach to examine domestic and international natural resources such as oil, coal, timber, minerals, and recycled materials. We will use a case study approach to look at resource distribution, and the environmental impacts of extraction, production, and disposal, as well as the legal and economic context. We will use GIS data and analysis to enhance our understanding of these case studies, and students will do a project and paper using GIS data and image analysis at a local, regional or global scale. Prerequisite: Introduction to GIS or Introduction to GIS Modeling.

**GEOG 3870 Water Resources & Sustainability (4 Credits)**

In this course, we look at water as both a local and global resource and examine what sustainability means for human and ecological realms. After an overview of the physical processes that drive the hydrologic cycle, surface and groundwater hydrology, we examine how we humans have harnessed water for our use and how we both alter and treat its quality. We examine the legal aspects of water allocation in the U.S. and the groups and agencies that are most involved in managing and overseeing water issues. Finally, we examine the most pressing water "issues" related to wildlife, development, scarcity and conflict. We look forward to imagining the power of both the individual and the collective in meeting our future, global water needs.

**GEOG 3890 Ecological Economics (4 Credits)**

Ecological Economics is an emerging transdisciplinary endeavor that reintegrates the natural and social sciences toward the goal of developing a united understanding of natural and human-dominated ecosystems and designing a sustainable and desirable future for humans on a materially finite planet. In this course we start with a basic overview and summary of the neo-classical economic perspective with a particular focus on the recognized market failures of public goods, common property, and externalities. We begin with a reconceptualization of economic theory by imposing scientific constraints (e.g. conservation of mass and energy, the laws of thermodynamics, evolutionary theory, etc.). Using the ideas developed in this reconceptualization of economic theory we explore the implications for international trade and myriad public policies associated with the ethical, environmental, and economic aspects of sustainability.

**GEOG 3910 Geomorphology (4 Credits)**

An advanced course that examines how Earth's landforms are created by a range of physical processes. Most landforms can be viewed as a result of some combination of erosion, transport and deposition of rock, soil and sediment. The most common agents causing these geomorphic processes are water, wind, ice and waves. This course examines the processes responsible for eroding, transporting and depositing earth materials and compares these processes with the resulting landforms. Prerequisites: GEOG 1202 or GEOG 1217 or instructor's permission.

**GEOG 3920 Remote Sensing Seminar (4 Credits)**

Special topics in advanced remote sensing.

**GEOG 3930 Cultural Geography Seminar (4 Credits)**

Topics, methods and current research in cultural geography.

**GEOG 3940 Urban Geography Seminar (4 Credits)**

International comparison of economic and social, positive and negative aspects of urban systems.



**GEOG 3950 Physical Geography Seminar (2-4 Credits)****GEOG 3955 Pollen Analysis Seminar (3 Credits)**

Pollen grains preserved in sediment provide long-term records of vegetation conditions. Changing proportions of pollen types may reflect climatic fluctuation or human impacts. We review important recent research in pollen analysis (palynology), pollen sampling, laboratory techniques and pollen identification. Students are responsible for counting a number of samples and contributing data for a pollen diagram.

**GEOG 3990 Undergraduate Research Seminar (1 Credit)**

This course is designed to prepare students who will participate in faculty-supervised summer research projects. Students are introduced to research design, use of the scientific method, research expectations and reporting of results. Preparation of formal research proposal with adviser.

**GEOG 3991 Independent Study (1-5 Credits)****GEOG 3995 Independent Research (1-5 Credits)****GEOG 4000 Fundamental Geographic Perspectives (4 Credits)**

A foundation course for persons in the community, without a degree in geography, who want to pursue an education in or make use of computer-based geographic technology but who need a foundation in geographic concepts and perspectives.

**GEOG 4020 Geographic Research Design (4 Credits)**

This class prepares you to undertake creative geographic research leading to the generation of new knowledge. You will produce a NSF-style proposal by the end of the class. In this class, we focus on your idea generation and proposal writing rather than philosophy or specific methods. Specific objectives of the course include providing you the following skills: 1. The ability to create and communicate scholarly work in writing and orally 2. The ability to critique your own work and the work of other in a constructive fashion 3. Incorporation of the core ideas of geography and your field into your research 4. An understanding and appreciation of the various research methods in geography and other cognate disciplines. This understanding includes a discussion of ethics in research. 5. Ability to write an effective vita, statement of area of specialization, literature review, problem statement, and research proposal.

**GEOG 4030 Advanced Field Research (1-5 Credits)****GEOG 4040 Research Topic Identification (0-5 Credits)****GEOG 4110 Geospatial Data (4 Credits)**

This graduate-level course is designed to provide graduate students from a broad range of disciplines with the skills to carry out applied research tasks and projects requiring the integration of geographic information system technologies and geospatial data. Students are introduced to a collection of techniques and data sources with a focus on acquiring and integrating data. Legal, ethical, and institutional problems related to data acquisition for geospatial information systems are also discussed.

**GEOG 4140 GIS Database Design (4 Credits)**

Designing databases to provide a foundation for GIS functions and applications, including investigating techniques used for designing databases in non-spatial environments and learning the applicability to GIS problems. Building on concepts and techniques introduced in the first half to extend traditional techniques and methodologies to model the requirements of spatial problems. Students learn to translate the conceptual spatial model into a physical implementation specific to GIS products.

**GEOG 4150 GIS Project Management (4 Credits)**

This course provides graduate students seeking a career in GIS, or anyone managing a GIS project, with the knowledge, skill and abilities to take a GIS project or program past the design and implementation phase and into day-to-day operation. Students evaluate and analyze the role of GIS in an organization's overall information system strategy and communicate the importance of geography in an information system. Data sharing in the organization is examined to determine the benefits and costs of distributing data creation and maintenance activities throughout an organization. Finally, the role of GIS professionals and the skill sets required to manage GIS effectively are examined. Students review case studies of successful and not-so-successful GIS projects in North America. GIS management issues are addressed by a series of case studies focusing on various management aspects. Students are also expected to visit operational GIS programs in the metropolitan area and interview GIS managers. Students prepare case study evaluations for review in the classroom. Required for all MSGIS students because of the critical importance of GIS project management.

**GEOG 4170 Geospatial Analysis and Project Management (4 Credits)**

This course provides an opportunity for students to apply geospatial data analysis to real-world applications. Students will work as a team to develop a project that requires GIS analysis and/or application development, design a project work flow and management plan, and implement a solution. Students will demonstrate competence in GIS techniques, geospatial data analysis, and project management at a professional level. This course may substitute for GEOG 3150 - GIS Project Management. Prerequisites: Completion of a minimum of two GISc courses.

**GEOG 4400 Urban Landscapes (4 Credits)**

Urbanization as a process; national urban systems; internal spatial structure of cities; role of transportation in urban development; location of residential, commercial and industrial activities; agglomeration economies; residential congregation and segregation; environmental justice; urban growth and growth coalitions; decentralization and urban sprawl; edge cities; impacts on the urban environment; world cities; globalization.

**GEOG 4410 Economic Geography (4 Credits)**

The study of the location and spatial organization of economic activities at the local, national, and global scales. Concerned with the spatial configuration of firms, networks, industries, and regions within the emerging global economy. Cross listed with INTS 4410.

**GEOG 4420 Urban and Regional Planning (4 Credits)**

The field of urban and regional planning is concerned with the future of cities, neighborhoods, metropolitan areas, and extended regions. How do local governments (cities, counties) and metropolitan planning organizations (regional planning agencies, councils of governments) work with community stakeholders (neighborhood associations, chambers of commerce, businesses, citizens, non-governmental organizations) to formulate plans that will guide the future development of a city and its region? Cities and their regions face numerous challenges including population and employment growth or decline, economic development, neighborhood vitality, housing availability and affordability, urban design, land use, transportation, sustainability, access to parks and open space, air quality, floodplain management, water resources, and social equity among many others. How places address these challenges is critical to the future health and livability of our cities, neighborhoods, metropolitan areas, and extended regions. This course will have a community-engaged service learning component. Community-engaged scholarship and teaching comprise intellectually and methodologically rigorous work that is grounded in the norms of democratic education: inclusiveness, participation, task sharing, reciprocity in public problem solving, and an equality of respect for the knowledge and experience that everyone involved contributes to education and community building. The specific service learning project for the class will be to assist the Metropolitan Denver Nature Alliance (Metro DNA) with its goal to increase the community's engagement with nearby nature by reviewing, analyzing, and collecting data from park/ open space plans of cities and counties in the Denver metropolitan area. Cross-listed with GEOG 3420.

**GEOG 4425 Urban Sustainability (4 Credits)**

The 21st century is being called the 'century of the city'. Now more than ever, humans across the globe call the city their home. Many of the world's most pressing crises are manifest in cities, including: greenhouse gas emissions, land degradation, high mass production and consumption, widespread poverty and hunger, and expanding socio-economic disparities. As 'sustainability' becomes part of mainstream discourse, this course will explore what sustainability means for urban contexts around the globe. Arguably, the city has the potential to be the most efficient, equitable, and environmental form of modern human settlement. Covering all dimensions of sustainability from a social science perspective, this course will focus on theoretical groundings, practices of urban sustainability, and new research agendas. Major topics include: cities and nature; planning and land use; urban form; community and neighborhoods; transportation systems and accessibility; livelihood and urban economies; and social justice and the city.

**GEOG 4440 Urban Transportation Planning (4 Credits)**

A specialized course in the urban planning sequence focusing on issues, practices and policies of urban transportation planning. Recommended for anyone interested in timely transportation topics, such as the feasibility and impacts of light rail transit, the planning and implementation of highway projects, and the role of freight and passenger transportation companies in transportation planning.

**GEOG 4445 Sustainability and Transportation (4 Credits)**

Sustainable transportation aims at promoting better and healthier ways of meeting individual and community needs while reducing the social and environmental impacts of current and future mobility practices. Given the importance of transport for economic growth, the uncertainties surrounding the availability and price of future sources of energy for transport use, as well as the social and environmental externalities of currently-utilized transport modes, it is imperative that more sustainable ways of providing transportation be developed and utilized.

**GEOG 4460 Air Transportation, High-Speed Rail and Tourism (4 Credits)**

This course delves into the world of commercial air passenger transportation, studying the foundations of the industry, its role in the travel and tourism, and strategies for the future. Foundational topics include the history and geography of air transportation, air travel and tourism, the geography of tourism, airline corporate cultures, the role of government, aviation law, regulation, deregulation, and globalization. Study of the principal elements of airline economics, finance, planning, management, operations, pricing, promotion, cost containment, marketing, and policy provide the opportunity for consideration of strategic options within the contemporary airline industry. Further discussion focuses on the planning and management of airport and airway system infrastructure, the issue of sustainable air transportation, and the role of the airline industry within the context of intermodalism. Cross listed with GEOG 3460.

**GEOG 4701 Topics in Geography (4 Credits)**

Topics vary by instructor.

**GEOG 4810 Geography of Latin America (4 Credits)**

In this course, we examine how past and present cultural preferences and political economies effect changes in Latin American landscapes. Cross listed with GEOG 2810.

**GEOG 4815 Geographies of Conquest: Christian, Jewish, and Islamic societies in Andalusia (4 Credits)**

This course introduces students to the cultural landscapes, former and current, of the different societies that converged in Iberia. The class will focus on medieval Al-Andalus, the Islamic kingdoms that flourished there. During medieval times, Christian, Islamic, and Jewish societies lived side by side in an environment that oscillated between tolerance and open persecution. Science, art, scholarship, and political strategy motivated tolerance while religious fundamentalism and geopolitical considerations motivated persecution. This class will cover the human-environment interactions in the landscapes medieval and modern Andalusia through an immersive field study and travel experience. This field class equals 4 academic credits. Over a period of 8 days we will visit the cities and surroundings of Madrid, Cordoba, Seville, and Granada in Spain where we will examine and compare cultural geographic, historical, religious, and anthropological issues surrounding the communities that interacted in Al-Andalus/Andalusia (past and present). Through observations, lectures, discussions, readings, assignments, and immersion, the course will stress the development of in-situ critical thinking skills and the promotion of cultural diversity, tolerance, and global awareness. This class fulfills geography, sustainability minor, and intercultural global studies minor requirements.

**GEOG 4825 Geographies of International Development in Africa (4 Credits)**

What are the historical roots of (under)development in sub-Saharan Africa? How is sub-Saharan Africa typically depicted in the media? How can we explain the fact that the Niger Delta provides the bulk of Nigeria's revenue, and yet, it remains the poorest part of the country? Is climate change the major cause of persistent food insecurity in the drylands of Ethiopia and Burkina Faso? How can we make sense of the uneven geography of poverty in Ghana? What explains urban food insecurity in Cape Town, or land struggles in rural South Africa? What are the social processes underlying the spatial disparity in health status in Malawi, or gender differences in HIV rates in Nyanza province, Kenya? And why do land users often resist state conservation efforts in Tanzania? These are some of the critical questions explored in this course. The primary aim is to provide a critical introduction to the geography of sub-Saharan Africa. We will begin by exploring how "the Africa story" is told by the media, scholars and policymakers. Attention will then shift to understanding the key historical processes that shape (under)development in the region. We will cover a broad range of topics, including governance, colonial history, debt and structural adjustment, foreign aid, food and agriculture, gender, climate change, land grabbing, health, population growth, migration, remittances, and resource extraction. We cannot possibly cover all these topics in greater detail; indeed, some are too vast and complex. We will however use specific case studies to illustrate and discuss each of the topics.

**GEOG 4880 Geographies of South Africa (4 Credits)**

This travel course is designed to give students a first-hand look at the physical and cultural landscapes of South Africa. We will study the varied natural landscapes that produce the commodities (e.g., gold, diamonds, wine, and agriculture) that have attracted the interest of outsiders for centuries and that have influenced the cultural landscapes particular to South Africa. A systematic presentation of the geology of South Africa, and its human history, will unfold throughout our travels.

**GEOG 4900 Graduate Colloquium in Geog (0 Credits)**

Solid foundation in history and philosophy of the discipline of geography; basis for further exploration of major research specialization.

**GEOG 4930 Nicaragua: Development Dilemmas (4 Credits)**

This class takes students to post-revolutionary Nicaragua to examine the consequences of recent land grabs by foreigners and transnational companies. Students learn to operate in a country with minimal "western" infrastructure. They learn to examine developing landscapes (that is, resorts and tourism infrastructure) with new eyes and from the perspective of locals who have been left out of the development loop. By the end of the class, students begin to understand the "development game", begin to question the role of tourism in developing economies, begin to know how to interact with other cultures, and finally learn to question the landscapes we "see" and begin to peel back the layers to understand the social and physical evolution of the landscape before their eyes. This class takes an experiential approach and requires students to participate in a service learning experience. Service learning is defined as a course-based, credit bearing educational experience in which faculty, students, and community members participate in an organized service activity that addresses a self-identified community need. We work with several community-based and non-governmental organizations to ensure a good fit between community needs and student expertise.

**GEOG 4950 Advanced Field Research (1-17 Credits)****GEOG 4991 Independent Study (1-5 Credits)****GEOG 4993 Capstone or Project (1-4 Credits)**

Includes technical design and development for MA geotechnical track project and MS-GIS capstone project.

**GEOG 4994 Report (1-5 Credits)****GEOG 4995 Independent Research (1-5 Credits)**

Includes field research for doctoral dissertation.

**GEOG 4999 Geographic Internship (0-5 Credits)**

Supervised internship in a government office at local, state or federal level or within private sector. Prerequisite: Permission of instructor.

**GEOG 5991 Independent Study (1-5 Credits)****GEOG 5995 Independent Research (1-10 Credits)**

## Global Studies (GS)

**GS 4010 Global Society: Structures and Stakeholders (4 Credits)**

This course provides students with an introduction to the major actors, structures, and issues in contemporary global society. Moving beyond a state-centric view of the global landscape, the course considers the values, interests, and ideas of a variety of stakeholders—including businesses, corporations, institutions, governmental and non-governmental organizations, and grass-roots initiatives—in order to assess some of the ways in which these actors both compete and cooperate for opportunities and resources. Students will apply relevant concepts to their own personal and professional experiences so as to gain a better understanding of how global issues and actors at a variety of levels impact their work and how their work constitutes an important part of global society.

**GS 4020 Culture, Identity, and Power (4 Credits)**

In a rapidly globalizing world, culture and identity are increasingly recognized as having profound implications for professional success across a range of industries and practices. An understanding and appreciation of difference are central to effective professional interactions and progress. This course presents approaches for thinking about intersecting dynamics of culture, identity, and power in professional environments, and for mitigating cultural and identity-based conflict in the workplace and beyond.

**GS 4030 Working Internationally (4 Credits)**

Working Internationally is designed for those looking to broaden their personal and professional pursuits in global settings, whether at-home or abroad. This course covers both qualitative and practical considerations. Students will explore the benefits and challenges of working internationally with a focus on cross-cultural communication and management. Through a combination of lectures, case studies, assignments, and group discussions students will develop skills and strategies for building successful relationships with people from different cultural backgrounds. Additionally, the logistical nuances of working abroad will be addressed. Upon completion of the course, students will have a better understanding of how to navigate cultural differences, explore international opportunities, and work effectively in a global environment.

**GS 4040 Managing Across Cultures (4 Credits)**

This course addresses the impact of culture on management and organizational processes as well as provides students with approaches to engaging effectively in globalized organizational and multicultural contexts. Additionally, the course enables students to distinguish between differences in diversity and culture. They will analyze the impact of global issues and events on the management process in different times and places and evaluate managerial practices in different cultures and institutional environments. The impact of cultural intelligence in organizational citizenship and performance is also addressed. The course will aim to provide opportunities for the practical implementation of the concepts covered.

**GS 4050 Diversity and Organizational Structure (4 Credits)**

A company is only as good as its culture. It is not only the responsibility of the Diversity, Equity, and Inclusion (DEI) leader to create an inclusive and diverse culture. People managers and employees play a vital role in DEI's success. This course helps students understand ways to make their organizations more engaging and dynamic by discussing the different processes that impact thought and interaction between people. Students will also consider how to bring advocates of DEI together in their organizations. They will analyze and apply best DEI practices from a variety of perspectives by learning the essential pillars of a strong DEI plan. They will also learn critical definitions, apply interventions that override errors in judgment and decision making, dissect inclusion and belonging among work groups and think through the change management and communication aspects of DEI.

**GS 4060 Cultural Memory: Perspectives, Voices, and Implications (4 Credits)**

Increasingly, the ability to engage effectively with stakeholders from a variety of socio-economic, generational, gender, ethnic, religious, and cultural backgrounds is a prerequisite skill for succeeding in the workplace today. This requires an understanding of the diverse memories, experiences, and perspectives of everyone involved. The culturally infused meanings attached to impactful historical events profoundly influence how people imagine the world and their role in it. This course focuses on the impact of cultural memory on identity and how our perceptions of the past and the caricatures it creates profoundly impact how we see the world today. In this course, students will gain an understanding of how history is constructed, contested, and incorporated into our everyday interactions. They will learn to identify their own biases and better understand the perspectives of others to strategize for increased personal and organizational success.

**GS 4130 Gender and Social Justice: Sex and Power in Global Perspective (4 Credits)**

This course provides students with a critical understanding of gender and sexuality in relation to social and institutional processes, particularly as they impact professional interactions and conduct. Issues such as inequalities in the labor force, low wage work and poverty, work/family conflict, and domestic work will be addressed. The course will take an intersectional approach to analyzing gender and sexuality in the workplace and beyond.

**GS 4140 Contemporary Racial and Ethnic Relations (4 Credits)**

This course provides students with ways of assessing the effects of race and ethnicity in professional settings. Topics addressed will include forms of prejudice and discrimination, manifestations of privilege and inequality, and the intersection of race and ethnicity with other markers of identity. Students will analyze social and institutional practices that foster inclusivity and the implications of such practices on workplace equity and social justice.

**GS 4150 Global Trade: The Intersection of Main Street and the World (4 Credits)**

Trade is often characterized in terms of economic flows—the exchange of goods and services across borders and the electronic transfer of funds worldwide, as well as associated taxes, tariffs, labor, and production costs in different parts of the world. Yet trade also involves the exchange of ideas, cultures, languages, and people, all of which have profound implications for doing business worldwide. This course addresses trade in its different manifestations and explores the impact of trade on work in a variety of contexts. Students will approach trade from a holistic perspective to analyze its connections to globalization and their own work environments.

**GS 4160 Politics and Social Media (4 Credits)**

As social media becomes an increasingly prevalent means of distributing information, advertising products and services, and communicating with stakeholders, questions arise regarding the politics and ethics that inform its use. What are the potential consequences of using platforms such as Twitter to disseminate political ideologies? How has the use of LinkedIn affected workplace politics and changed the ways in which professionals network? Does professional success require the use of social media, or does its presence in certain contexts do more harm than good? This course will address these questions and others while providing students with lenses through which to view the intersection of social media and politics in the workplace and beyond.

**GS 4200 Globalization and Global Citizenship (4 Credits)**

Over the past century the world has witnessed unprecedented developments in communication, technology, and mobility. These have enabled the rapid exchange of money, people, materials, ideas, and cultures across national borders. With these changes have come questions about the roles and responsibilities of individuals, companies, and organizations within this increasingly complex and interconnected global society. Globalization is often used as a buzzword for this ever-evolving context, although its meaning is sometimes unclear. This course clarifies the nature of globalization by introducing students to fundamental concepts of global citizenship, focusing in particular on relationships between the local and the global, and on the necessity of developing a cosmopolitan perspective in order to be more successful in an increasingly globalizing workplace.

**GS 4210 The Force of Faith: Religion in the Global Workplace (4 Credits)**

This course examines the role of religion in the global workplace, addressing issues involved in working with clients, stakeholders, and employees from diverse religious backgrounds with the aim of increasing students' awareness of their own attitudes toward religious beliefs and professional responsibilities. Students will develop an understanding of the ways in which different religious beliefs impact conceptions of professional communication and conduct, in addition to exploring relationships between religious faiths and business ethics.

**GS 4303 Community Engaged Learning in Practice (4 Credits)**

This community engaged learning course provides students with an opportunity to apply knowledge and skills gained through their Global Community Engagement coursework to a real-world issue or problem. Students will learn best practices for engaging with communities both global and local, and will develop skills necessary to work effectively in diverse contexts. Equipped with an academic foundation, students will have significant latitude to sketch out a project of their choosing, with the professor's approval.

**GS 4701 Topics in Global Community Engagement (4 Credits)**

The content of this course varies each time it is offered. Specific course content is detailed on quarterly schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**GS 4800 The Puerto Rican Paradox: Challenges and Opportunities in Uncertain Times (4 Credits)**

The Commonwealth of Puerto Rico is a tropical paradise boasting vibrant communities, rich cultures, and abundant natural resources. Once coined a "natural jewelry box" by the BBC, Puerto Rico offers sparkling turquoise waters, bioluminescent bays, lush mountainous terrain, and colorful colonial architecture. It is also plagued by a debilitating debt crisis, political corruption, and a crumbling infrastructure, which, particularly in the aftermath of hurricanes Irma and Maria, have caused many residents to flee the island in search of better opportunities and more stable living conditions. In this course, students will examine the paradox that is Puerto Rico. Drawing from literature on culture, history, power, and politics, students will research a topic of their choosing, with the professor's approval. They will then work with local communities in Puerto Rico on a project of mutual interest and importance, culminating in an approach or proposal for addressing the issue(s) at hand. Students will be required to spend 5 days on-site in Puerto Rico, plus any necessary travel time. This course will give students broad exposure to the history and culture of Puerto Rico, in addition to a nuanced understanding of a specific industry, issue, or problem. It will additionally highlight the power, privilege, and oppression that exists in our own backyards on this U.S. Commonwealth island.

**GS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**GS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**GS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**GS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**GS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**GS 4991 Independent Study (1-5 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Health Informatics (HINF)

**HINF 4010 Health Informatics Communication (4 Credits)**

This course will provide students with a foundational background in organizational communication strategies, develop knowledge and understanding of healthcare communication standards and policies and equip students with practical knowledge of current health informatics communication tools and trends. The student will contextualize the role of Informatics and Health Informatics/IT professionals through the development of course projects. Students will evaluate current industry communication modalities, construct plans to assess and improve communication, and advise stakeholders on how to successfully implement communication plans to achieve success in Health Informatics/IT projects. Through this process, students learn to bridge gaps between Health Informatics/IT professionals, clinicians, and health leaders.

**HINF 4020 Healthcare Workflow and Gap Analysis (4 Credits)**

The alignment between the steps of a business or patient care transaction in an information system and how that work is done significantly impacts the performance of that organization. It can also impact the quality of data gathered using information system resources in a healthcare organization. This course will provide the learner with a critical view of the interaction between operational processes in a healthcare organization and the information technology used to carry out those processes. The course will begin with an introduction to the System Development Life Cycle ("SDLC") and how work processes interact with technology. Students will review the skills needed to critically assess processes and identify technology needs. The course will wrap up with a review of operational process analysis with the design of health information systems resources.

**HINF 4030 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HINF 4210 Data Platforms in Healthcare (4 Credits)**

Data Platforms in Healthcare focuses on widely used data platforms in data collection, storage retrieval, and use in healthcare and healthy-industry settings. Students will learn the flow of data from data entry to data storage, and they will learn to query, process, and present healthcare data for actionable use. Students will also learn common pitfalls of healthcare data solutions and the legal restrictions involved with personal healthcare information. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**HINF 4220 Health Data Mining (4 Credits)**

Focusing on creating problem statements and research questions, this course allows you to hone skills related to accurate health data mining. Learn to create clinical partnerships with key stakeholders concerning data in Health Informatics/IT projects while gleaning valuable insight from large health data repositories.

**HINF 4230 Healthcare Statistical Dynamics of Machine Learning (4 Credits)**

HINF 4230 focuses on data cleaning, statistical analysis, and machine learning using healthcare data. Students will use Python to clean, prepare, and interpret a large dataset and then train and evaluate a machine learning model. Finally, students will debug their models and iterate to make improvements.

**HINF 4240 Health Data Science Reporting (4 Credits)**

This course will focus on best practices for health data science reporting to improve healthcare into the future. The learner will explore various ways to develop effective reports, inform healthcare leaders, and make appropriate recommendations. Upon completion of this course, students will understand the difference between data and how information provides key insights that allow healthcare leaders to draw conclusions, make decisions, and improve clinical and business outcomes. Preferred prerequisite: HINF 4210.

**HINF 4301 Foundations of Digital Health (4 Credits)**

This foundational course provides a working knowledge of key HIT definitions, concepts, and relevant advancing forms of technology. It encourages students to review the changes to HIT and evaluate the growth of these systems into the current and future forms of digital health tools. While this course is not designed to turn students into network administrators or software developers; it will equip students to become an active and valuable participant – or even a team leader – in the evaluation, selection, implementation, and ongoing operation of health information systems.

**HINF 4310 Healthcare Information Systems (4 Credits)**

Electronic health records systems (electronic medical records (EMRs), electronic health records (EHRs), personal health records (PHRs), and health information exchanges (HIEs)) are all the buzz these days, yet for the past 30 years the healthcare sector has clung to paper records, file folders, and clipboards. This course will explore the technical and controversial aspects of healthcare information technology in general, and the specific factors involving evaluation and adoption of EMR systems. The course also covers the fundamental components of modern electronic records systems and reviews their impact on both business and clinical functions. Key areas of interoperability, interfaces, and standards will be introduced. The course will be practical and thought-provoking as it emphasizes critical thinking and the synthesis of ideas from multiple sources and perspectives. Participants will be challenged to develop their own viewpoints and opinions, substantiated by the published work of those who are thought leaders in the field of HIT, as well as the participants' own experiences.

**HINF 4315 Digital and Virtual Health (4 Credits)**

With the widespread availability of health-oriented digital and virtual devices and software (apps), healthcare organizations are shifting their approaches to recognize how patients wish to communicate, manage their health, and share their health information. The shift in digital and virtual health is designed to improve healthcare access and quality—particularly in underserved populations, geographies, and specialties. This course will present the current and emerging digital and virtual health services, as well as the benefits and drawbacks of these technologies. This course will address various forms of telehealth, apps, portable devices, and remote monitoring strategies, as well as the role of artificial and augmented intelligence in enhancing digital and virtual experiences. After a broad review of the digital and virtual health field, this course will focus on evaluating, sustaining, and leading a digital or virtual program. Each lecture will discuss regulatory issues such as privacy, security, FDA review/approval, and when digital and virtual health services can be reimbursed. In addition to these regulatory issues, the course will instruct how to conduct a needs assessment, evaluate digital and virtual health products, implement different business models, and evaluate best practices for implementation and adoption. Preferred Prerequisite: HINF 4301.

**HINF 4325 Values and Outcomes in Digital Health (4 Credits)**

This course covers the major healthcare information technologies and topics other than electronic health records systems. Electronic health records systems represent a large focus in healthcare technology; however, many other important systems form the complete framework of modern connected healthcare. These include electronic practice management (EPM/PMS) systems, scheduling, billing, diagnostics/labs, reporting, payment interfaces, and business intelligence in healthcare. This course focuses on the fundamentals of how to be an analyst of health IT technology. Preferred prerequisite: HINF 4301.

**HINF 4335 Healthcare Cybersecurity (4 Credits)**

This course will introduce students to information security risks facing the healthcare industry. Students will learn how to protect healthcare organizations and their patients' data better. Students will learn about recent security breaches, the impact of those breaches on healthcare organizations, and all of the key players involved. This course also covers the evolution of healthcare IT and the continuously evolving risk and regulatory landscape. Students will explore regulations of HIPAA, NIST/ONC, HITECH, and Meaningful Use and how they relate to day-to-day operations in healthcare organizations. Additionally, this course will prepare students to support information security initiatives in order to protect the organization while furthering the advancement of healthcare IT capabilities. This is not a technical course; however, the course covers how security is impacted by technology and what one must do across technology to secure healthcare systems, organizations and patients. Preferred prerequisite: HINF 4301.

**HINF 4600 Healthcare Data and Delivery by Perspective (4 Credits)**

This course evaluates the environment of the U.S. healthcare delivery system and introduces the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, towards the payer, and evolving into population health. Students will learn about the associated data that is generated from the patient as a consumer, from the provider through clinical operations, from the payer perspective, and finally how all of these contribute toward population health data. This course will cover the basics of U.S. healthcare research and clinical intervention, and students will have the ability to model the conceptual as well as practical application of health informatics.

**HINF 4610 Healthcare Ethics and Biostatistics (4 Credits)**

This course discusses research investigator training and outlines the progression of the Institutional Review Board (IRB) process. In addition, this IRB process will be compared with the business process improvement cycle. Health Insurance Portability and Accountability Act (HIPAA) as well as data governance issues are surveyed from the patient, provider, payer, and population perspectives. The connections between these topics and ethics are explored, and the principles of biostatistics are discussed. Common statistical packages used within healthcare research and business applications are covered, and this course concludes with an analysis of resulting ethical implications of short- and long-term healthcare data. Preferred prerequisite: HINF 4600.

**HINF 4620 Healthcare Methods and Programming (4 Credits)**

This course presents the basic study designs of epidemiology and illustrates the field's benefit to the healthcare industry. Randomized control trials (RCT) through correlation studies are explained through case studies as well as practical application. Informatics tools such as machine learning, clinical decision support, and natural language processing (NLP) are categorized with respect to their relative positions in the 4P (patient, provider, payer, population) perspective framework. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. This course concludes with the many benefits of auditing as a check and balance for healthcare methods and programming. Preferred prerequisite: HINF 4600.

**HINF 4630 Healthcare Data Mining, Integration and Interpretation (4 Credits)**

This course explores available public healthcare data sets and the data mining process. In addition, this course articulates the value of mapping relationships between data points and workflows. This process determines the level of integration of disparate data sources and is explored through the 4P (patient, provider, payer, population) perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. Once the data sources are integrated, the focus becomes how to turn this data into information, knowledge, and insight. This course wraps up by exploring both business and research options for interpreting data through visualizations and predictive analytics. Preferred prerequisite: HINF 4600.

**HINF 4640 Healthcare Database Applications (4 Credits)**

This course covers the growing functions of security in healthcare data and specifically elaborates on the vulnerabilities and emerging solutions for dealing with data once it is stored. Database architecture is surveyed, which transitions into an exploration of terminologies and standards and how these impact interoperability of data in warehouses. A significant portion of this course focuses on the specifics of medical coding and how coding is affected by the 4P perspectives. This framework is generated from the natural flow of healthcare delivery starting with the patient, moving to the provider, progressing on to the payer, and evolving into population health. The course wraps up with a compilation of Structured Query Language (SQL) capabilities and a study of the influence of their practical application. Prerequisite: recommended HINF 4600.

**HINF 4650 Healthcare Project Management and Professionalism (4 Credits)**

The course is designed to simultaneously teach project management concepts while preparing a student to operationalize a healthcare project. Students will analyze business problems healthcare organizations are facing to properly scope and plan a project. Students will also work on stakeholder engagement and project documentation development.

**HINF 4701 Topics in Health Informatics (1-4 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Health Informatics degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HINF 4810 Survey of Health Industry Artificial Intelligence (4 Credits)**

Artificial Intelligence (AI) is "the capability of a machine to imitate intelligent human behavior." AI is fast becoming a major player in the health and healthcare industries. In addition to having positive impacts in traditional medical areas such as radiology, pathology, EHR systems, oncology, and cardiology, AI is increasingly being used in the health industry to bridge gaps in the healthcare delivery systems. This course will provide students with the tools to understand how Artificial Intelligence platforms sort and learn from the immense amount of data available in the healthcare field. Students will engage in virtual learning as well as project-based learning offering the next generation of health industry professionals the skills to leverage massive amounts of data into meaningful knowledge.

**HINF 4825 Technology and Applications for Telehealth and Virtual Care Success (4 Credits)**

This course investigates the technology required for virtual care and technological concepts to advance virtual care models. This will include virtual care applications, telemonitoring systems, and technology concepts to include artificial intelligence, machine learning, informational robotics/ applications.

**HINF 4835 Design and Implementation of Telehealth and Virtual Care Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn the steps to implementation when designing telehealth and virtual care systems. Students will explore the factors that impact the success of telehealth and virtual care programming, including barriers to care, the social determinants of health (SDOH), and conducting risk and benefit analysis. Students will develop the skills needed to create a telehealth and virtual care plan that builds on the development of a business case to support the needs of the community it serves.

**HINF 4900 Experiential Learning in Health Informatics (4 Credits)**

This course is an opportunity to participate in experiential learning by connecting academic research with a real-world healthcare management or health informatics problem. Students may take this class either early in their degree program as an introduction to healthcare or health informatics, or later in the program as a prerequisite for their upcoming Capstone experience. First, students will conduct informational interviews with healthcare management and health informatics instructors to learn more about a chosen problem. Those taking this course as an introduction will learn key skills necessary to identify an independent research project topic, formulate a research question with a business, healthcare or health industry application, investigate research methodologies, explore the requirements for human subjects research through the Institutional Review Board (IRB), and draft a project proposal. Students preparing for their Capstone experience (all health informatics students and some healthcare management students) will prepare a Capstone project proposal according to approvable structure and deliverable guidelines. They will choose and schedule a meeting with their Capstone Advisor, select a research topic, formulate a research question with an industry application, develop a thesis statement, choose appropriate project methodologies, and draft a project proposal that will meet appropriate ethics and compliance requirements for human subjects research, and submit their proposal to the IRB for approval.



**HINF 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HINF 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HINF 4980 Internship (0-4 Credits)**

The Health Informatics Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HINF 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Health Sciences (HLTH)

**HLTH 3000 Seminar in Health Science (1-2 Credits)**

This seminar is the capstone course for the Human Health Science & Systems program. This class will focus on the current understanding of several topics in human health. Emphasis will be on critical reading and discussion of current scientific literature related to human health and health care. Students will learn to recognize and appreciate different approaches and methods of health-related research. Students will utilize and integrate knowledge from previous courses to understand to present effective discussions on current topics in health. For students' continued development of strong oral communication skills, student presentations of primary literature will generate the basis of discussion. Prerequisites: HLTH 2000 and 2010.

**HLTH 3600 Cultural Responsiveness in Health Care (2 Credits)**

To contribute to reducing health inequities and improving health outcomes, this course will promote an improved understanding and responsiveness to the realities of social and structural impacts that influence the health of an individual or community. Topics will include health care delivery and access, political economy of health care, implicit biases, professionalism, relational leadership, dealing with patients in difficult situations, and health equity. The course will help students learn to provide more informed and effective care and promote a more culturally sensitive and responsive future workforce in healthcare, while also serving community needs. Prerequisite: HLTH 2000 or equivalent.

**HLTH 3700 Topics in Health (1-4 Credits)**

Topics in the area of, but are not limited to, human health and disease, environmental or social impacts on health, healthcare delivery, evidence-based medicine. Students will gain knowledge of a specific topic in human health and/or health care through discussion of current literature and research. May be repeated for credit. Prerequisites: HLTH 2000 or 2010.

**HLTH 4210 Advanced Health Education and Promotion (2 Credits)**

This course will provide students foundational knowledge about how to deliver health education and promote healthy behaviors to patients and community. This course will provide students will the practical skills and best practices for communicating and educating others about health, clinical tests and results, and clinical plans of action. Students will gain practical skills for encouraging goal setting and behavioral change and will develop an understanding of motivational considerations especially for patients with mental health challenges or psychosocial concerns related to acute and chronic physical disorders. Students will focus on integrating evidence-based research and strategies for the purpose of leading culturally sensitive discussions and/or difficult conversations and encouraging healthy behaviors.

**HLTH 4300 Basic Legal Consideration in Healthcare (2 Credits)**

This course will provide a basic understanding of legal issues that may affect care providers and business owners. Basic legal terminology and concepts will be presented, in addition to basic court processes and procedures. A goal of establishing this basic understanding is to prevent or reduce the consequences of lawsuits. Professionalism and the code of ethics will also be discussed.

## Healthcare Leadership (HC)

**HC 4000 Healthcare Systems and Regulatory Environments (4 Credits)**

This course opens with a comprehensive overview of the functions of various types of healthcare organizations: providers, insurance companies, government agencies, and professional associations. Alternative payment and provider models are reviewed, regulatory bodies and issues are explored, and healthcare reform efforts and proposals are discussed. Supply and demand projections for personnel are examined. The work of key federal agencies (NIH, National Center for Disease Control, and Food and Drug Administration) is reviewed as well as the activity of national and international non-governmental organizations. Major national and global public health challenges are introduced.

**HC 4005 Healthcare Macroeconomics (4 Credits)**

This course focuses on macro analysis of the current financial state of healthcare in the United States. The relationships of value, quality, and price are analyzed. Transparency related to price and quality is considered. Fundamental items such as balance sheets/income statements, accounting vs. financial reporting, equity, cash flows, and debt financing are covered in detail. Payment and incentive models are considered in connection with employer-furnished benefits, private health insurance plans, Medicare and Medicaid. Current issues, such as pay for performance, shared savings, cost shifting, and healthcare for the aging, under and uninsured are discussed. Students will discuss variations in health policy related to payment and coverage systems.

**HC 4010 Healthcare Communication and Leadership (4 Credits)**

This course focuses on the welfare of patient, family, and community in the context of medical team communication and leadership. Models for communicating highly technical medical information with patients and others involved in their care are examined. Students weigh and assess differences in personal and organizational cultures to optimize patient-centered outcomes. Students acquire a sound body of knowledge and terminology to facilitate communication and leadership across a multitude of disciplines essential in the delivery of healthcare. NOTE: This course is strongly recommended within the first 3 terms of study.

**HC 4015 Healthcare Finance (4 Credits)**

This course gives students a skills-based grounding in the financial management in healthcare organizations operating in the United States. Students will gain a broad overview of the business of healthcare in the U.S., including interpretation of financial statements, budgeting, operational analysis, expense management issues, revenues, and payment systems used in the current U.S. healthcare system. The course will use a case-based approach where students will demonstrate mastery of financial management skills through application of knowledge to real-life scenarios from the industry.

**HC 4100 Management and Leadership in Healthcare (4 Credits)**

Healthcare systems are complex, dynamic, and multilayered. They require constant situational awareness to maintain safety, efficiency, compliance, relevance, and fiscal responsibility while supporting an increasingly diverse workforce. Managers and administrators must be able to create and lead effective teams to address constant change. In this course, students explore the functions required to lead and support healthcare systems, organizations, and practices. Students will simulate the role of healthcare managers and leaders by gaining an understanding of leadership approaches, analyzing the performance of a business unit and identifying opportunities for improvement, building teams, identifying and tracking key metrics, and creating solutions that contribute to an effective, efficient, and equitable work environment.

**HC 4110 Healthcare: Innovative Strategies and Change Management (4 Credits)**

Effective healthcare takes continual innovation to meet the ever-changing needs of the population. Through an examination of disruptions that create a catalyst for change, this course focuses on teaching students how innovative strategies can enable quality care and sustainability both within the healthcare delivery system and the health industry. Further, the drivers of innovation are explored from their use in grassroots efforts through regulatory reform through the lens of supply and demand. Finally, strategic planning for maximum use of financial resources to meet stakeholder expectations is ventured into in this course.

**HC 4130 Organizational Behavior in Healthcare (4 Credits)**

Customer and employee satisfaction elements of healthcare management are often a result of how well the entire healthcare system functions. Students examine successful and less successful examples of cooperation, compatibility, and dedication within the workplace and explore what contributes to a harmonious and effective healthcare environment. Interpersonal skills are discussed, as are ethical guidelines and laws that define acceptable workplace behavior.

**HC 4200 Comparative Healthcare Systems (4 Credits)**

This course describes variations in healthcare delivery systems locally, nationally, and globally as they relate to policy, structure, and finance. Comparisons of systems are made relative to expenditure of resources and outcomes. Students learn about healthcare coverage, access to care, healthcare rationing, provider manpower distribution, and seeking healthcare in foreign countries (medical tourism). The discrepancy between the desirable and the practical is explored, and students are asked to outline and defend a system that they believe is both desirable and practical.

**HC 4210 Quality Improvement for HC Leaders (4 Credits)**

This course provides an analysis of successful healthcare quality programs. Students will review the essential elements of a quality program and the national, state, and local laws and regulations that impact a quality program. The course explores the types of data and scientific methods that can be used to ensure the effectiveness and efficiency of a quality program. Students will get the opportunity to design a healthcare quality program for a healthcare setting of their choice. Course content is beneficial to all types of individuals who work in healthcare, from entry level to high-level manager, administrators, and clinicians.

**HC 4220 Ethical Considerations in Healthcare (4 Credits)**

This course provides a survey of important ethical considerations encountered in U.S. and global healthcare, past and present. It covers issues on which consensus has generally been reached, and some on which debate is currently active. Clinical, professional, and organizational scenarios will be examined, with an occasional glance toward public policy. Students will practice recognizing the elements of ethical problems and applying a "toolbox" of principles, theories, and concepts to understand them. Through readings, class discussions, and assignments, students will review noteworthy cases and policies. They will evaluate the merits of ethical arguments taking different forms. They will compare different frameworks for making ethical judgments and solving dilemmas that arise from competing value perspectives. This background is an essential foundation for practitioners and leaders in every role in a healthcare environment.

**HC 4225 Healthcare Public Policy and the Legislative Process (4 Credits)**

This course provides students an opportunity to transform a healthcare policy-related idea or problem into policy and legislation reform, change, or development. Students examine political and legislative procedures; the functions of government agencies; the influences of lobbyists, public hearings and testimonies; and advocacy efforts on these processes. Students objectively evaluate how policy changes occur at the federal and state levels and subsequently affect citizens from differing backgrounds and professionals in a variety of settings. As such, students explore the importance of developing relationships, communicating, and creating advocacy strategies with elected officials and various stakeholder groups that interact with the federal and state legislative processes.

**HC 4230 Implementation and Evaluation of Healthcare Public Policy (4 Credits)**

This course examines strategies for implementation and evaluation of healthcare public policy. Students develop skills in analyzing issues, considering and weighing pros and cons of proposed policy, and defending strategies for bringing about change. Beginning with the passage of a new law, policy, or regulation, students track the process to implement and evaluate new policy. Topics related to implementation of a new policy include funding the implementation, effect on constituents and the overall national economy, sustainability, and short- and long-term evaluation of the policy. At the conclusion of this course, students will prepare an implementation plan for selected recently passed state legislation. Students are strongly encouraged to complete HC 4000 prior to registering for this course.

**HC 4300 Health Equity and Justice (4 Credits)**

In this course, definitions and historical perspectives of health equity, health disparity, and social justice will be introduced. Students will learn to recognize the geographic, cultural, and social contexts, where health inequities occur. Through reflection and journaling, students will explore the concept of implicit bias. From this critical reflection, students will gain an understanding of the impact of bias on patient care and population health in the U.S. healthcare system. Issues of, racial, ethnic, and gender status and their relationships to health disparities and inequities will be analyzed. Through course assignments, students will conceptualize interventions and design improvement projects aimed at making substantive positive changes toward health equity and justice.

**HC 4305 Healthy Aging: A Healthcare Imperative (4 Credits)**

As technology advances, the ability to healthcare to keep people alive increases, but not always in ways conducive to improving quality of life. It is the hope of healthcare providers that quality of life improves as well. However, there are many factors this piece of the puzzle challenging. In this course, the older adult population is examined both for the challenges they face and the effects of an increasing elder population on the healthcare delivery system. The course will focus on specific assessment of the impact of unhealthy lifestyles that create the co-morbidities, health disparities commonly seen in aging populations, and the improvements that can be made in health and technological illiteracy/accessibility on older adults. Extending this assessment, students create a cultural care model for end of life care. These explorations of older adulthood culminating in evaluating the underlying cultural issues that need to be addressed to improve population health and resiliency in meeting the challenges during the end of the life spectrum.

**HC 4400 Legal Dynamics of Healthcare Leadership (4 Credits)**

This course is a primer on the legal and compliance considerations associated with organization, payment, and administration of facilities and provider groups. Topics will include the corporate and contract law, Stark and anti-kickback law, licensure and credentialing, professional liability, professional review and patient safety, HIPAA and patient privacy, and other laws affecting healthcare providers and organizations.

**HC 4410 Legal Frameworks of the Healthcare Industry (4 Credits)**

This course reviews the recent history of healthcare reform in the United States beginning with the 2010 Affordable Care Act (ACA) and moving to health reform since the ACA. Students examine the influences and functions of Medicare and Medicaid as well as the Department of Health and Human Services' (HHS) role in shaping benefit coverage throughout the healthcare industry. Students will explore the importance of, and examine legal issues related to, public health and healthcare provided by entities within the Federal Government such as the Department of Veterans Affairs (VA), Department of Defense (DoD), and Indian Health Service (IHS). Students will objectively evaluate the legalities and ethical issues associated with clinical research as well as the Food and Drug Administration (FDA)'s involvement in the development of pharmaceutical agents and medical devices. The course concludes with students analyzing the future landscape of health reform and public sector influence in healthcare.

**HC 4420 Legal Fundamentals of Revenue in Healthcare (4 Credits)**

This course provides an understanding of the legal complexities of creating and managing delivery and payment models for healthcare services. Course content revolves around the current challenges of evolving from volume-based to value-based payment principles. Topics will include fraud and abuse and compliance, legal foundations of private and public payment systems, fee for service, managed care, value-based systems, and a review of current healthcare payment reform efforts. The course wraps up with the role of clinical health information and related data systems in healthcare delivery and payment.

**HC 4430 Significant Healthcare Policy and Law (4 Credits)**

This course provides a foundational overview of healthcare law and the sources of law, as well as the distinction between healthcare law and policy. Throughout the course, learners will examine major federal healthcare laws and policies and understand their relationship with stakeholders such as patients, providers, payers, lobbyists, and public health, all through a health equity lens. Learners will examine the intersection of traditional areas of law and healthcare, including torts, antitrust, contracts, and intellectual property. They will then delve deeper into understanding major healthcare policies, such as Medicare Part D and the Affordable Care Act (ACA), to include the Supreme Court's landmark decision regarding the ACA. This is a robust course with significant independent work/research on the part of learners and should be taken after introductory and concentration courses.

**HC 4500 Operational Challenges in Global Health Management (4 Credits)**

This course presents challenges in operations that are unique to healthcare services and products being delivered in the international market. Topics include international marketing of services and healthcare products, negotiation styles, ethical considerations, organizational structure, transporting of medical goods and personnel, individual travel health and medical tourism as a business model. Cultural and religious considerations in healthcare delivery are discussed. Grants and research management for global health are compared with domestic procedures.

**HC 4510 Legal and Employment Issues in Global Health Management (4 Credits)**

This course presents legal considerations involved in conducting global programs and business related to healthcare services and products. Employment and labor law are discussed in relationship to employment across international lines and within foreign countries. Intellectual property, patent and copyright of healthcare products, curriculum, and programs are examined. Customs laws, foreign trade, and other regulations such as healthcare licensing and credentialing of personnel are developed. Human resource challenges such as remote team management are discussed.

**HC 4520 Global Health NGO Management (4 Credits)**

Students will examine factors that impact organizational performance in the global nonprofit health sector. Students explore current challenges associated with Non-Government Organizations (NGOs) that operate in low-income and middle-income countries. Examples include Doctors Without Borders, Shoulder to Shoulder, and others. Students are empowered to research and compare different NGOs and analyze factors that impact organizational effectiveness. Key challenges facing NGO leaders are analyzed and students provide recommendations to improve organizational performance. Course topics include assessment of NGO strategies, organizational resources and financing, and stakeholder relations. Other topics include analysis of countries' demographics, culture, healthcare delivery, policies, and external environment. It is recommended that students in the Global Health Program Management concentration or certificate complete HC4500 and HC4510 prior to registering for this course. Students in other concentrations or programs may take this course at any time as an elective.

**HC 4530 Regulatory Affairs in Global Health Management (4 Credits)**

This course discusses the various regulatory requirements of conducting healthcare related business from the perspective of research, development, and marketing of medical devices and pharmaceuticals. Both domestic and international requirements will be examined. Students will develop a template of skills for investigating healthcare related compliance issues that can be adapted to specific markets as needed.

**HC 4701 Topics in Healthcare Management (1-10 Credits)**

This is an advanced special topics seminar course. The focus is on specialized areas of interest. Topics courses may be used as electives within the Healthcare Leadership degree and certificates, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate programs.

**HC 4805 Virtual Care: Opportunities and Barriers for Health Systems (4 Credits)**

Leaders in telehealth and virtual care settings must learn to balance the needs of the individual with the needs of populations. Students will explore the factors that impact the success of telehealth and virtual care programming including barriers to care, the social determinants of health (SDOH), and the concerns of special populations. Students will develop the skills needed to create a telehealth and virtual care plan that takes into account health policy and regulatory compliance, best practices in population health, and the social context of the healthcare system.

**HC 4815 Analysis of Healthcare Environments for Virtual Care (4 Credits)**

This course will provide an in-depth exploration of virtual care and its impact on healthcare delivery. Students will learn about the various technologies and platforms used in virtual care, along with key issues and challenges involved in implementing and integrating virtual care into healthcare systems. They will assess different healthcare environments, legal and regulatory issues, impact on patients, and financial considerations surrounding virtual care, as well as the need for a virtual care solution. The course will cover topics such as telemedicine, remote patient monitoring, virtual reality, augmented reality, artificial intelligence, and data analytics.

**HC 4900 Experiential Learning in Healthcare (4 Credits)**

This course is for students who want to do independent research by completing an industry project and serves as a connector between research methods and a student's Capstone Project. The course will connect an academic research question with an experiential learning opportunity in healthcare for students as they prepare for their Capstone Project experience. Students will choose a Capstone Advisor, choose a topic, develop a thesis statement, explore project methodologies, write a proposal, and complete the necessary Institutional Review Board (IRB) requirements. Students will also agree to the structure and deliverables of their projects. There is an expectation for face to face (virtual is acceptable) meetings between students and their prospective Capstone Advisor during this course. This course is a prerequisite for any students planning to complete the Capstone Project (HC 4901) as it is the beginning of the Capstone Project process. Prerequisites: approval by Academic Director, acceptance as a degree candidate, and completion of between 30-40 quarter-hours. This course meets an elective option.

**HC 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HC 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HC 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HC 4915 Experiential Learning in Business (4 Credits)**

This course is for learners who want to increase their range of business skills and industry experience. As learners navigate ten modules, they will walk through reflection on specific activities related to professional business skills. These skills include items such as building a personal brand, creating value add, informational interviewing, negotiating, and system evaluation. This course will use virtual reality to ensure an equitable experience for remote students. At the culmination of this course, learners will have a basic set of professional business skills they can use throughout their careers.

**HC 4980 Internship (0-4 Credits)**

The Healthcare Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all Healthcare students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences.

**HC 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Higher Education (HED)

### HED 4201 Assessment in Higher Education (4 Credits)

This course is designed to give students a broad understanding of assessment in higher education. This course will improve students' familiarity with existing assessment instruments for students, services, programs, and facilities as well as provide an understanding of the importance of maintaining high standards of ethics and integrity in assessment of higher education and student affairs.

### HED 4202 Program Evaluation in Higher Education (4 Credits)

This course is an overview of the craft of program evaluation, "...the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy" (Weiss, 1998, p. 4). Program evaluation, simply put, is the craft of applying research methods in a thoughtful way to the task of finding out what and/or how interventions work in the context of the programs or policies in which they operate. This is accomplished by systematically investigating the effectiveness of program processes and outcomes within their political and organizational context. The goal is to inform social action and, by extension, improve conditions for program recipients and participants. Students in this course will explore program evaluation within the context of higher education. The purpose of this course is threefold: (1) Develop an understanding of existing evaluation theory and practice; (2) Apply evaluation theory and approaches to the context of education evaluation; and (3) Develop an experiential base upon which to engage in evaluation in educational practice, including doctoral research projects.

### HED 4210 Critical Higher Education (4 Credits)

This course examines the social and political context of U.S. education and provides an analysis of schooling, cultural politics, and global influences that inform current practices and structures of the higher education system. Central to this course is the development of a critical understanding of topics related to meritocracy, stratification, diversity, and decentralization in higher education. Prerequisite: Ph.D. student in higher education or permission of instructor.

### HED 4211 Current Issues in Higher Ed (4 Credits)

This course is a study of contemporary higher education as a specialized field of inquiry and as a professional area in which to work. It explores institutional missions as well as entities such as administration, faculty, curriculum, and students, in relationship to current issues.

### HED 4212 Introduction to Public Policy and Higher Education (4 Credits)

This is an introductory course that gives students an overview of federal and state public policy, current issues, research methods, and practical skills required for the policy formation process. This is the introductory seminar to the Public Policy, Leadership and Organizational Change emphasis area for the master's program.

### HED 4213 Leadership and Supervision (4 Credits)

General leadership theory and its implications for higher education; specific focus on leadership skills, such as conflict resolution, problem solving, use of teams and change advocacy.

### HED 4214 History American Higher Ed (4 Credits)

The purpose of this course is to trace the history of higher education in the United States from the system's pre-colonial beginnings through the present day. Readings will focus on the original purposes of higher education within the US, the forces leading to system massification and the subsequent competing visions and goals that have led to its becoming one of the most highly contested social institutions within the public arena. Higher education in many ways serves as a mirror to US national and state-level priorities. Understanding this relationship between higher education as a system, and higher education as a national, state and individual level asset helps us understand how we've arrived at our current historical moment: a decentralized system in which education represents a spectrum of institutional types, constituencies and local concerns. One could therefore argue the history of higher education gives us an opportunity to view the US postsecondary educational system as a dynamic reflection of our country's past, present, and future.

### HED 4215 Curriculum Development and Teaching Strategies in Higher Education (4 Credits)

The goal of this course is to prepare those who will serve in higher education with the knowledge, skills, and dispositions necessary to design curriculum and pedagogical strategies that produce effective and equitable learning outcomes for all students and adults in postsecondary settings. This course pushes students to think about curriculum and instruction as a decision-making process that requires articulated goals, strategic alignment, and thoughtful planning in order to realize a more effective and inclusive pedagogy. Throughout the course, students will come to understand the complexities of curriculum and teaching design but also have the process clarified with a framework for choosing among different ways of teaching that result in significant and transformative learning experiences for their future students.

### HED 4216 HED Research Processes (4 Credits)

The course enables students to explore current research and theories associated with their scholarly interests and resources for doing research as well as to address problems in conducting original inquiry and investigations in postsecondary education. Attention is directed to the investigation of a research problem of each student's interest. Prerequisites: RMS 4940 and RMS 4910 and RMS 4941 and (HED 4202 OR HED 4242).

### HED 4217 Student Affairs Administration (4 Credits)

This course provides a review of student services with emphasis on programmatic content and its relationship to student development; organization of student service programs; and national trends. Further, this course describes the historical development of student affairs work including significant persons and activities and begins the development of students' own professional identities as reflective practitioners and understanding of their responsibilities for integrating assistantships/internships/work experiences to theory and new knowledge.

**HED 4218 Organization and Governance in Higher Education (4 Credits)**

Students enrolled in this course will acquire a nuanced understanding of how colleges and universities are governed in the United States. Questions guiding this course will be: Who has the power to make decisions on college campuses? What roles do various constituents, such as board members, presidents, deans, faculty, staff, chief diversity officers, student affairs professionals, and students play, and how reflective are these individuals of the broad diversity of U.S. higher education? How does the larger social/political context in the U.S. affect how institutions are governed? What does academic governance reveal about power, privilege and oppression? We will explore how organizational characteristics (the culture, history and structure), positionalities and identities, and policies (for example, tenure and promotion, shared governance, and academic freedom) influence the ability of institutions to dismantle systemic oppression, promote opportunity for all stakeholders, and strengthen democratic life. We will use normative and critical theories to examine the organization and governance of higher education.

**HED 4219 Introduction to Higher Education (4 Credits)**

This course is designed to provide students an overview of higher education as a field of study and practice. The topics covered attempt to equip students with working knowledge of the structures, functions, challenges, concerns, and opportunities within higher education as a social institution. Grounded in values and principles of inclusive excellence, the course takes equity and diversity as departure points from which any and all productive understandings of higher education must engage.

**HED 4220 Organizational Theory in Higher Education (4 Credits)**

This course is focused on the study of theoretical perspectives and empirical research drawn from the social sciences related to higher education organizations and governance with an emphasis on the application of theory and practice.

**HED 4221 Financing Higher Education (4 Credits)**

This course focuses on the financing of public and private institutions of higher learning. Specifically, students will consider sources of income, budgeting procedures, funding and control, and use simulated exercises to illustrate principles.

**HED 4222 Legal Issues in Higher Education (4 Credits)**

This course provides a review of a broad range of administrative problems with legal dimensions; the process for analyzing case law on issues of access, student rights, employment, collective bargaining, church-state relations, private sector, and liability. Students will gain practical experience in analyzing and applying legal concepts to higher education subjects.

**HED 4226 The Community College (4 Credits)**

This course covers general issues related to community colleges, such as their history, mission, characteristics, students, curricula, teaching, and student services.

**HED 4229 Student Support in College (4 Credits)**

This class will introduce students to basic interpersonal helping skills required in Higher Education settings, including relationship building, listening, giving feedback, problem-solving, and resolving conflicts. Students will become familiar with crisis intervention models and techniques; signs and symptoms of distress and mental illness; strategies for making appropriate referrals to mental health providers; and considerations about self and other when engaged in helping relationships, particularly those with cultural differences. Central to the course will be discussion of the appropriate role Higher Education professionals have in helping students while recognizing their limitations.

**HED 4230 Reflective ePortfolio (2 Credits)**

The purpose of this course is to assist students by facilitating their transition into professional positions in higher education. An electronic learning portfolio is a required component for completion of the Master of Arts (M.A.) degree in Higher Education through which students demonstrate significant learning about the field of higher education and themselves. Pre-requisite: Completion of a minimum of 32 credits (out of 50) of coursework toward completion of the Master of Arts in Higher Education. Registration requires Departmental Approval.

**HED 4235 Organizational Change (4 Credits)**

This course will focus on designing, implementing, and evaluating effective change in higher education through an equity-minded lens. The course is intended to assist students in developing a set of understandings in how to plan and implement change in higher education organizations, institutions, and as an industry. The course will introduce "equity-minded change" in higher education and will focus on how institutions can change to achieve equity, while addressing the importance of managing organizational development on a macro and micro level in higher education institutions and organizations. Students will acquire tools to manage and understand change through structural, political, human resource, and symbolic perspectives to understand the systemic interrelationships among these factors to effectively meet the changing socio/economic/political environments within higher education as they impact student success.

**HED 4242 Educational Policy Analysis (4 Credits)**

Students in this experiential course will develop critical policy analysis and praxis skills that have relevance for the implementation of public policy and finance strategies for higher education. Students will employ critical thinking skills to analyze, evaluate and interpret public policy and finance with the goal of advancing the field of higher education's understanding of effective public policy and finance, as well as the unintended consequences that may arise with various policy solutions and funding strategies. Specifically, students will learn how to evaluate whether public policy and finance hinders or assists post-secondary institutions and their leaders in dismantling systemic oppression while promoting educational equity and opportunity and strengthening the public purposes of higher education. Students will interact directly with public policymakers, post-secondary administrators, policy researchers, and policy analysts while assisting with a quarter-long experiential policy analysis project with an intermediary public policy organization. Students will also develop a policy analysis paper.

**HED 4246 Issues of Access & Opportunity (4 Credits)**

This course addresses theories and research on a variety of issues related to college preparation, school structures, and inequalities in college access. The course will cover different levels of analyses: theoretical, individual levels (i.e., race, ethnicity, and social class), organizational levels (family, geography, high school context, and outreach), and field levels (i.e., policy, testing, rankings, media, and policy). Special attention will be paid to the sociocultural context influencing issues of college access and opportunity for students.

**HED 4247 Retention, Persistence, and Student Success in Postsecondary Settings (4 Credits)**

This course introduces students to relevant research, theory, and practice related to college student retention and persistence. Students explore cultural, institutional, and individual factors that may impact college student persistence and critically examine theories attempting to explain why students leave college. In addition, students also closely explore the dynamics of oppression at the individual, institutional, and socio-cultural levels and the resulting impact on student retention. Effective retention practices, programs, and assessment procedures are also identified and examined.

**HED 4260 Students and College Environments (4 Credits)**

This course will serve as an introduction to college environments and the complexity of campus and culture. The purpose of this course is to familiarize you with today's higher education settings and provide you with strategies to maximize learning and development, for all students. In line with inclusive excellence, attention will be paid to the impact of campus environments on diverse student populations. Theoretical concepts will help explain, describe, and examine the college environments as a system and its impact on students, faculty, and staff.

**HED 4261 College Student Development Theory (4 Credits)**

This course is an overview of human development theories relevant to college students, of traditional and non-traditional ages. The application of theories covered in this course will enhance the ability of students in their roles as student affairs professionals to maximize the affective and cognitive development of students within the college setting.

**HED 4270 Internship in Student Affairs (0-6 Credits)**

Supervised experience in postsecondary institutions with a focus on student affairs practice.

**HED 4281 Inclusive Excellence Programming and Development (4 Credits)**

This course provides an overview of the development and implementation of cultural programming and cultural centers over time. Specifically, it will focus attention on the role of student activism in creating change on college campuses in the form of cultural programming and centers, diversity curricula, and inclusive excellence initiatives. The course will also address the challenges and competencies associated with inclusive excellence programming and development.

**HED 4284 Inclusive Excellence in Organizations (4 Credits)**

In recent years, major demographic and economic changes in this country and worldwide have contributed to the diversification of the workplace. As a result, the need for understanding how to enhance cultural diversity in organizations has taken on a greater importance. Accordingly, framed through the concept of Inclusive Excellence, this course focuses on the changing demographics of our society, especially related to race and culture, gender, age, physical ability, sexual orientation, and socio-economic status, emphasizing the implications these factors have for leadership and management in a variety of organizational settings.

**HED 4287 Critical Race Theory and Education (4 Credits)**

The purpose of this course is to provide students with an in-depth exposure to Critical Race Theory (CRT) as it pertains to education. Critical Race Theory is an analytical framework that provides race-based epistemological, methodological, and pedagogical approaches to the study of everyday inequalities in P-20 education. Together, we will work through the historical development continuing on to the contemporary nuances of CRT. In addition, we will work to expose the ideological construction of race and education in the U.S. As such, we will also work through the oppressive nature of education and boldly confront notions of colorblindness. Throughout this course, we will struggle with the challenges surrounding the inclusion of multiple voices and multiple perspectives in the complex intersections among race, ethnicity, gender, class, and sexual orientation. Specifically, we will critique the strengths and limitations of CRT as a framework for addressing educational inequalities.

**HED 4288 Gender & Sexuality in Higher Education (4 Credits)**

This course examines how gender, sexuality, and their inhabitants have been constructed, confined, and disciplined in U.S. higher education. Although neither a history nor philosophy course, we will engage both history and philosophy of sexuality and gender within and beyond higher education studies. Also, while neither a policy nor an administrative practices course, we will also engage issues of policy and practice in colleges and universities. The considerations, complications, and implications that course participants will engage will have direct import for postsecondary education, yet are transferable to other educational, community, and social contexts.

**HED 4289 Race and Racism in Higher Education (4 Credits)**

This course explores connections between race, racialization, and racism in American higher education. It draws on historical, political, economic, and cultural explanations of racial inequity in educational outcomes and processes. The course uses institutional and systemic levels of analysis to examine racial equity in higher education.

**HED 4293 Special Topics in Higher Education Studies (1-4 Credits)**

This flexible special topics course in higher education studies will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as comparative higher education, intercollegiate athletics, student support, and other emergent issues of theory, policy, and/or practice.

**HED 4294 Seminar in Higher Education (4 Credits)**

Advanced seminar to examine timely topics, issues, and problems. The course description is developed each time the course is offered to describe the topics to be investigated.



**HED 4295 Internship in College and University Administration (0-6 Credits)**

Supervised experience in administration at college or university level.

**HED 4296 Internship in Public Policy (0-6 Credits)**

Supervised experience in postsecondary public policy analysis or research, usually at a state or national compact or agency in the Denver-Boulder area.

**HED 4297 Internship in College Teaching (0-2 Credits)**

Supervised experience in teaching at college level.

**HED 4991 MA Independent Study (1-10 Credits)****HED 4995 Independent Research (1-10 Credits)****HED 5991 PhD Independent Study (1-10 Credits)****HED 5993 Doctoral Research - EdD (1-20 Credits)**

Doctoral research credits for doctoral research project toward the EdD. Prerequisite: Must be an EdD student in HED; must have completed at least 80% of coursework; cannot complete more than five credit hours of HED 5993 prior to passing the comprehensive exam.

**HED 5995 Independent Research (1-20 Credits)**

## History (HIST)

**HIST 3350 Social History-Modern Britain (4 Credits)**

This course investigates the intersections of class, gender, and race in nineteenth-century British society. During this period, Britain became the preeminent world power thanks to its spectacular industrialization and its even more impressive empire. Such success often fostered smugness and complacency, yet British society was also riddled with dissension as people struggled to cope with the enormous changes they were witnessing. Discussions focus on the ways in which Victorian people themselves understood their society and its problems, and how they attempted to construct solutions to those problems. Who was implicitly or explicitly excluded from British society? As we consider these topics, we use a variety of secondary and primary sources, including fiction; one goal of the course is for us to think about how to integrate different kinds of sources as we analyze historical problems and create our own interpretations. Cross listed with MUAC 3350.

**HIST 4991 Independent Study (1-10 Credits)****HIST 4995 Independent Research (1-10 Credits)****HIST 5991 Independent Study (1-10 Credits)****HIST 5995 Independent Research (1-10 Credits)**

## Human Resource Administration (HRA)

**HRA 4130 Finance for HR Professionals (4 Credits)**

It is essential for Human Resource professionals to have business acumen as a competency in order to be perceived as valuable business partners. This course addresses financial oversight and budget skills and aims to increase students' knowledge of financial statements, cash flow, operating budget, cost-benefit analysis, and capital budgeting. The course will address financial reports, financial ratios, analysis and measurement tools, and ethical situations as a means to increase the student's business acumen. In addition, the course focuses on understanding how those financial reports influence human capital decisions.

**HRA 4140 HR as a Strategic Partner (4 Credits)**

This course offers an introduction to HR as a professional field of study, discusses how HR fits into the workplace, as well as possible career trajectories. Additionally, students will explore some of the differences in the HR function across the public, private and non-profit sectors. The course presents theories and issues in the HR field, and it defines the HR practitioner as a strategic partner and change agent. The course places HR functional management in the context of organizational strategy and policy while defining the core competencies of HR professionals including recruitment, retention, talent development, benefits design, and employee relations. All coursework is done through an equity and inclusion lens.

**HRA 4150 Human Resources Across Organizations (4 Credits)**

This course prepares HR professionals to work in a number of organizational settings and sectors during their careers. Students will explore how organizations may differ in legal structures, HR models, governmental oversight, records access, type and size, compensation processes, and benefits. Students will also assess how HR practices integrate with organizational strategy and mission to ensure a clear linkage to stated goals and objectives.

**HRA 4160 Human Resources in a Global Economy (4 Credits)**

In this course, students will explore the various challenges, strategies, and frameworks that apply to operating HR at the global level, focusing in on how talent, total reward, employee relations, culture, organizational design, culture and diversity, equity, and inclusion are approached within international organizations. Ultimately, students will understand, identify, analyze, and create strategies related to various HR challenges in the global context.

**HRA 4170 The Inclusive Organization (4 Credits)**

Employees are coming into organizations with differences in race, ethnicity, gender, age, religion, sexual orientation, ability, and other aspects of diversity. How can employees, regardless of level or function, contribute to a more inclusive environment that creates space and psychological safety for everyone? In this class, students will come to a nuanced and comprehensive understanding of what inclusion is, what inclusive practices look like, and what it takes to implement them at the personal, group, and organizational levels.

**HRA 4180 Organizational Politics and the HR Professional (4 Credits)**

Description: Organizational politics may impact programs developed by HR professionals when decisions are made to further individual interest over the interests of others. Despite the inclusion of best practices in recommendations from HR, political reasons, agendas, or actions may drive decision-making, rather than the benefit of employees. This course examines why and how politics may enter HR decision-making, assesses the merits of strategies to navigate organizational politics, and identifies links between motivation and leadership.

**HRA 4230 Consulting and Human Resource Applications (4 Credits)**

HR professionals often serve in a consulting role, both as internal and external consultants. This course includes models, tools, and concepts to build effective relationships with key stakeholders; identify, analyze, and diagnose organizational issues; develop and implement value-added solutions; effectively manage the change process; and measure/monitor outcomes. Students utilize a consulting model approach to turn strategy into action.

**HRA 4240 Human Resources Technology Solutions (4 Credits)**

Technological advances have had a major impact on the use of information for managing human resource functions within both large and small organizations. Understanding how information is utilized in the functional areas of human resources is a critical piece of supporting organizations' decision-making and strategic planning. In this course, students will explore the specifications, development, implementation and maintenance of human resources technology and how the collection, storage, and analysis of human resources data is an important element of all human resources systems. Students will also explore the fundamentals of a human resources information system (HRIS) and best practices for implementing HRIS. Ultimately, students will apply needs analysis to recommend an HRIS to an organization. Other topics covered in this course include international usage and security and privacy issues, including big data, gamification, and artificial intelligence within the realm of HRIS.

**HRA 4250 Integrated Talent Management (4 Credits)**

Organizational value depends on developing, utilizing, and retaining human resources. This course examines the importance of demonstrating that value along with what is needed to acquire, hire, and retain talented human resources. This includes workforce planning and forecasting, competency modeling, talent acquisition, onboarding and career development, succession planning, and developing models. Students will examine how political, economic, and social systems can lead to new policies and practices that affect talent management strategies, along with ethical considerations and inclusivity.

**HRA 4260 HR Analytics and Research (4 Credits)**

This course provides historical context for employee benefits and explores its motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options, which include the overall compensation and benefits an employee receives. Students will gain a solid grasp of the legal and budget implications of employee benefits offerings and will become familiar with the details of specific types of benefits, such as pension plans, health insurance, and flex spending. At the end of this course, students will be able to comprehensively understand, analyze, and strategically design total reward frameworks for organizations. The course aims to equip students with the knowledge, skills, and critical thinking abilities necessary to navigate the complex landscape of employee compensation and benefits, ensuring they can contribute effectively to organizational success and employee satisfaction.

**HRA 4270 Value and Impact of HR Interventions (4 Credits)**

In this course, students will determine the long-term and short-term impact of interventions, especially looking at a cost-benefit analysis. The object is to have a practical strategy to provide decision makers the data for human capital investments support.

**HRA 4500 Organizational Leadership, Team Effectiveness, and Communications (4 Credits)**

In the 21st Century, HR professionals are organizational leaders who are often tasked with building teams, leading change and ensuring strong internal communications. This survey course explores a variety of topics including how to champion organizational change, manage organizational crisis, build effective teams, and develop strategic communications. A critical tool also introduced in this course, supporting the role of HR as a strategic partner, is the balanced scorecard. This enables HR leaders to align deliverables in finance, internal processes, customer and learning and growth measures. This broad overview prepares HR professionals to actively engage in the business dialogue.

**HRA 4510 Organizational Lifecycles and HR Implications (4 Credits)**

This course examines the role of HR at various phases of an organization's lifecycle taking into account mission, vision, and values. Moving from start-up to mature organizations, the course addresses HR responses to compensation, benefits, and HR structure, and addresses how HR can support and facilitate transitions from one lifecycle phase to the next. Students will explore short and long-term strategies that match HR structures and programs to needs of organizations in transition, including change management, crisis management, talent management, total rewards, and organizational communication strategies.

**HRA 4520 HR Change Management (4 Credits)**

Human Resources play an essential role in planning, implementing, and sustaining organizational change. This course examines the role of HR professionals in leading and advising on organizational change, including how to apply HR management practices to change management plans, and aligning total compensation and performance management practices to support the goals of change initiatives.

**HRA 4600 Human Relations in Organizations (4 Credits)**

The goal of this course is to examine how human relations are integral to creating systems and communication channels that support healthy employee relations and create positive workplace cultures. This course will equip human resources professionals to integrate positive human relations as a foundational element of human resources management responsibilities such as recruitment and staffing, legal and ethical considerations, onboarding, training, professional development, compensation and benefits, employee well-being, and employee relations. This course also examines the integration of and differences between human resources management, organizational development, and human relations.

**HRA 4610 Employee Compensation (4 Credits)**

This course explores how to develop and manage employee compensation systems with emphasis on motivational theory, individual and group performance, key elements of compensation-system design, external competitiveness, internal equity, compliance, and innovative reward strategies. Students will explore the practical and strategic purpose of compensation systems from a historical perspective as well as in the context of the social and business issues of today's world economy.

**HRA 4620 Employment Total Benefits (4 Credits)**

This course develops historical context for employee benefits and the motivational implications. It reviews the wide range of potential benefits and discusses "total rewards" options. The course examines pension plans, social security, ERISA, major benefits legislation, health insurance, flex spending, and budget implications.

**HRA 4630 Employment Law (4 Credits)**

This course explores employment law issues that affect the HR function in organizations. It provides an in-depth examination of the complex and dynamic intersection between legal principles and HR functions within organizations. Topics include equal employment opportunity laws, sexual harassment, risk management, discrimination, wage and hour laws, unionization, workplace safety, at-will employment, and other relevant legal concepts. The course will also address issues related to international employment laws. The primary focus is to prepare students with the knowledge and skills necessary to navigate the landscape of employment law and effectively manage HR practices in compliance with legal requirements.

**HRA 4701 Topics in Human Resources (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues in the field of strategic human resource management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**HRA 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**HRA 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**HRA 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**HRA 4980 Internship (0-4 Credits)**

The Strategic Human Resource Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SHRM students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences.

**HRA 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**HRA 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only may be used by degree candidates. Prerequisite: Admitted degree candidate.

## Info & Communications Technology (ICT)

**ICT 4000 Business Essentials for Technology Leaders (4 Credits)**

In this course, students will explore the essential attributes of business research and analysis in the Information Technology (IT) field to make appropriate business decisions. Students will individually and in teams explore the economic principles that drive the IT industry. This course sets the foundation for research, analysis, and critical thinking that will be encountered and required throughout the program. As such, a major component of this course is writing research papers on various topics including economic and technical drivers and challenges, IT economic principles, and the regulatory framework. Additionally, students will participate in collaborative teams as they consider industry trends and customer/user needs during the development process to create a product or service proposal and business case. Lastly, students will have the opportunity to evaluate and utilize management and process tools which will guide class discussions as well as critical thinking and analyses in a structured format. The applicability of these tools extends beyond this course and into the operation and management of an IT organization.

**ICT 4001 Technology Leadership (4 Credits)**

This course is designed to give technology students a broader perspective on technology in organizations. The content will focus on bringing students a new set of skills that will enable them to evaluate what it means to be a technology leader. Students will explore how an IT organization establishes a technology vision and strategy and will develop skills such as communicating effectively, building and managing technology teams, managing risk, and technology budgeting. At the end of the ten weeks, students will demonstrate their technology leadership abilities in an executive presentation.

**ICT 4005 Technical Essentials (4 Credits)**

In this course, students will examine the essential technologies that comprise the field of Information Technology (IT). Students will explore each technical discipline as groundwork for pursuing a specialized discipline while also gaining an understanding of how the disciplines work together. A major component of this course is conducting research and writing analyses of the various technical topics that drive the IT industry. This course sets the foundation for technical research, analysis, and critical thinking that will be encountered and required throughout the IT program.

**ICT 4007 Creative Problem Solving and Programming Concepts (4 Credits)**

In this course students will develop, or improve upon, their problem-solving skills to analyze problems and create solutions. Students will document their solutions and translate them into running programs written in the enormously popular Python programming language. Students will learn programming concepts including the use of variables, program input and output, flow control, conditionals, interpreter- and code-file-based approaches, and error testing. Students will learn how to set up Integrated Development Environments (IDE) such as Visual Studio Code on their personal computers and/or utilize a Cloud IDE in which they will write programs.

**ICT 4010 Enterprise Architecture (4 Credits)**

In this course, students will learn how to integrate IT to effectively support business goals. The course examines how enterprise architecture (EA) informs business and technology strategy. The course will explore the basics of EA, such as reference architectures, architecture patterns, and a comparison of EA and other architecture types. Students will also examine the opportunities and limitations of various EA frameworks and will apply the methods and tools of one of those frameworks, TOGAF, to design and document an EA initiative. Additionally, the EA implications of IT related topics such as cloud computing, global regulatory compliance, data protection, artificial intelligence, and IT ecosystems will be explored. Prerequisite: Recommended ICT 4000, ICT 4005.

**ICT 4015 Managing Technology for Strategic Value (4 Credits)**

Technology's impact on business organizations is tremendous, and will likely only intensify in the future. While some businesses still view technology as an expense to the bottom line, other organizations use technology to gain a competitive advantage. Considering the impact of technology on smaller or startup companies as well as large corporations, this course will explore concepts, tools and frameworks to understand how technology can be used to inform business strategy. Students will apply current methodologies to case studies and projects to gain insight into business and digital transformation. Topics include digital future, business organization framework, technology financial management, data proliferation, technology risk management, disruptive innovations, and performance measurement. Prerequisite: Recommended ICT 4000.

**ICT 4020 Business Forecasting and Planning (4 Credits)**

This course includes a wide diversity of skills required in one's professional career. Topics include the importance of accurate planning and scheduling for successful projects, risk/opportunity analysis, resource planning and allocation, building budgets, revenue forecasting, profit and loss statements, balance sheet analysis, the importance of managing customer perceptions and expectations, and the impact of economic issues on project success. Students will develop business analyses, including budgets and business plans, for several increasingly difficult scenarios addressing a range of technology applications and services. The final case study will culminate in a presentation to be given to potential investors, banks, or venture capitalists to secure a commitment for funding for a simulated telecom project. Recommended prerequisite: ICT 4000.

**ICT 4025 Managing the Innovation Process (4 Credits)**

Students will experience innovation management by developing a new product from ideation to adoption. Students will craft compelling product visions, create innovative cultures, and align teams to their innovation strategy. They will develop a product roadmap and a team that can not only deliver the product, but support its ongoing operations in the market. Students will practice setting strategic objectives for the new product, and explore regulatory, licensing, and pricing concepts – and then bring that information together in a product forecast that helps an enterprise understand product performance from awareness to adoption. All of these elements come together as the project's new product introduction plan, delivered in the final presentation. Required Prerequisite: ICT 4000.

**ICT 4100 Principles of Project Management (4 Credits)**

This course will provide students with practical knowledge, tools, and techniques to become an effective project manager and work successfully within a project team. Students will learn real-world application of foundational concepts and develop skills such as stakeholder management, balancing competing constraints, delivery of value, navigating risks and ambiguity, building and running a high-performance project team, defining scope, managing change, and productive communication strategies. Students will practice classroom concepts through hands-on exercises individually and in teams.

**ICT 4105 Project Contracts and Procurement (4 Credits)**

This course is designed to provide students with leadership and practical skills in project contracts and procurement. The course covers current trends in the procurement marketplace, including digital transformation, supplier relationship management, sustainability, cyber security and agile processes. Students will gain knowledge of the various elements of the contract and procurement process, including procurement plans, requests for proposal (RFP), Statements of Work (SOW), and various types of contracts. Students will learn project management and negotiating skills, and gain hands-on experience developing a procurement plan, supplier selection criteria, an RFP or other appropriate RFx, and contract terms. Recommended prerequisite: ICT 4100.

**ICT 4110 Project Risk and Quality Management (4 Credits)**

This course introduces students to project risk and quality management and develops advanced skills in applying the project management tools and techniques learned in ICT 4100. A focused examination of scheduling, cost, quality, and risk management processes using advanced tools and techniques is included. Emphasis is placed on the project planning, execution, and monitoring and controlling processes. This course is on the Project Management Institute's (PMI) certification track. Recommended prerequisite: ICT 4100.

**ICT 4115 Project Management Dynamics (4 Credits)**

This is an advanced course that applies project management knowledge and skills to identify and analyze a complex project dynamics. Case studies will be used to explore the PMI project domains and project management dynamics. Learning is based on reading case material, the PMBOK Standard, completing project management simulations and the practical application of project management tools and techniques. Students receive hands-on simulation experiences in planning and running projects, and working in learning teams to practice project management roles. Students develop a workable project change management system, exercise project integration and communication skills, and demonstrate the ability to keep an overall project on track. They also demonstrate decision-making skills, with emphasis on making trade-offs based on solid business rationale.

**ICT 4155 Strategic Alliances in the Technology Sector (4 Credits)**

Strategic alliances are one of the key drivers in today's global economy and they have gradually replaced vertical integration as the chief method of corporate expansion. Business-to-Business alliances provide organizations with a variety of benefits including enhancing the capability of organizations and helping to extract maximum value from available resources. While applicable to any industry, strategic alliances are particularly important in the technology sector. This course defines and discusses the roles of various types of strategic alliances in the technology sector, including informal alliances, partnerships, joint ventures, and outsourcing arrangements. Students will use case studies to explore strategies for managing profitability and leveraging these external business relationships. Students will analyze successful and unsuccessful alliances from the perspective of each alliance participant, 3rd party vendors, customers, and a variety of other stakeholders.

**ICT 4170 Agile Techniques and Practices in Project Management (4 Credits)**

Agile principles and practices are used across many project domains, each with its own unique characteristics and challenges. As the term implies, Agile techniques for the successful use of Agile project management processes are not static; they are dynamic and continuously evolving. The Agile debate is now turning from the tactical to the strategic. Realizing the full benefits of Agile (e.g., faster time to market, improved responsiveness to customers, higher quality, and greater efficiency), means more than improving project execution. It requires understanding the right place for Agile versus traditional methods within a modern enterprise comprised of multiple teams or groups of teams. This course examines both the Agile processes and practices for delivering projects, how to choose when Agile is appropriate versus Predictive methods, and the cultural challenges encountered when transforming into strategic Agile teams. Recommended prerequisite: ICT 4100.

**ICT 4200 Cybersecurity Foundations (4 Credits)**

This course will provide students with an understanding of cybersecurity and the importance of implementing sound cybersecurity policies, procedures, and systems. The course is for students who are new to cybersecurity (e.g., newly appointed managers with little cybersecurity experience) or those who need a refresher of cybersecurity fundamentals prior to taking additional courses in the concentration.

**ICT 4205 Cybersecurity Management (4 Credits)**

This course places students in cybersecurity manager roles to expose them to multiple security viewpoints. Students will interact with the full breadth of cybersecurity dimensions, including people, internal and external organizations, systems, and networks. They will learn how organizations strive to control all possible outcomes and occurrences within defined risk contexts as defined by company Directors. Students walk through the management discipline of cybersecurity, starting with the determination of needs and goals and the application of best practices before moving to the continual maintenance and improvement of an organization's cybersecurity stance. The course will provide students with an understanding of management roles and responsibilities including policy and process oversight, adherence to laws and regulations, cybersecurity program management, and understanding the types of reports created and reviewed by cybersecurity managers (such as reports for a Board of Directors). Prerequisite: Recommended ICT 4200 or practical experience in Information Security Principles and Practices.

**ICT 4210 Cybersecurity Policy (4 Credits)**

This course will help students understand critical events that shaped the U.S. cybersecurity landscape. Students will explore the impact of international cybersecurity policy such as the European General Data Protection Regulation (GDPR) on U.S. businesses. Students will learn how to analyze new cybersecurity policies and regulations to determine their impact on organizations.

**ICT 4215 Cybersecurity Risk Management and Incident Response (4 Credits)**

This course covers how to manage cybersecurity risk including mitigating risk, responding to incidents, and incident reporting (in particular when governmental and regulatory agencies need to be notified). This course will also address working with a public relations team and the Board of Directors to create press statements regarding cybersecurity incidents or breaches.

**ICT 4220 Cybersecurity Leadership and Strategic Planning (4 Credits)**

This course covers senior and strategic cybersecurity leadership roles and responsibilities, including the skills required for supervising and managing employees performing cybersecurity-related work. The course will provide students with an understanding of the tools and techniques required for analyzing technology, management, and leadership issues related to organizational processes and problem-solving. Students will learn how to develop new policies and advocate for changes to existing policies that align with organizational goals and cyberspace initiatives, including compliance with various laws and regulatory requirements. The course will also cover cybersecurity risk management concepts and practices. Recommended prerequisite: ICT 4200 or practical experience in information systems security principles and practices.

**ICT 4225 Cybersecurity Audits (4 Credits)**

Cybersecurity audits play a key role in addressing today's rapidly changing cyber threat landscape. Executives, including members of the Board of Directors may be required to certify that they have taken reasonable steps to protect information assets. Cybersecurity audits are a primary way to verify that information system and process controls effectively address cybersecurity risks. This course will cover cybersecurity audits, providing aspiring audit professionals with the information needed to manage a comprehensive audit of cybersecurity controls. Recommended prerequisite: ICT 4210.

**ICT 4300 Web Enabled Information Systems (4 Credits)**

This course is an introduction to the development of modern software systems from the desktop to the cloud. The course examines best practices for software development and introduces the three tiers of software development from the web frontend to the database backend using available tools and software. It covers security issues and best practices related to developing web and cloud applications. This course lays the groundwork for a common understanding of full stack development. This should be the first course taken in: Software Design and Programming and Web.

**ICT 4305 Object-Oriented Methods and Programming I (4 Credits)**

This is the first of two courses that will present Object-Oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course examines Object-Oriented concepts such as abstraction, encapsulation, generalization, and polymorphism. Students will exercise these concepts with hands-on programming practice and define testing procedures. Additionally, students will use Integrated Development Tools and determine the role of software design frameworks. Students without any Java experience are recommended to take ICT 4361 Java Programming before taking this class. Recommended prerequisite: ICT 4300.

**ICT 4310 Distributed Computing (4 Credits)**

This course provides a practical, hands-on introduction to distributed applications and the use of cloud technologies. The course develops students' understanding of application scalability, reliability and virtualization through the design, implementation, and deployment of cloud applications and services. Students will evaluate, recommend, and justify distributed technology solutions based on complexity, reliability and cost. Recommended prerequisites: ICT 4300, ICT 4315.

**ICT 4315 Object-Oriented Methods and Programming II (4 Credits)**

This is the second of two courses that will present object-oriented methodologies and programming concepts using the Java programming language. Students will apply Agile tools and techniques, as well as the Unified Modeling Language (UML) within the software development process. The course builds on the material from ICT-4305 to create code based on models written using the UML while applying industry standard object-oriented design patterns. Students will learn critical skills in designing inheritance hierarchies, working with object persistence and serialization frameworks and multi-threaded code. Additionally, the course will cover critical topics in privacy and security, including recent legislation such as the GDPR. Prerequisite: ICT 4305.

**ICT 4351 .NET Programming with C# (4 Credits)**

Students will explore the fundamentals of C# and object-oriented programming by using Visual Studio to develop desktop and web applications, test and debug applications, perform object-relational mapping using Entity Framework, and connect with XML and SQL data sources. Students will identify and describe various .NET components, design issues, development solutions, and package managers, while gaining familiarity with the core .NET languages and CLR execution. Recommended prerequisite: ICT 4305.

**ICT 4361 Java Programming (4 Credits)**

This course introduces students to the fundamentals of procedural and object-oriented programming, using the Java language. It teaches how to write, run, and debug basic programs before moving to a study of discrete, manageable building blocks that can be composed together to form software of any complexity. It will show how to use Java's built-in tools to load, store, and discover information, both in transient memory and persisted files. Students will interpret and modify sample code, with the help of various online learning aids, and gradually build up the confidence needed to write novel programs based on provided specifications.

**ICT 4370 Python Programming (4 Credits)**

This course starts with an introduction to Python programming covering basic programming concepts and Python syntax. It then continues to deepen students' knowledge of Python by teaching how to access data (text files, databases and other data storage technologies), and process and manipulate that data. Basics of creating front-end interfaces with Python are covered in order to allow students to produce more intuitive interaction with application users. Beyond core Python libraries, other commonly used Python libraries will also be utilized in the course. The course will focus on good programming practices and solving problems effectively. At the successful completion of the class, students will be able to create a number of different types of projects and execute them in Python, as well as continue learning and applying Python skills to data analytics, GIS and other areas of focus. Recommended prerequisite: ICT 4007 (if student has no prior programming experience).

**ICT 4375 Blockchain, Cryptocurrency, and Web3 Foundations (4 Credits)**

Novel protocols, tools, and techniques are restructuring the web itself into a more distributed, trusted, and self-managing network than ever before. Welcome to Web3. This course will help students master foundational blockchain concepts and explore Web3-enabling technologies. Students will gain the ability to confidently apply decentralized technologies like blockchains, cryptocurrencies, tokens, peer-to-peer apps, and more. Furthermore, students will understand how these technologies are being applied in industries around the world and why. Students will gain the ability to critically assess when Web3 technology is advantageous over other solutions both from a technical and financial perspective. Knowledge of basic programming principles is recommended.

**ICT 4390 iOS Application Development (4 Credits)**

This course is designed to help students build a solid foundation in programming fundamentals utilizing the Swift programming language. Students will gain practical experience with the tools, techniques, and concepts required to build an iOS app both on their own and as a part of a team. Students will also learn the fundamental user interface design principles that are necessary for creating a meaningful user experience. Prior programming experience is not required for this course, but students must have a Mac/Apple computer.

**ICT 4395 Android Application Development (4 Credits)**

In the Information and Communications Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. A final grade of B- or better is required in this course to meet degree requirements. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4400 Database Administration (4 Credits)**

This course introduces the roles and responsibilities, as well as the critical knowledge and skills, needed to function as a database administrator. The course focuses on Oracle and Microsoft SQL Server RDBMSs and the Oracle NoSQL databases. Database administration covers a range of topics which are covered in this course; installation, configuration, performance tuning, maintenance, and database security. Special focus will be paid to the architecture of the RDBMS and NoSQL systems, using it as the basis of much of the work throughout the course. There will be weekly hands-on lab work that afford students opportunities to gain valuable practical experience in managing databases. This course will function as an introduction to other courses in the Database Design and Administration concentration, which will give students the occasion to study these topics in greater depth. The course will conclude with an examination of the future of the database field, discussing quantum computing, cloud computing and block-chain technology.

**ICT 4405 Database Design and Implementation (4 Credits)**

In this course, students will focus on database design from a holistic view of a database from inception to implementation. Students will start by exploring the history and evolution of database systems and models and then proceed to hands-on application of database design theory. The course concentrates on the relational database model and the conceptual, logical, and physical phases of database design and development. Entity-relationship modeling, data normalization, and Structured Query Language application are core components of the class. Students will gain hands-on experience with database design concepts and have the opportunity to build a relational database using the foundational principles of database design within the framework of the database life cycle (DBLC).

**ICT 4410 Data Warehousing Design (4 Credits)**

Data warehouses are one of the most valuable assets an organization can possess to remain competitive in a quickly evolving global marketplace. This course provides students an introduction to the role of data warehouses in effective decision-making based on data for strategic and operational objectives and supporting decision support systems. This course will provide students foundational knowledge and skills around data warehouse design and broad coverage of data warehouse concepts, architecture, data modeling, security, implementation and trends underlying current and future development. Prerequisite: Recommended ICT 4400.

**ICT 4415 Database Backup and Recovery with Lab (4 Credits)**

This course explores database backup and recovery strategies and tactics using both Oracle and SQL Server database systems. The course will include weekly lab work that will give students an opportunity to gain experience with Oracle and SQL Server databases. Topics include preparing backup, recovery and disaster plans, as well as performing complete and incomplete database recoveries using the Oracle Export/Import utility. Students also work with a SQL Server database, utilizing the SQL Server Management Studio. Students will be assigned a Linux Virtual environment that will be used for all Oracle administration, and they will install a SQL Server database locally that will be used for all SQL Server administration. Prerequisite: ICT 4400.

**ICT 4430 Database Security (4 Credits)**

As the world has become increasingly data-driven, IT professionals have been forced to dramatically rethink how to protect their most valuable corporate asset, data. This course strives to provide a perspective that intersects several technology disciplines: database administration, web-based application development, and technology management. Taking a defense-in-layers view, Database Security will provide students with an opportunity to gain an understanding of how data is protected from several perspectives. A wide range of database security concepts will be explored, including those specific to the Oracle, MySQL, and Microsoft SQL Server RDBMSs. Students will gain an understanding of the different types of threats and vulnerabilities present in a data-centric world and will develop strategies to protect an enterprise's data footprint.

**ICT 4451 Database Programming: Oracle PL/SQL (4 Credits)**

This course builds on skills learned in ICT 4405 Database Design and Programming. Students will transform a database schema design into a database application using Oracle's PL/SQL programming language. Topics include advanced SQL DDL, DML, and scripting, PL/SQL constructs, stored procedures, modular design and development (packages), software development processes, views, sequences, cursors, dynamic SQL, and error handling. Using weekly assignments, students will practice different aspects of design and development of database applications. Prerequisite: ICT 4405 or SQL experience.

**ICT 4462 SQL Server and T-SQL Lab (4 Credits)**

This course provides a comprehensive introduction to Microsoft SQL Server, utilizing the SQL Management Studio for administrative and development tasks. This course offers a solid foundation of the Transact-SQL (T-SQL) constructs that will enable students to build, query, maintain, and finetune SQL Server databases. The course focuses on basic to advanced queries including joins, functions, data types, stored procedures, declaration and execution, cursors, temp tables, triggers, error handling, transaction management, and security. This course also offers an introduction to common administrative and maintenance tasks, SQL Integration Services, SQL Analysis Services, and SQL Reporting Services are covered. Working in Microsoft SQL Server, students experience hands-on learning in weekly labs to prepare them for real-world situations. Prerequisite: Recommended ICT 4400.



**ICT 4485 NoSQL Databases for Big Data (4 Credits)**

Structured Query Language (SQL) based database management systems (DBMS), commonly referred to as relational databases, have been dominant in the market for over forty years and remain so today. However, the emergence of real-time streaming data from technologies such as the Internet of Things (IoT) and relationship-based dynamic datasets from e-commerce and social networks gave rise to big data. Big data is characterized by volume (petabytes), velocity (data rate), and variety (structured and unstructured). Relational databases are not suitable for big data. The requirements of big data have created the need for alternate databases. NoSQL databases were developed to address the requirements of big data. The requirements of big data cannot be satisfied by a single NoSQL database model because real-time streaming data is structured very differently from relationship-based dynamic data. Many large, well-known companies use different types of NoSQL databases to solve problems in their domain. In this course we will examine four NoSQL database models: key-value, document, column, and graph. Students will learn about advantages and disadvantages of each type of NoSQL database model. The course will include hands-on experience with a relational database and each type of NoSQL database. Students will also learn to analyze the structure of data and select the appropriate NoSQL database model to store and manipulate big data.

**ICT 4505 Website Design and Management (4 Credits)**

This course extends your web design and development skills and includes advanced HTML techniques and enhanced page design capabilities using CSS. The key to great web design is rooted in a solid foundation, which requires a plan or a "blueprint." We will explore best practices in information architecture (IA) and how to incorporate user-centered design (UCD) techniques as a standard practice in web design. Students will also develop an understanding and working knowledge of Cascading Style Sheets. Through the use of readings, examples, hands-on projects, and discussions, the class will build an understanding of the foundations and applications of user-centered design to plan, build, and manage a website. Through participation in a project and regular discussions, class members will experience working as active and contributing members of the class and knowledge-building community.

**ICT 4510 Advanced Website Design and Management (4 Credits)**

Web development has become an integral part of the tech industry and has created a multitude of career options for job seekers. This course will enhance the knowledge gained in ICT-4505 by delving into HTML5 JavaScript APIs and Responsive design using a common CSS framework. Students will be introduced to beginner, intermediate and advanced JavaScript concepts. Finally, the foundational web languages HTML5, CSS and JavaScript will be used to build a fully functional client-side application. Prerequisite: ICT 4505.

**ICT 4515 Usability Design for Websites (4 Credits)**

This course expands on the basic knowledge of website design and development by providing an in-depth understanding of how to design a website with the user in mind. Students will gain knowledge about how the fields of human factors engineering and psychology (e.g., visual perception, attention, cognition, learning and memory, information processing) relate to the basis of usability design as well as how usability assessments are conducted. Usability guidelines for common functions such as web navigation, search, menus, scrolling, links, text, page layout, visual organization, etc. will be explored. Students will have the opportunity to develop a website that demonstrates appropriate use of important usability guidelines and conduct usability assessments with real users. Prerequisite: ICT 4505.

**ICT 4540 Data in Web Application Development (4 Credits)**

XML is an open, text-based markup language (Extensible Markup Language) that provides structural and semantic information to data. XML was designed to store and send data, and it can also be used by software and web-based applications for display. This course explores several common industry-leading approaches, models, and techniques for XML in business applications. Hands-on experience with the XML formats and manipulation, which includes syntax, structure, context, and programmatic uses of XML, form the weekly assignments, culminating in a summary project. Other related standards, such as JSON, are discussed, as well as use of CSS for display of XML data. Some JavaScript is introduced to illustrate the document object model and techniques for integration of data. Prerequisites: Students should have familiarity with constructing HTML web pages and data concepts. Familiarity with data manipulation, APIs, or a programming language will be helpful but not required.

**ICT 4560 Web Graphics Production (4 Credits)**

This course introduces the fundamental concepts and techniques of digital graphics creation and image processing for both online publication and website interface design using industry-leading tools as well as topics around use policy and considerations of image manipulation in the digital age. Students learn the basics of manipulating, correcting and modifying images, bitmap painting tools, vector drawing tools, typography, masking, web production techniques, and advanced image compositing in hands-on exercises and assignments. Basic integration of images and generated code into a website layout employing CSS is also covered. Experience with tools like Adobe Photoshop is useful but not required.

**ICT 4570 Web Scripting with JavaScript (4 Credits)**

This course presents students with the principles necessary to design and develop client-side and server-side scripts used to build dynamic websites and applications. JavaScript concepts such as data types, control structures, functions and objects are discussed. Students learn how to write beginner and intermediate scripts. Students will be introduced to frameworks and libraries such as Node.js and Arrow Functions that are used to create interactive and dynamic client-side and server-side applications. Real world examples will be included. Technologies covered in the course include JavaScript/ECMAScript, JSON (a JavaScript-friendly data format), XML (Extensible Markup Language) JavaScript as the J in AJAX, and JavaScript in HTML5 form interaction and validation. Prerequisite: Recommended ICT 4505, ICT 4510.

**ICT 4580 Cross-Platform Mobile Application Development (4 Credits)**

The mobile device market has grown tremendously over the past few years. Self-contained apps that are focused on one concept account for a large percentage of this growth. This course teaches the basic concepts of developing a mobile application using a framework so that the application runs on different devices. Students will synthesize the basic knowledge of the framework to create building blocks of various tools. They will follow best practices in the development lifecycle of building a mobile application. Students will compare and contrast various frameworks for mobile application projects. They will construct their mobile application that could be deployed across many platforms that use native device APIs and hardware. Prior programming experience recommended.

**ICT 4605 Principles of Information Security (4 Credits)**

This is a comprehensive Information Systems Security management course covering the eight basic principles of Information Assurance and Information Systems Security. The course follows the Common Body of Knowledge (CBK) convention established by the International Information System Security Certification Consortium, Inc. (ISC)2. In this course, students learn about information security risk management, asset security, security architecture and engineering, communication and network security, identity and access management, security assessment and testing, security operations, and software development security. The course applies a systems approach to security issues to analyze and develop security solutions. The information covered includes contemporary issues of cybercrime and how to mitigate cybersecurity risks. All topics are discussed in the context of a total enterprise-wide framework.

**ICT 4610 TCP/IP Networks (4 Credits)**

This course explores the design, architecture, capabilities, and security of the TCP/IP protocol stack by looking at its history, development, and current applications. The course also explores how TCP/IP has supported the growth of the Internet, Internet of Things (IoT), and next-generation wireless networks and services. The TCP/IP model, standards, and key architectural principles that support data flow are examined through familiarization with the full TCP/IP v4 and v6 protocol suites. Students explore TCP/IP capabilities, addressing/subnetting, performance, and cybersecurity issues. The course also covers security-specific protocols to support secure network communications, user identity protection, and the security aspects of all other protocols. Students will examine secure VPN services and mechanisms for personal and business Internet connectivity. The course concludes with a survey of modern topics including Real-Time Communications and IPv6.

**ICT 4615 Identity and Access Management (4 Credits)**

Identity is the new security perimeter. Access can be determined based on a persona, a role, or a user type. Identity and Access Management (IAM), then, is the foundation for access to any secured computer resource and must be handled and managed carefully and deliberately. This course will provide students with the skills they will need to succeed at designing and implementing access control mechanisms on networked systems. The course covers the principles and mechanisms that compose an overall IAM system and is based on modern technology that supports Zero Trust, Federated Identity, Role-based Access Controls (RBAC), and Attribute-based Access Controls (ABAC).

**ICT 4670 Disaster Recovery and Business Continuity Planning (4 Credits)**

This course is an introduction to Disaster Recovery and Business Continuity (DR/BC) Planning. The course examines the steps required to identify mission-critical continuity needs of an organization, analyzes the legal & regulatory requirements for data security, and evaluates the various risks management approaches to identify and quantify business risk associated with business continuity. The course provides students the opportunity to create a Disaster Recover/Business Continuity (DR/BC) plan that incorporates business resumption planning, emergency response & communication, and data/system recovery techniques.

**ICT 4680 Principles of Cryptography (4 Credits)**

E-commerce has made cryptography a cornerstone of modern information systems security. Cryptology is a core component of all recognized information security certifications; however, it may be the least understood of the information security disciplines. This course focuses on the terminology and concepts needed to understand how cryptographic techniques are used to protect sensitive information. Topics include different types of ciphers (substitution, transposition, block and stream), Digital Signatures and Message Authentication Codes, public key infrastructure (PKI), secure sockets layer (SSL), and network protocols for encryption, among others. Lecture and reading materials are reinforced by hands-on experimentation in a virtual lab environment focused on real-world uses of cryptography. Internet resources are used to tie the course material to current technology trends. No programming experience or advanced mathematical skills are required for this course. Recommended prerequisite: ICT 4605.

**ICT 4685 Cloud and Internet Law (4 Credits)**

This course explores the legal and technical ramifications and implications created by cloud computing and Internet Law. This course also examines the types of issues and concerns that exist in the US and the world by the dynamic change in software, computer networking, and cloud infrastructure. This rapid change in computer networking, data, information, Internet, and cloud architecture directly impacts governments, companies, and individuals. Issues include how to handle data, information, security, privacy, civil and criminal laws, rules and regulations, contractual agreements, and service-level agreements between parties on many levels from service providers in different states, countries, and parts of the world. It is important that all of these issues are balanced by differing cultural standards and mores from all 50 States, all over our country and all around the world, including the legal (and sometimes not so legal) methods of protecting governments and companies in this ever-changing, "always-connected" world.

**ICT 4690 Computer Forensics with Lab (4 Credits)**

This course will introduce students to current methods and techniques in computer forensics with a focus on the appropriate procedures for evidence collection and processing. As electronic information increases in its importance and use in the court of law, future investigators need to be able to collect and analyze forensics data from computer systems in support of incident investigations, including e-Discovery, forensic analysis and reporting, evidence acquisition, Internet browser forensics and tracing user and application activities on computing systems. The course is supplemented by hands-on exercises, case studies, and a final culminating assignment. Prerequisites: Required ICT 4605 (unless prior ISS experience), Recommended ICT 4610.

**ICT 4695 Application Security (4 Credits)**

In this course, students explore the security concepts, principles, training needs, and practices that are used to secure the modern software development lifecycle (SDLC). Topics include enhancing Agile/Scrum development processes with secure design models and application risk analysis, application lifecycle management, defensive programming, secure DevOps, and AppSec (application security) issues with new technology and new consumer devices. Recommended prerequisite: ICT 4605.

**ICT 4700 AI Concepts, Capabilities, and Tools (4 Credits)**

This graduate-level course provides a comprehensive exploration of evolving artificial intelligence (AI) concepts, tools, and their applications in organizational settings. The course is tailored for all learners seeking to gain a foundational understanding of AI concepts. Students will gain a deep understanding of the benefits, limitations, and tradeoffs associated with designing and engaging with AI tools. The course aims to empower students to champion appropriate AI use within organizations, identify business or organizational problems suitable for AI solutions, and navigate the dynamic landscape of AI in their respective industries.

**ICT 4701 Topics in Information Technology (4 Credits)**

This is an advanced special topics seminar course that may be offered to address a developing concept, an industry trend, or a new technology. The focus is on specialized areas of interest. Topics courses may be used as electives within the Information Technology degree and certificate programs, and, with advance approval from Academic Director, may substitute for core courses in the degree or certificate program.

**ICT 4800 Network Communications and the Internet (4 Credits)**

This course focuses on the fundamental concepts and technologies of communications networks and the Internet, including Network Communications theory through the TCP/IP stack, which is the foundation of modern communication systems. The course also emphasizes application of these concepts to the analysis and design of network solutions for various Enterprise and Service Providers requirements. Topics include in-depth analysis of the layered structure of networking protocols, network media, communications standards, LAN and WAN network architectures, in-depth IP routing, and current trends in networking via the Internet. Students will analyze the purpose of network routing protocols, their respective algorithms, and IP addressing. Students will apply critical thinking via discussions of current and future trends in network technology, expanding to IP Services, Network Virtualization, and their role in networking evolution. Prerequisite: Recommended ICT 4005.

**ICT 4820 Advanced Network Technologies (4 Credits)**

Technological advancements in networking within the last few years are revolutionizing networking concepts for both enterprises and service providers. This course demystifies those latest advancements in network technologies. Topics include in-depth coverage of modern networking elements, network requirements, and network virtualization technologies, including Software Defined Networks (SDN) and Network Function Virtualization (NFV). The course will also explore the latest network technologies' requirements, such as elastic traffic, mobility, ultra-low latency, on-demand bandwidth, and more. Further, students will discuss the motivations behind network softwarization, SDN and NFV components, architecture, protocols, and use cases. The course emphasizes deep understanding, analyses, and evaluation of modern network architectures. Prerequisite: Required ICT 4800.

**ICT 4830 Broadband Wireless Networks (4 Credits)**

This course examines how Broadband radio technologies are changing to meet the growing demands for autonomous vehicles, smart cities/smart homes using smart IoT devices, cellular communications that deliver consumer entertainment/relevant and specific information content, support remote workers, and online learning. Wireless telecommunications networks are studied with an emphasis on the challenges and the approaches to meet the demands of continually increasing data traffic from devices such as mobile smartphones, tablets, hotspots, smart IoT devices, new emerging technologies like cellular-vehicle-to-everything (C-V2x), as well as broadband services like VOIP and mobile video. Current and dominant wireless telecom technologies and protocols are presented, including 3G, 4G LTE, OFDM, MIMO, Mobile IP, WIMAX, and Wi-Fi. The new 5G NR technology standards and services (eMBB, URLLC, mMTC) will be presented. The wireless telecom industry is studied from standards, carrier, and technology perspectives, with an emphasis on radio networks designed to support key use cases. Prerequisite: Recommended ICT 4835.

**ICT 4840 Next Generation Wireless Networks and Services (4 Credits)**

The rapid innovation in wireless networks that is at the center of today's IT industry takes place in the four areas of broadband radio, core and edge networks, wireless services, as well as smart objects. This course focuses on the key next generation technologies at the core network, service, and object layers. First, the role of the Internet Protocol Multimedia Subsystem (IMS) in the core network is examined, which is at the heart of many service provider deployments. At the service layer, this course emphasizes wireless service architecture, including popular applications such as mobile real-time messaging, video, and mobile web services. The production of networks and services through cloud technologies is highlighted. The course also explores The Internet of Things (IoT), which plays a prominent role in modern wireless networks. A case study approach is taken to highlight core use cases from key industries including Smart Cities, the Smart Grid, and Industry 4.0. Finally, wireless product development and operations are examined in the critical context of the conflict between over-the-top (OTT) and network operator ecosystems. Prerequisite: Required ICT 4800.

**ICT 4845 Information Systems Attacks and Defenses (4 Credits)**

This course will provide students with the knowledge and skills necessary to conduct effective penetration testing and develop defensive techniques that prevent the attack(s) or reduce the effectiveness or impact of those attacks, should they succeed. Students will focus on real-world examples of both perimeter network security and desktop security across almost any computing environment. Students can work with a range of network security toolboxes in a hands-on, robust software lab environment. Students will also learn how to use the MITRE ATT&CK framework to identify and analyze various attack techniques, tactics, and procedures (TTPs) used by adversaries and will understand how to apply Cyber Kill-chain strategies, followed by using the MITRE D3FEND framework to implement effective defensive measures to mitigate and prevent these and future attacks. Recommended Prerequisite: ICT 4605.

**ICT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and who can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ICT 4902 Capstone Seminar (4 Credits)**

In the Information Technology Capstone Seminar, students will apply their cumulative knowledge and skills to create a culminating work that critically addresses a problem in their degree field of study. Students make iterative progress on a capstone project throughout the course that presents a position on a relevant problem, supports the position with academic and professional literature, analyzes the proposed solution, and synthesizes scholarly findings. Primary research will not be conducted. The seminar is structured around collegial discussion and continuous feedback from peers and the instructor. At the end of the course, students will present their capstone project with professional and academic audiences in mind. Prerequisite: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ICT 4980 Internship (0-4 Credits)**

The IT internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the IT master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all IT students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the IT degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ICT 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.

**ICT 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a for-credit basis.

## Information Technology & E-Commerce (ITEC)

**ITEC 4270 Emerging Technologies (4 Credits)**

Emerging Technologies and Strategies investigates new information technologies. Having a broad view of emerging technologies as they relate to business can provide an organization with a valuable strategic advantage. Those organizations that can most effectively grasp the deep currents of technological evolution can use their knowledge to protect themselves against sudden and fatal technological obsolescence.

**ITEC 4280 Intro Software Engineering II (4 Credits)**

A continuation of ITEC 4270, this course covers systems development in a client-server Internet/Intranet environment using the Java programming language. Principles of event-driven systems, remote database access, and building GUI (Graphical User Interface) prototypes for interfacing with desktop systems are included. Prerequisite: ITEC 4270 or instructor's permission.

**ITEC 4310 Electronic Commerce (4 Credits)**

This course is an overview of electronic commerce (EC) trends and techniques including the underlying technical infrastructure, traditional ED techniques such as electronic data interchange (EDI) and commerce at light speed (CALS), Internet use for EC, business models for business-to-consumer EC, marketing on the Internet, payment and fulfillment mechanisms, security and regulatory issues, and global implications. Uses lectures, cases, outside speakers from industry and field trips.

**ITEC 4320 Networks & Telecommunication (4 Credits)**

This course examines network-enabling technologies and concepts, including LANs and WANs. Network design, management, and trouble-shooting issues will be covered. Network design in the age of the Internet will be emphasized, including intranets, extranets, design issues, security and firewalls. Pros and cons of private networks, including virtual private networks, will be discussed. Alternative technologies such as wire line, wireless, satellite and cable will be covered. Cross listed with ITEC 3810. Prerequisite: ITEC 4475.

**ITEC 4350 Practicum (1-4 Credits)**

This course will consist of an information systems project performed by small teams of students and tailored to individual students' needs. It will be undertaken for a "client" in the business community. Supervised by a faculty member, each project will permit students to apply what they have learned in a live setting and focus on project management planning, reporting, and problem discovery and resolution. Prerequisite: ITEC 4300 or ITEC 4330.

**ITEC 4476 Business Process Analysis and Design (4 Credits)**

This course starts with the traditional information technology systems analysis and design and broadens this approach to include analysis and design of better business processes - innovative processes which deliver greater value to customers and enterprises alike through creative uses of information technology. We will analyze past and current examples and look for ways to build on and extend these successful exploitations of information technology to other companies and industries. In short, this course is about exploring innovative ways to create greater business value by analyzing and designing not only the systems, but also the business processes these systems are created to support.

**ITEC 4477 Database-Driven Websites (4 Credits)**

Using state of the art technologies, this course focuses on the development of dynamic web pages. Technologies include PEARL, ASP, ColdFusion, SQL, Access, and Oracle. Cross listed with ITEC 3477. Prerequisite: ITEC 4475 or current enrollment.

**ITEC 4478 XML (4 Credits)**

This programming course is the second of a five series Web Services course track designed to prepare the student for the certification exam offered by Microsoft in the development of .NET applications. The second module of the series, XML, provides a thorough understanding of the main techniques surrounding the development of XML applications. Up until now, it has been very difficult to communicate and transfer data between different platforms. The surge of XML as a universal text-based standard readable and interpreted by any other system available, has opened the channel to enhance the development of cross-functional applications. Students will learn to write the codes describing the data, processes it and prepare it for presentation, as well as modeling and designing functional components that will later be used to drive the applications. Topics include: creating well-formed and valid XML documents, parsing the documents and creating the format to display it through the client's browser, design functional components and the interconnections among them. Some of the tools that the student will learn to use in this course are XML Syntax, DTD, Schema, CSS, XSL, XSLT, DOM, SAX, SOAP, WSDL, and UDDI. Prerequisite: ITEC 4477 or concurrent enrollment.

**ITEC 4480 ASP.NET (4 Credits)**

The goal of this course is to provide students with the knowledge and skills that are required to develop XML Web services-based solutions to solve common problems in the distributed application domain. The course focuses on using Microsoft Visual Studio .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate and consume Extensible Markup Language (XML) Web services.

**ITEC 4481 C#.NET (4 Credits)**

The goal of this course is to provide students with the knowledge and skills needed to develop C# applications for the Microsoft .NET Platform. The course focuses on C# program structure, language syntax, and implementation details. C# was created to be the programming language best suited for writing .NET enterprise applications. C# combines the high productivity of Microsoft Visual Basic with the raw power of C++. It is a simple, object-oriented, and type-safe programming language that is based on the C and C++ family of languages.

**ITEC 4486 Information Technology Management (4 Credits)**

This course focuses on issues central to the effective management of the IT function including, but not limited to: managing the IT organization, IT's changing role in the enterprise, and managing internal and external relationships.

**ITEC 4500 Strategic Info Technologies (4 Credits)**

How organizations are using information technologies for competitive advantage.

**ITEC 4610 IT Strategy (4 Credits)**

Businesses run on information, organized data about customers, markets, competition, and environments. Information systems (interconnected computers, data, people, and processes) are critical to capture, organize, and disseminate that information in ways that provide stakeholder value. This course is designed to help managers, technical and non-technical alike, to explore how to derive greater value and satisfaction, both personally and professionally, from information systems.

**ITEC 4700 Topics in Inform. Technology (1-10 Credits)**

New topic area discussion in information technology.

**ITEC 4980 Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Permission of instructor required. Hours and times arranged by student.

**ITEC 4991 Independent Study (1-8 Credits)**

Individual study and report. Hours and times arranged by student.

**ITEC 4995 Independent Research (1-8 Credits)**

# Instructional Design and Technology (IDT)

## **IDT 4000 Strategic Planning for Accessible Learning Design (4 Credits)**

This course will help students develop expertise in accessibility principles, institutional processes, and legal considerations. The course explores federal accessibility regulations, common practices for implementing accessibility, and solutions to common challenges of accessibility implementation.

## **IDT 4001 Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Instructional Design and Technology program must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

## **IDT 4010 Curricular Development and Program Assessment for Adult Learning (4 Credits)**

This course will provide students with the skills to develop and maintain program-level or department-wide training curricula for adult learning environments. By taking a holistic continuous-improvement perspective, this course will explore how learner needs assessments lead to the development of measurable learning outcomes, teaching practices, and then to a curricular plan. The course will examine inclusive practices that assist departments in creating equitable, authentic assessments.

## **IDT 4100 E-Learning: Course Design, Models, and Practice (4 Credits)**

This course introduces instructional design theories, models, processes, and strategies for adult e-learning. We focus on instructional design principles that inform the methodology, skills, and techniques necessary for designing e-learning experiences for adult learners. Students will practice designing and selecting e-learning materials and analyzing the types of activities that best serve online learners.

## **IDT 4120 E-Learning: Multimedia Application (4 Credits)**

This course will take a deep dive into the development of key media assets such as video, interactives, and other course design elements incorporating inclusive best practices. The course will explore both the technical aspects of creating media for learning purposes, as well as the pedagogical and UX considerations in media design. Prerequisite: IDT 4100.

## **IDT 4130 Equity, Justice, and Inclusivity with Learning Design (4 Credits)**

This theory-to-practice course will explore a theoretical and a practical understanding of justice, equity, and inclusivity (JEI) in learning design. Students will be encouraged to connect their experiences to the foundational concepts in this course and develop an understanding of the impact of equity, inclusion, and justice in course design. Students will leave this course with practical tools for advocating for justice, equity, and inclusion in educational contexts.

## **IDT 4140 Universal Design for Learning (4 Credits)**

## **IDT 4150 Project Management and Stakeholder Communication (4 Credits)**

Whether in a corporate, higher ed, or government setting, instructional design projects require meticulous management from start to finish. This course will cover strategies and tools to equip instructional designers with the skills necessary to assess project needs, plan design iterations, and meet stakeholder expectations all while meeting project timelines.

## **IDT 4203 Adult Learning Strategies and Theories (4 Credits)**

Individuals involved in adult learning design and development benefit from a strong foundation in adult learning theories and strategies to develop effective practices. Adult learners bring unique needs, life experiences, and prior knowledge to learning situations and thrive when inclusive, motivational, and relevant application of knowledge, concepts and skills are utilized. In this course, foundational and emerging theories regarding how adults learn best, along with analysis of key instructional strategies, provide solid grounding for implementing best practice in adult learning.

## **IDT 4701 Topics in Instructional Design and Technology (4 Credits)**

## **IDT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

## **IDT 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**IDT 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the course produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**IDT 4980 Internship (0-4 Credits)**

Instructional Design and Technology Internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notifications to all IDT students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**IDT 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. Before registering for the independent study, the student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices. Independent Study is offered only on a for-credit basis.

## Intermodal Transportation (TRAN)

**TRAN 4100 Fundamentals of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, giving students an understanding of supply chain processes from sourcing to finished goods and customers to suppliers, identifying the six core supply chain processes and examining the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management that impact the users and providers of services. Additionally, current trends in the technology of supply-chain management, including applicable global trends will be covered.

**TRAN 4110 Fundamentals of Supply Chain Planning (4 Credits)**

According to the Six Pillars of Supply Chain program design at the University of Denver, the system can only succeed if it acts as an integrated system. This course focuses on the first three pillars of the supply chain management system, design, source, and schedule, the steps that are taken before a product is made. Supply Chain Planning is focused on how agents in the front end of the supply chain system are centered on how to create, procure, and plan/forecast within the overall process within and across companies. Students are exposed to concepts and practical examples of how front-end activities are achieved within the overall supply chain model. The course introduces concepts and tactics in product and supply chain design, strategic sourcing, forecasting, demand planning, and supplier management. Prerequisite: TRAN 4100.

**TRAN 4120 Fundamentals of Supply Chain Execution (4 Credits)**

This course focuses on the last three pillars of the supply chain management system: make, deliver, and sustain. Make, or manufacturing, is the production process of the product based on the planning steps in the supply chain. Distribution focuses on what happens between the product being made, and purchased by the consumer. Sustain, the last step, is focused on how these materials can be reused in the supply chain rather than wasted. In this course, students will be able to build upon their knowledge of the front-end of the supply chain to evaluate what makes supply chain strategies successful in the marketplace. Real-life examples will be applied related to global supply chains and the changing nature of retailing, including the impact of e-commerce, to demonstrate how successful execution must follow supply chain strategies and plans for success. Prerequisite: TRAN 4100.

**TRAN 4130 Structured Problem Solving in Supply Chain Management (4 Credits)**

This course provides opportunities for students to apply concepts covered in the first three courses of the program to an individual project through the completion of a structured problem-solving exercise in an area of study related to the student's specific area of interest. Potential topics will either relate to one of the six pillars in the SCM model, or a specific area of interest as a special topic, such as sustainable supply chains, supply chain structure, supply chain risk management, etc. Upon completion of this course, the student will possess a deeper understanding in an area of focus related to application of the student's future interests. The student will be introduced to how this topic area can be applied in a company in a real market setting. Prerequisites: TRAN 4100, TRAN 4110, TRAN 4120.

**TRAN 4140 Supply Chain Technology and Systems (4 Credits)**

This course provides a fundamental definition of the role of technology and systems in supply chain management, demonstrating how "people and processes" intersect with these increasingly important tools. Students will learn how system and technology strategy can become key differentiators in the field across the six pillars of the supply chain and are required to integrate disparate suppliers and partners. Specific current and future trends will be explored, including the implications across local, national, and global systems. The focus will be related to the strategic, operational, and tactical design and execution of technology and systems related to how supply chains operate. TRAN 4100, 4110, 4120, 4130.

**TRAN 4150 Supply Chain Cost Management (4 Credits)**

A successful supply chain strategy must be effective not just in its material flow within the six pillars and the information flow from its systems, but its financial flow as well. Companies and their corresponding supply chains can achieve improved cost management that leads to greater top line revenue growth through improvements in financial flows achieved waste reduction, inventory carrying cost, capital investment and management and terms with suppliers and customers, to name a few. How the financial flow of the company and its supply chain is dependent on the entity's material and information flows, and vice versa. This course will provide an understanding of how these flows work in conjunction with one another, and how supply chain professionals must understand the role of financial management fundamentals in the process. Prerequisite: TRAN 4130.

**TRAN 4160 Analytic Methods for Supply Chain Management (4 Credits)**

Because Supply Chain Management is built off of structured problem-solving techniques across suppliers and partners requiring rapid and precise decision making, analytical methods are a requirement for success. In this course, the student will be presented with advanced techniques in quantitative analytics that are critical for today's largest companies and innovators. Upon completion of the course, the student will be familiar with how to apply these techniques under various situations across the supply chain and within the firm. Prerequisite: TRAN 4130.

**TRAN 4170 Industrial Engineering and Operations Management (4 Credits)**

Industrial Engineering and Operations Management is the application of engineering, logistics, finance and analytics, and structured problem-solving techniques to achieve the goals of today's global supply chains. In this course, the student will be introduced to the concept of Industrial Engineering, including critical methodologies such as Six Sigma, Lean, and the Toyota Production System. Upon completion of the course, the student will be able to apply these structured problem-solving techniques to an advanced level across the six pillars of supply chain management. Prerequisite: TRAN 4100 & Advisor approval.

**TRAN 4180 Sustainability and Supply Chain Management (4 Credits)**

Sustainability in Supply Chain Management is founded upon the principles of Six Sigma and Lean to not only reduce waste within the system, but also to solve some of the world's greatest challenges in relation to the environment. Through an understanding of the supply chain across the six pillars and through the use of finance, industrial engineering, logistics, and analytics, the student will be capable of defining, measuring, analyzing and solving the balance required between industry and the environment. Prerequisite: TRAN 4100 or MKTG 4380.

**TRAN 4190 Import/Export Supply Chain Management (4 Credits)**

Today's supply chain is global, and this means that companies must understand how to buy and sell goods across national boundaries. In this course, the strategic, operational, and tactical requirements of importing and exporting will be presented to the student in order to understand how the global supply chain operates. A specific focus will be on freight forwarding and customs requirements into and out of the U.S. territory through various ports and entry and egress. Prerequisites: TRAN 4130.

**TRAN 4330 Principles of Supply Chain: Management and Technologies (4 Credits)**

This course will assist students in gaining awareness, knowledge, and understanding of the distribution patterns and relationships that play a key role in determining company success. We will view perspectives within the context of the global marketplace and across both freight and passenger transportation. We will address external value chains and internal value chains; stakeholder relationship management; the supply chain and the demand chain complexities; strategies of E-business; the strategic use of IT; strategic planning to gain a competitive advantage; end-to-end supply chain visibility and the strategic use of technologies in the enterprise-wide system.

**TRAN 4400 Excellence in Leadership (2 Credits)**

This course will provide an integrated exploration of current topics most important for leadership success within the transportation industry. Current best leadership practices will be reviewed, and common leadership challenges within transportation will be analyzed for successful resolution.

**TRAN 4410 Executive Management Practices in Organizations (1 Credit)**

This course will provide a comprehensive view of best practices for executive management in transportation workplaces. Organizational situations will be assessed from a variety of viewpoints and policies analyzed for optimal execution of strategy.

**TRAN 4420 Leading with Integrity (1 Credit)**

This course will explore ethical decision making and values-based leadership. Values, ethics and organizational philosophies will be assessed for best application in various corporate settings within the transportation industry.

**TRAN 4430 Applied Micro Economics & Pricing (4 Credits)**

The course will involve fieldwork and U.S. site visits observing and discussing the physical elements underlying the long-term and marginal economics of the firm and its pricing strategies and policies. In addition, the course will discuss basic microeconomic concepts used in the analysis of business services, including the concepts of market size; marginal, average, short-run, and long-run costs; and production levels as they relate to revenue and contribution with a focus on pricing for the firm relative to its fixed and variable costs, market share framework, and competitive issues both within the mode and between modes.

**TRAN 4440 Marketing, Sales, Procurement & Customer Management Strategies (4 Credits)**

Within the context of Transportation and Supply Chain, this course will explore the strategies related to the Sales and Marketing process and strategies from the seller perspective and the related perspective of Procurement from the buyer perspective. Additionally, the strategies and measures used for Customer Management will be explored including customer setup, advancing customer excellence practices, customer valuation and segmentation, and other related concepts. Further, the concepts of establishing, building, and maintaining trust will be explored as a key strategy and practice, which appears throughout each of the four main components of the course.



**TRAN 4450 Legal Studies: Contracts & Regulation (2 Credits)**

This course will focus on the fundamentals of creating and implementing effective contracts, whether with customers, suppliers, or labor. The contract discussion will be framed by regulatory and policy realities both in domestic and international contexts, including an understanding of federal and international laws, liability, regulations, policies, programs, and agencies impacting contracts.

**TRAN 4460 Financial & Managerial Accounting (2 Credits)**

This course will cover the basic theory, principles and practice of financial accounting and examine accounting statements including income and cash flow statements and balance sheets. Discussions include managerial use of accounting data useful in making investment and cost decisions, assessing cash flows, and the use of the organization resources to produce profit. Additional topics will include reading and understanding the 10-K, basic accounting standards and practices, and assessing the quality of financial information found in the accounting reports.

**TRAN 4470 Financial Analysis & Capital Structures (2 Credits)**

Complementing 4460, this course will use ratio analysis to determine relative performance of companies and the industry to enable management to assess operating efficiency, profitability and effective use of capital. Capital structure concepts, fixed and variable cost considerations, the use of operating and financial leverage and the concepts of business and financial risk will be discussed. The course also includes a basic review of the principle of time value of money.

**TRAN 4480 Capital Decision Making and Capital Markets (2 Credits)**

This course will examine the management decision process for making capital expenditures that enhance the value of the firm, cash flow estimation for capital budgeting purposes, decision models for capital budgeting, weighted average cost of capital, decisions in capital constrained situations, sensitivity analysis, and a review of the capital markets.

**TRAN 4490 Global Trade & Economics (4 Credits)**

This course will examine the World Trade F15 Organization and the regional trade agreements, such as NAFTA, EU, and ASEAN, with regard to their impact on North American transportation, trade, and economy overall including their relationship to account deficits and their N20; and their impact on disputes and how trade disputes are settled. In addition, the course will address the global economy and economics and its drivers, comparing and contrasting North America, China/Asia, the European Union and selected emerging economies to include impacts on global trade, such as trading patterns, outsourcing, and changing production areas.

**TRAN 4701 Topics in Supply Chain (1-4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Supply Chain Management, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4702 Topics in Transportation Management (4 Credits)**

The content of this course varies each time it is offered. Topics may include time-sensitive issues in the field of Transportation Management, new courses being piloted, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**TRAN 4710 Transportation Finance (4 Credits)**

This finance course focuses on the transportation managers ability to understand and analyze financial statements. Topics covered will be the basics of major accounting statements, income and balance sheets, use of operating leverage, ratio analysis to determine relative performance of companies and the industry individual modes and across modes. An emphasis will be placed on time value of money and capital expenditure analysis and decision models for capital budgeting. Exploring markets and the sources of financial capital, securities, public and private financing will be discussed.

**TRAN 4800 Advanced Concepts of Transportation & Supply Chain (2 Credits)**

This course is a program-wide survey course in which each of the primary learning outcomes of the Executive Masters' program are reviewed: Leadership, Economics & Finance, Technology & Optimization, Supply Chain, Trade & Legal concerns, and more, are all explored within the context of current trends in Transportation and Supply Chain space.

**TRAN 4810 Innovation and Technology in Global Transportation and Supply Chain (4 Credits)**

Innovation and change are prevalent in the global supply chain and transportation industrial structure. This course exposes students to an array of technology trends and innovative ideas for boosting competitive advantage, predicting disruptions, and preparing for new forces emerging from GIS, the Internet of Things, artificial intelligence and machine learning, and cloud-based products. The advantages and security issues related to big data and analytics are investigated as they relate to compliance and decision-making for managers and leaders. Understanding analytics helps managers and leaders identify and implement new technology in real-world applications. Students will explore what it means to have an innovation mindset and how it is applied while making decisions that maximize asset utilization and control wastage and/or redundancy and how to successfully apply emerging technologies to their careers and organizations.

**TRAN 4820 Principles of Supply Chain Management (4 Credits)**

This course will provide an overview of the basic principles of supply chain management, as well as current trends in supply chain technology and global value chains. Students will learn the six core pillars of supply chain processes and how suppliers, customers and other stakeholders are linked in these processes. The course will examine the role that transportation and logistics play in the supply chain. Students will learn the key operating and financial measures of supply chain management, apply the problem solving framework known as DMAIC (Define, Measure, Assess, Innovate, Control) to a real-world supply chain problem.

**TRAN 4830 Advanced Supply Chain Management (4 Credits)**

Building on foundation of Supply Chain Management from TRANS 4820, this course enables the business leader to gain a customer centric system view of supply chain management that is achieved by today's top companies. A more advanced view of the six pillars of supply chain management will be studied as it relates to a stakeholder model of both customers and suppliers. In this course, the goal is to understand how a stakeholder's (customer, supplier, partner, etc.) supply chain operates across three flows (physical, logical/system, and financial) related to a transportation provider. The goal of this course is to provide the student a process and functional understanding of supply chain management in order to achieve success from a process, financial and strategic standpoint. The course will offer particular emphasis on industrial engineering skills related to supply chain operations.

**TRAN 4840 Policy and Regulatory Effects in Transportation & Supply Chain (2 Credits)**

The purpose of this course is to explore how public policy and regulation manifest in transportation and supply chain systems and how companies can effectively navigate that process. Students will learn about the history of transportation and supply chain regulation and how it has changed over time. They will review how infrastructure and systems are planned, operated, and financed and what roles the public and private sectors play. Additionally, the course explores safety, security, and trade concerns, Environmental Social & Governance (ESG), and how to develop strategies for their companies to engage in the policymaking process in ways that maximize value for their enterprises.

**TRAN 4850 Transportation & Supply Chain Strategies for the 21st Century (4 Credits)**

Today's supply chain and transportation markets are rapidly evolving across localities and the definition of what global means. In the 21st century, supply chains will become exponentially more fluid, and transportation providers will need to understand and incorporate these changes. In this course, the 21st century supply chain expectations will be discussed from a people, process, and technology standpoint. Students will determine how transportation providers will need to respond to these changes, and how emerging technologies will be incorporated in emerging supply chain strategies and supplier/provider processes. Supply chains will become more local and global concurrently - and this course will evaluate what is required to respond successfully to these trends.

**TRAN 4860 Senior Management: Executives & Issues Seminar (4 Credits)**

Through the use of transportation executives in the classroom, this course will explore in-depth some of the key concepts covered during the course of the degree program, to include topics such as applied transportation finance, merger and acquisition issues, shipper transportation metrics/requirements, global freight flows to/from North America, and government/military transportation. In addition, in case studies, students will propose options for real-world challenges using knowledge and data from current events, degree program courses, case material, and guest executive presentations.

**TRAN 4870 Individual Leadership Development Project (4 Credits)**

This course will guide students through the process of developing and executing individualized leadership development projects to enhance specific leadership skills and goals within their current management structure or an assigned organization. Through work over the six quarters of the program, the leadership projects will provide a unique opportunity for each student to hone critical aspects of her/his leadership, which, in turn, benefits the students, their organizations, and the larger transportation, logistics, and supply chain community.

**TRAN 4880 Business Planning Thesis (4 Credits)**

This course will guide students through the creation of a comprehensive business development and/or productivity improvement-oriented business plan, with a preferred focus on the transportation industry, to develop a new revenue growth or new service opportunity for their organization or an assigned organization. Through work over the six quarters of the program, this project provides each student with important business planning and development skills to create an implementable business plan, which may provide tangible benefits to their sponsoring organization as well.

**TRAN 4890 Global Transportation & Supply Chain Seminar (2 Credits)**

This international travel seminar will build from learning objectives encountered throughout the Executive Masters program. Students will examine the management and operation of transportation and supply chain operations in other countries, and compare them to their own home county-based operations. During the travel event, students will meet with executives, government leaders, and local managers of these systems to learn directly about the challenges of serving the global economy, and will learn how to recognize and navigate international cultural differences in a business setting.

**TRAN 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**TRAN 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon the quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentations. Students must have acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**TRAN 4980 Internship (0-4 Credits)**

The Supply Chain Management Internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience. A training plan is created for each student in conjunction with the internship site supervisor to provide experiences related to the skills and knowledge covered in the certificate and master's programs as well as professional goals. Students are responsible for finding their own internship site and proposing their internship ideas. University College will send notification to all SCM students if they hear of internship possibilities. Students may also work through the DU career center, to explore opportunities for internship experiences. To be eligible for an internship, completion of a minimum of 28 hours of graduate coursework in the field of specialty is required OR Academic Director approval for students with previous work experience in the field.

**TRAN 4991 Independent Study (1-10 Credits)**

## International MBA (IMBA)

**IMBA 4700 Topics in International Business Administration (1-5 Credits)**

Topics change each term.

## International Studies (INTS)

**INTS 3665 Comparative State Building (4 Credits)**

Since the fall of the Berlin Wall, countries in East Central Europe have experienced some twenty-five years of fascinating political, economic, and social change as they have tried to rebuild themselves, undergone democratization, and transitioned to a free market. But the legacies of the region's dramatic and often tragic encounters with war and ideology in the 20th and 19th centuries are still shaping how East Central European societies respond to the new horizons following the collapse of the Soviet bloc. This course is designed as an overview and analysis of the processes of state-building in East Central Europe from the eve of imperial independence in the late 19th century to the present day. We will learn about the condition of the states and nations of East Central Europe before WWI and how they embarked on their nation-building projects after the demise of the foreign empires, the Ottoman, the Austro-Hungarian, and the Russian, that had ruled the region for 500 years. We will then discuss the onset of yet another foreign mode of control – communism – and we will learn how communist reality and Soviet hegemony was lived by the people of Poland, Hungary, Czechoslovakia, Serbia, East Germany, Romania, and Bulgaria for over forty years. After the initial wave of optimism after independence, the political chaos and economic backwardness of the interwar period 1918-1939; after the resistance, collaboration and murder of the Second World War; after the terror and senselessness of Stalinism; after the exhilaration and disappointment of the Hungarian Revolution in 1956, of the Prague Spring in 1968, and of Solidarity in Poland in 1981; after the gray monotony of decaying communism and the lonely voices of dissidents, we will come to the triumphant revolutions of 1989 and the challenges of the post-communist transition. For many of these states, the project of building a liberal democratic state and a functioning market economy over the last twenty years can be considered an impressive success. For others, however, the transition has been undermined by political mismanagement, economic backwardness, and ethnic nationalism. We will weigh the roles of domestic actors and of international institutions in bringing about East Central Europe's successes and failures over the last century. At the end we will discuss some of the key outcomes, positive and negative, of the accession to another ("foreign") empire - the European Union, which ten of these post-communist states joined in 2004-07. Prerequisites: INTS 1500 and INTS 1700.

**INTS 4010 Epistemology (4 Credits)**

An introductory course covering philosophy and history of science, epistemology, causality, and the logic of inquiry as related to international studies. The relation between theory and practical politics is explored, and differences between empirical and normative theory are examined in the context of foundational principles of politics and social science.

**INTS 4011 Comparative Genocide (4 Credits)**

This course examines the historical origins, patterns, and legacies of contemporary genocides around the world. We begin with the UN Convention on the Prevention and Punishment of the Crime of Genocide in 1948, which legally codified the definition of genocide and compelled ratifying parties to prevent its reoccurrence. Yet as we'll see, genocide has instead reoccurred with alarming frequency. We will discuss the definitional and analytical challenges facing this subject, as well as academic and policy debates regarding how to define and prevent genocide. We will also explore different approaches to seeking justice and reconciliation in the aftermath. To do so, this class will ground theoretical debates in empirical case studies.

**INTS 4029 International Business: Strategy and Practice (4 Credits)**

This course focuses on applied issues in international business. Students will learn to think strategically about international business issues, and will in turn be able to apply that thinking to best practices. The following subject areas will be covered: country selection, entry mode theory, exporting, born-global businesses, organizational structures internationally, negotiation, consumption, culture, and demand. Other potential topics include global supply chain management/sourcing, country of origin effects, etc.

**INTS 4031 Conflict and Security in Cyberspace (4 Credits)**

This course is for Korbel in DC program participants only. Cyber conflict is a new and complicated strategic problem that will engage the international community at many different levels. The cyber environment challenges traditional strategic thinking, and work on an adequate policy framework to assess and manage cyber conflict is at an early stage. Many traditional security concepts will need to be adjusted for the cyber environment through review and discussion. This class will look at both the national and international dimensions of cyber conflict in the larger international security context.

**INTS 4040 Technology and War (4 Credits)**

This course introduces graduate students to past, present, and future trends in warfare, focusing especially on the how technological advances affect the ways in which states engage in international conflict. The course will begin by introducing students to a number of theories that help shed light on why technological developments occur and how they affect the conduct of war. Subsequent classes will then examine important technological developments and assess how each has impacted the use of force over time. Topics range from the invention of gunpowder and the use of machine guns, to the development of nuclear weapons, the use of unmanned technologies on the battlefield, and the growing importance of the cyber domain to future inter-state conflict.

**INTS 4046 Global Economic Inequality and Human Rights (4 Credits)**

The main purpose of this course is to understand the conceptual and empirical issues underlying the political economy of global inequality and its relation to Human Rights. What is inequality? What are the global dimensions of inequality and what are the connections between global inequalities and human rights? What are the proximate and deeper causes of global inequality? How does the analysis of deeper causes of global inequality and poverty relate to the underlying political economy of global capitalism? In order to do this, we will look at the relationship between the world economic system, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus on the more recently developed social capabilities approach developed by Amartya Sen and others. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy. A special feature of the course will be an analysis and assessment of the millennium development goals and the prospects for progressive policies in the post-MDG period, e.g., the SDGs. We will also examine the problems of the advanced countries in a rigorous holistic framework that will go beyond the important work of Picketty and his collaborators on inequality.

**INTS 4047 Global Sustainable Development and Human Rights (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between sustainable development and human rights globally. For this purpose we will need to understand both the current global political economy (GPE) and Geopolitics. The key questions are: What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between sustainable development and human rights globally and within particular nation states? How does the discourse of the linkages between sustainable development and human rights relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between sustainable development and human rights relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among sustainable development, human rights, energy, technology, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions. After an initial exploration of these issues we will focus critically on the more recently developed social capabilities approach developed by Amartya Sen and others within the context of domestic and global political economy. In particular we will explore the limits of policies under the existing institutional arrangements and examine the need for fundamental changes in the global political economy and within the nation states. For this purpose we will try to find the approximate but deep causal structure of GPE and the place of sustainability and human rights within this GPE. A special feature of the course will be an analysis and assessment of the climate change issues and renewable energy and critiques of technological fix.

**INTS 4048 International Politics of Nuclear Weapons (4 Credits)**

This MA-level course analyzes subjects central to the understanding of the role of nuclear weapons in international politics. The course addresses the origins of the atomic bomb project, early efforts to control nuclear materials, deterrence theory, nuclear strategy and force posture, and considers contemporary challenges to the global nuclear order including nuclear latency and nuclear terrorism. The goal of the course is to introduce students to the evolution of scholarship on the role of nuclear weapons in international politics, and to evaluate contemporary nuclear security issues in light of this broader context. Each class will focus on a different substantive topic, interweaving theory with history to better understand each issue area. The course will start with the initial development and use of nuclear weapons, followed by an in-depth look at the early thinking on nuclear strategy and escalation during the Cold War. These classes will cover the Manhattan Project, the bombings of Hiroshima and Nagasaki, the basics of deterrence theory, the arms race between the United States and Soviet Union, and historical cases of nuclear crises and brinkmanship (the Cuban Missile Crisis being the most well-known example). During weeks 5-7 students will explore the politics of nuclear acquisition, evaluating different explanations for why states build nuclear weapons. This section of the course will also explore the variety of ways that the international community has sought to prevent the spread of nuclear weapons, including the important role of international institutions, norms, and the nuclear disarmament movement. The final three classes are devoted to contemporary topics in nuclear politics, including the threat of nuclear terrorism, nuclear energy and dual-use issues, regional instability in Northeast and South Asia, the Iran nuclear deal, and the implication of new technologies (e.g. autonomous systems, 3D printing, precision weapons) for nuclear issues. The final class will provide the students with the opportunity to take stock of what we have learnt over the course of the quarter and to reevaluate early thinking on nuclear weapons in light of what we know now.

**INTS 4049 Addressing Complex Interagency Problems (4 Credits)**

This class will ask students develop the skills and addresses the challenges associated with the process by which policy recommendations are developed within the United States Government, particularly as they relate to complex multi-dimensional security problems. Students will learn about the roles played by various departments and agencies that are engaged in the policy making process, as well as how external actors impact the development of national security policy. This class will also give students the opportunity to learn about the policy making process in the United States inter-agency environment through a series of presentations from practitioners as well as hands-on experience via role-playing and the development of briefing memos, presentations and other materials. Students will learn about the history, structure and function of the interagency process, including past and current reform processes such as the Clinton Administration's Presidential Decision Directive on Managing Complex Contingency Operations (PDD-56) as well as the more recent Project on National Security Reform. Students will also hear several real-life examples of interagency policy-making from former government officials and various subject-matter experts. Students will be expected to role-play members of a mock National Security Council (NSC) team or as representatives of various US Government Departments and Agencies involved in the interagency decision-making process. Students will identify an actual national security problem and be responsible for debating and agreeing to a set of policy recommendations within the format and structure of the mock NSC. Select students may have the opportunity to present their recommendation to a current member of the National Security Council via video-teleconference. At the end of course, students should have a fundamental understanding of the strengths and weaknesses of the current system; what constitutes good NSC products and how to produce them; and how concession and compromise, trade-offs, external public pressure, intelligence issues and budget realities all can play a role in how national security decisions are made.

**INTS 4050 Statistical Methods I (4 Credits)**

An introductory course featuring statistical reasoning, probability, sampling, statistical inference, nominal and ordinal measures of association, and correlation. Open only to students with no prior background in statistics.

**INTS 4051 Statistical Methods II (4 Credits)**

This course is a continuation of Statistical Methods I, covering the fundamentals and primary methods of statistical inference. Topics include two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, correlation, simple regression and multiple regression. Emphasis will be on problem solving, computer applications (using Stata) and interpretation of results. This course is offered in the Winter quarter only. Prerequisites: INTS 4050.

**INTS 4052 Statistical Methods III (4 Credits)**

This course will serve as continuation of Statistical Methods II. This will be an applied, non-calculus based course on statistical techniques used in nonparametric and multivariate analysis. Emphasis will be on applications and data analysis using the statistical software package SAS. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4056 Information Management in Humanitarian Crises (4 Credits)**

Accurate, reliable and timely data collection, processing, analysis and dissemination (four steps in information management) are critical for the effective implementation of both development and humanitarian programs. In humanitarian responses, there are numerous challenges to managing information in what may be a rapidly evolving situation. This course introduces students to the theory of information management and its application in the humanitarian context.

**INTS 4057 Statistics (4 Credits)**

This is a fast-paced course which serves as an introduction to basic and intermediate concepts in statistics and probability, as well as the primary methods of statistical inference. Topics include data collection, presenting data in tables and charts, summarizing and describing numerical data, basic probability, discrete probability distributions, normal distribution, sampling distributions, confidence interval estimation, single-sample and two-sample hypothesis testing, analysis of variance, chi-square goodness-of-fit tests, chi-square contingency analysis, simple regression and multiple regression. Emphasis will be on statistical reasoning, problem solving, computer applications (using Stata), and interpretation of results. Prerequisite: Strong quantitative background and a minimum quantitative GRE score of 148 or permission of the instructor.

**INTS 4058 Applied Time-Series Analysis (4 Credits)**

This course serves as an introduction to time-series analysis and panel data analysis techniques. Topics include moving averages, exponential smoothing, time-series decomposition, model identification and estimation, Box-Jenkins method, ARMA and ARIMA models, and VAR analysis. Panel data analysis includes fixed effects and random effects models. Emphasis will be on computer applications (using Stata) and interpretation of results.

**INTS 4059 Data Science With Python (4 Credits)**

Python is a widely used programming language for data exploration. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions, and so forth. They will then learn how to write Python programs to conduct data exploration, statistical analysis, visualization, and predictive analysis techniques like decision trees and text mining. Students will also learn how to use various libraries available in Python (like Numpy, Pandas etc.) in their programs. Finally, they will learn how to read and debug (i.e. fix) Python programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4060 Data Visualization (2 Credits)**

"The simple graph has brought more information to the data analyst's mind than any other device," stated John Tukey, a mathematician distinguished for his contributions to the field of statistics. The course, "Data Visualization" will introduce students to the Grammar of Graphics philosophy which has fundamentally changed thinking about data visualization in the last 20 years. We will use two popular data visualization tools designed using this philosophy: Tableau and the ggplot2 package in R. Students will create a portfolio in which their data visualizations implement best practices – and avoid common pitfalls – to effectively deliver insights.

**INTS 4061 Introduction to Survey Methods (4 Credits)****INTS 4062 Data Science with R (4 Credits)**

R is a widely used programming language for data analysis. In this course, students will first learn programming concepts like data types, regular expressions, conditional statements, loops, functions etc. They will then learn how to write R programs to conduct data exploration, visualization, basic statistical analyses, as well as produce reproducible reports. Students will also learn how to use various packages available in R in their programs. Finally, they will learn how to read and debug (i.e. fix) R programs written by someone else. No prior programming experience is necessary to enroll in this course.

**INTS 4063 Advanced Statistics (4 Credits)**

This course is a continuation of INTS 4057 Statistics. Topics include multivariate analyses such as principal component analysis, discriminant analysis, logistic regression and data examination. Emphasis will be on conducting data analyses as well as on interpreting Stata output. In addition, students will develop and write an empirical research paper using a rigorous analysis of the elements of formal research writing. Prerequisite: INTS 4057.

**INTS 4078 Modeling for Policy: Development, Sustainability, and Conflict (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of “traditional” development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward. This course introduces students to professional analysis using one class of quantitative tools called integrated assessment models (IAMs), which quantitatively represent complex systems in interaction. IAMs are tools that formally model the interaction across key development systems, like demographics, economics, energy, and the environment. They can be used to 1) think critically about how key trends are unfolding, 2) identify leverage points; and 3) explore the impact of changing policies and environmental uncertainties on desired outcomes.

**INTS 4090 Values-Based Leadership in International and Public Affairs (4 Credits)**

The professionals who leave Korbel to enter international and public affairs will come to hold positions of influence, privilege, and leadership as they seek to promote the public good. Their behaviors will have significant consequences for those with whom the work, those they serve, and for third parties. Ethical leaders must be attentive to the challenges and contradictions associated with their positions, influence, and interventions. What values do we hope professionals in international and public affairs will embody, and how might they enact those values? This team-taught course engages the entire Korbel graduate student body in centrally important, common, and difficult ethical issues that professionals in international affairs and public policy confront in their work. The course examines values-based leadership, which comprises ethical dilemmas but also issues and questions that commonly arise in practice but do not generally “fit” within the field of professional ethics. Traditional ethics courses tend to teach the two or three principal approaches to ethical frameworks and then present cases to apply those frameworks. This course on values-based leadership (VBL) also examines cases—but it takes the view that professional ethics as it is typically taught does not suffice to prepare students for the complexities of the world they will confront. As a corrective, the course is interdisciplinary, and among other fields incorporates troublesome findings from the new field of behavioral ethics. For example, why do virtuous people often violate their own ethical norms and then fail to recognize that they have done so? The course also reaches beyond ethics to engage other values that are central to responsible leadership—such as inclusivity, allyship, and access to decision-making by those targeted for professional research and policy interventions—while also exploring the contradictions and risks associated with professional privilege. Faculty and students will explore the power dynamics of decision-making where the populations that are the most affected by interventions often lack decision-making authority and may even be further disempowered by professionals’ good intentions. The course looks to bring together, in one Korbel-wide, cross-degree conversation, matters pertaining to values in leadership so that students can engage with others with a broad range of backgrounds, orientations, and career aspirations. No one discipline or professional field has a monopoly on good thinking on VBL. And so the course draws widely on the diverse experiences and expertise of students and faculty at Korbel as we confront together some of the most difficult challenges professionals face over the course of their careers.

**INTS 4091 Great Issues in International Affairs (4 Credits)**

The course embraces a grand challenges approach that focuses on major issues of the day, while introducing key concepts central to the student of international affairs, notably international political economy, international relations, and governance in all its forms. Issues may vary from year to year, but will be those central to the Korbel School's mission. These will likely include: • Economic Inequality • Environmental Sustainability • Democracy and Human Rights • Security A lead professor will teach the first and last weeks of the quarter and coordinate the remaining weeks. Four other faculty members will each teach a two-week unit on one of the core issues. Each unit will seek to develop students understanding of: 1. The nature of the problem, its manifestations, its causes and its consequences 2. The array of possible interventions—by governments, international organizations, private firms, NGOs, and other—that might address causes or ameliorate consequences. 3. How one would decide which course of action to take. The course will utilize a mix of lectures and discussion sections led by PhD students. Generally, the first week of these units will frame the larger issue and the second will focus on a more particular instantiation of that issue. For example, in a unit on Inclusive Economic Growth, a first lecture might be explore the broad contours of economic inequality and its likely causes and second might focus on a narrower topic such as access to education, social mobility, or gendered dimensions of inequality, depending on the expertise of the faculty member leading that unit of the course.

**INTS 4105 Campaigns and Foreign Policy (4 Credits)**

This course will examine the principles of political campaign management and their application to international political campaigns, foreign policy initiatives and international affairs. Students will be introduced to the tools of political campaign management: message development, survey research, audience targeting, and paid and earned communications. Case studies will focus on elements of both US and other nations' foreign policy. Examples of foreign policy playing a significant role in campaigns in the UK, and Denmark will be highlighted. In addition, there will be a focus on human rights and issue campaign. Classes will be comprised of lectures, discussion and some simulation exercises. Outside specialists will be invited to share their experience and expertise in person or via teleconference. Readings include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management. Movies and the Internet will be an integral aspect of the class.

**INTS 4110 Food/Nutrition Security and Sustainable Development (4 Credits)**

This policy-oriented course will examine structures and processes that result in varying food security outcomes across space and time. Food security outcomes reflect interactions among political, economic, socio-cultural, and physical environmental systems. These systems, which are both dynamic and permeable, give rise to particular forms and patterns of food production, distribution, and consumption, and to more or less environmentally-sustainable uses of the natural resources critical to food and nutrition security. Ultimately, food security is realized when all people within a population consume sufficient nutrients to live active and healthy lives. This normative focus on human health and well-being, as the metric by which food security outcomes will be measured, is critical to the framing of this course. Political, economic, and social institutions—positioned at scales encompassing global, national, “local” (micro-regional, community), and household—are simultaneously charged with producing food in particular physical environments and/or making food available and accessible to their populations, and with protecting environmental resources and public health in ways that contribute to nutritional components of human development. The term “political ecology” has been used to describe an analytical framework that explicitly focuses on the interactions among the structures of political economy and those of physical/biological ecologies (including human), together with the socio-cultural contexts that influence structural impacts and help to explain outcomes. This framework incorporates both an explicit navigation among scales (of power and of analysis) and a long-term perspective. Cumulatively, the readings and exercises of this course will build a political ecology of policy domains central to improving food security and nutrition outcomes in both global north and south. We will examine policy issues and constituencies, institutional approaches, theoretical perspectives, and empirical analyses. You will have opportunities to engage with institutional approaches through structured exercises, including a mid-term graded exercise. You will also have an opportunity to produce an independent project that will include your own policy recommendations.

**INTS 4127 The Rise and Fall of Great Powers (4 Credits)**

This new graduate course provides an in-depth look at often ignored areas of history. Learning about the rise and fall of the Roman Empire, British Empire, Russian Empire, Soviet Empire and Chinese Empire provides an excellent backdrop to understanding important historical lessons that are often downplayed in the early 21st century. The course provides a series of good works that can help students better understand the present and future developments of our century.

**INTS 4134 Forever Emerging? The Developmental Trajectory of Modern Brazil (4 Credits)**

Brazil has the largest population, economy, and industrial basis in Latin America. It is the seventh largest economy in the world, fifth largest country in land area, outranking the continental United States. Like the US, Brazilians are a mix of indigenous, European, and African peoples, along with subsequent inflows of Asian and Middle Eastern immigration, though race, ethnicity, and class have been interpreted with distinct cleavages and hierarchies. We approach our understanding of Brazil through the country's former capital, Rio de Janeiro, a city of numerous complexities, wonders, contradictions, challenges, and potential. By looking at the historical evolution of this fascinating city, the course will offer students an opportunity to study the evolution of Brazil, from the colonial period to the present day, when the country has increasingly been seen as a regional economic and diplomatic powerhouse, as well as a globally emergent player. By focusing on the historical trajectory of Rio de Janeiro, in an in-depth reflection structured along textual, visual, and in-sight materials and experiences, students are invited to reflect about matters of change and continuity as well as how national socio-political trends are reflected in local contexts, thus also learning to reflect about the interpretive relationship between the micro-macro levels of analysis. Historical political and economic narratives, contemporary analysis of the country's place in the world, films, music, architecture, guided visits to neighborhoods and local cultural institutions will be our explanatory prisms into the Carioca (Rio-based) spirit and cultural memories as expressions of national trends and trajectories. Through lectures, seminar discussions, and field studies, we explore Rio's renowned and sometimes notorious informality, from informal housing (favelas) to language, social organization and economic activities. We also explore themes such as tourism, the history of housing policies, and the transformation of local culture into 'national' and 'export' cultures. Moreover, by looking at the urban transformations over the last 200 years, we explore Brazil's drive to become an industrial power, as well as the new social conflicts produced by these efforts. Finally, we investigate Brazil's contemporary culture, politics, sports, achievements, promises and continued challenges as it proceeds as a so-called emergent nation into the 21st century, while still struggling with its colonial past.

**INTS 4136 U.S.-Cuba Relations (4 Credits)**

This class will review relations between the U.S. and Cuba from the Spanish-American War in 1898 to present day. On one hand, we find a stand-off that includes an invasion and trade embargo by the U.S., mutual attempts at political disruption, and the exodus of populations from each country to the other. On the other hand, we find surprising levels of cooperation including a longstanding pattern of “back channel” communication between the two governments as well as a degree of cooperation at the societal level. In addition, each country has had a profound influence on the development of social ideals in the other.

**INTS 4137 China in the World: Global Drivers, Local Conflicts (4 Credits)**

It is impossible to understand the 21st century without discerning China, which now possesses the largest army in the world, the biggest economy in terms of purchasing power parity, and the greatest number of people. Chinese firms provide foreign direct investment (FDI) worth \$3.8 trillion in stocks by 2018 and Chinese policy banks fund official development finance totaling around \$658 billion between 2000 and 2019. Chinese information and communications technology firms have launched some of the most widely used applications such as TikTok and Zoom. The Ministry of Finance, the People's Bank of China, and the State-owned Assets Supervision and Administration Commission of the State Council have been able to rewrite some of the global development architecture, launching the Belt and Road Initiative and Asian Infrastructure Investment Bank and the. Global commodity chains pass through Chinese territories or maritime economic zones, reaching 12.4% of global trade in 2019. In security issues, the Chinese Ministries and the People's Liberation Army have defined norms such as the responsibility to protect in the international community. In global struggle to reduce decarbonization, Chinese electric vehicle companies have been at the forefront of these new technologies and renewable energy companies have made major strides at limiting carbon emissions within its borders. The Chinese Communist Party has redefined human rights, putting the economic definition of the right to livelihood and work above everything else. China's new rich comprise the fastest growing number of billionaires in the world who are responsible for investments in online gambling or wildlife hunting.

**INTS 4141 Domestic/Int'l Conseq:Drug War (4 Credits)**

Domestic and international policy and the impact of the drug war on both.

**INTS 4142 After the Fall: Russia & China (4 Credits)**

Provides analysis of the historical rise of Russia and China, and their complex inter-relationship and interaction with the United States and the world.

**INTS 4147 American Govt & Pol. Making (4 Credits)**

Examines governmental fragmentation affects and policies and examines how policy issues engage different segments of the government.

**INTS 4201 Quantitative Analysis of Global Environmental Change (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate This course examines the role that quantitative analyses play in characterizing risks to society or ecosystems posed by global environmental change, and how various policy options could reduce those risks. We will focus in particular on analyses with "integrated assessment models" (IAMs), which have been influential in shaping the climate change policy debate. IAMs are typically global-scale systems analyses that integrate societal and environmental aspects of the climate issue. The course will survey alternative types of IAMs and explore how they work using one of the original, and still most influential, IAMs in the climate field, the Dynamic Integrated Climate-Economy (DICE) model developed by recent Nobel laureate William Nordhaus. We will use a recent version of DICE to explore how assumptions affect outcomes, and understand the strengths and weaknesses of such models.

**INTS 4205 Hacking for Defense (4 Credits)**

Hacking for Defense (H4D) is designed to provide students the opportunity to learn how to work with the Department of Defense (DoD) and Intelligence Community (IC) to better address the nation's emerging threats and security challenges. (See the background here.) Unlike current practices in the DoD/IC that can stall and in some cases thwart rapid innovation, this course provides a platform to develop prototypes that address DOD/IC users' needs in weeks. Agencies or Commands in the Department of Defense and Intelligence Community may provide follow-on funding to student teams for further refinement and development of prototypes. In this Hacking for Defense (H4D) course, student teams may either select from an existing set of problems provided by the DoD/IC community or introduce their own ideas for DoD/IC problems that need to be solved. Although teams pick a problem to solve, Hacking for Defense is not a product incubator for a specific technology solution. Instead, it provides teams with a deeper understanding of selected problems and the host of potential technological solutions that might be arrayed against them.

**INTS 4207 The Global Political Economy of China (4 Credits)**

China's rise in the 21st century has given rise to complex reactions in both the global North and the global South. This course will explore the rise of China and its possible consequences for the Global Political Economy from a complex systems perspective. The recently developed evolutionary theory of Global Political Economy will be the basic framework. We will build up an applicable ecologically sound evolutionary theory from the bottom up to understand 21st century Chinese paradoxes and ambiguities. These paradoxes and ambiguities are not accidental but relate to tensions in the moral economy of PRC embedded in the world of the early 21st century. Furthermore, the uneven development of both the Chinese and Global Political Economies across space and over time has led to immense inequalities among groups and possible polarizations. We will examine these inequalities and related emerging issues both theoretically and empirically and begin a conversation between the theorists and practitioners. In this way, this course is intended to begin the much needed dialogue among students of global society regarding the contemporary relevance of a complex multilayered innovative economy like that of the PRC. The ecological and geopolitical aspects of China's rise will be analyzed within our Evolutionary Ecological Global Political Economy framework. The well-being of the Chinese people and others in the Global Political Economy will be analyzed by using an extension of Sen's capabilities theory called the Socially Embedded Intersectional Capabilities Theory.

**INTS 4210 Global Value Chains, Multinational Corporations, and Investment Sustainability (4 Credits)**

The emergence of sweeping new legal rights for Multinational Corporations (MNCs) in relation to their foreign direct investment and cross-border trading activities under the avalanche of bilateral investment treaties negotiated in the last few decades and under multilateral conventions such as NAFTA represent what many have termed "revolutionary" changes in the nature of state sovereignty as it relates to state-investor relations. That expansion of investor/MNC rights in relation to state sovereignty has thus seemingly reached a point calling for re-examination of the nature and appropriate scope of MNC rights, as well as the nature of MNE accountability and responsibilities which are the flip side of such rights.

**INTS 4215 Gender and Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has grappled with the concept of gender and how to operationalize it in the context of humanitarian preparedness and response. Through readings, class discussions, guest speakers and assignments, students will have the opportunity to gain a better understanding of how the humanitarian system's approach is evolving in theory and practice.



**INTS 4220 Political Economy of Energy & Sustainable Development (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is sustainable development? What are the global dimensions of sustainable development? What are the linkages between energy and sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty and inequalities in several different dimensions.

**INTS 4223 Global Dynamics and Local Threats in Agricultural Development (4 Credits)**

Many low- and middle-income countries in which agriculture plays a key role for development are characterized by high levels of socio-economic inequality, a mixed human rights record and a dominance of transnational corporate power in domestic agricultural export markets. At the same time, these countries face processes of environmental degradation through anthropogenic and natural drivers of change that affect the availability of ecosystem services and thus shape agricultural development and human wellbeing. This course offers an in-depth study of the political, socio-economic and social-ecological conditions for sustainable agricultural development in low- and middle-income countries. We explore the political economy of agricultural production and trade in countries that depend to a significant extent on the export of agricultural commodities as a source of foreign revenue. We examine the design and implementation of global policy frameworks, international agreements, and national strategies for agricultural production and trade, with a particular focus for the governance of natural resource use. Our goal is to assess the relevance and effectiveness of current governance structures for agriculture to respond to local-, regional- and global-scale environmental changes and socio-economic challenges in ways that address current and future human needs. Through case studies from selected agricultural sub-sectors and diverse countries from across Asia, Africa and Latin America, we investigate local strategies for natural resource use in the context of poverty, inequality, and environmental change. The course provides a comprehensive coverage of the political economy of agricultural development and an introduction to social-ecological systems analysis as a theoretical framework for interdisciplinary research in the field of sustainable development.

**INTS 4226 Social Entrepreneurship & Sustainable Development (4 Credits)**

This course provides an overview of the role of social entrepreneurs, innovative small firms, and entrepreneurial NGOs in sustainable development and poverty alleviation. Market-driven strategies are increasingly important for all organizations, in government, public, or private sectors, to encourage local solutions that are sustainable and do not require ongoing subsidy. Entrepreneurial NGOs and small firms are a great source of local innovation and adaptation, identifying potential strategies that can be scaled up through partnerships with governments, social purpose organizations, or private capital. These market-driven strategies are based on a good understanding of customers, the value provided, and how to best deliver products and services to vulnerable populations in a responsible way. Further, a strong customer and market focus ensures that all social purpose organizations (both for-profit businesses and NGOs) meet customer needs effectively and develop new products and services efficiently.

**INTS 4227 Social Impact & Sustainability Lab (4 Credits)**

This course combines classroom work with a project-based learning opportunity that matches students to a specific project for a social enterprise organization or research on a social enterprise topic. The class combines structured introduction to social enterprise business models and strategies to enhance social impact and financial sustainability with real organizations and practical challenges of launching and managing social enterprises. This approach allows teams of students to work together on real issues for social enterprises, learn strategies and tools for designing better solutions to development challenges, and learn some basic consulting and research skills with group discussion and shared learning. While INTS 4226 Social Entrepreneurship & Sustainable Development is not a pre-requisite, it provides a helpful overview.

**INTS 4228 Development Practicum in Social Enterprise (4 Credits)**

As global development challenges continue to evolve, many are complex, inter-connected social challenges that we call "wicked problems." These challenges require development organizations and social entrepreneurs to combine human-centered design and systems thinking methods to design better solutions, and to include business planning for implementation and social impact management for continual learning. While not all organizations are "social enterprises" with earned revenue streams to drive their social impact, all social-purpose organizations can benefit from an entrepreneurial approach to problem-solving. They need human-centered and systems-minded impact strategies, market-driven business models, and well-designed performance metrics to guide continual innovation and improvement. Further, organizations that consistently strive to improve customer outcomes and make existing systems work better will be leaders in social innovation that create sustainable change. This Development Practicum is an experiential learning opportunity that matches students with projects for existing development organizations to help strengthen their customer-centered program design, business model, social outcomes, or financial sustainability. This allows teams of students to work together on a real problems, gain experience in how to design better solutions to development challenges, and learn and apply strategies and tools in Human Centered Design, business planning, and social impact management. The Practicum matches teams of 2-3 students to a client consulting projects and provides structured classroom learning about social enterprise principles and strategies for better solution design and successful implementation. This approach gives students structure for their consulting or research projects, and facilitates group learning and insights.

**INTS 4234 International Security, Diplomacy and Force (4 Credits)**

The course examines the ways and means of war and peace with a focus on both multilateral and bilateral forms of diplomacy. We begin with the use of force and the modalities of peacemaking in the Greco-Roman, Indian and Chinese ancient worlds. Ending wars in the “modern” period has often resulted in new constructs to maintain peace. Thus, the Peace of Augsburg (1555) and the Peace of Westphalia (1648) that ended warfare among German states established a foundation for sovereignty as cornerstone of a new state system. When post-1789 France became a “revolutionary” power, she dramatically upset the status quo. After the defeat of Napoleon in 1815, conservative powers gathered in the Congress of Vienna to restore a balance of power. The arrangements they established (dubbed the “Concert of Europe”) successfully avoided general war for 99 years. World War I (1914-18) was followed by multilateral diplomacy at Versailles and formation of the League of Nations and agreement to maintain international security through application of international law. Failure of this design in the interwar period led to another attempt after World War II (1939-45) at Yalta, Potsdam, Dumbarton Oaks, and San Francisco to establish and maintain peace not just by international law (collective security), but also through alliances (collective defense)—both under United Nations auspices. In the seven decades since, both bilateral and multilateral diplomacy have been used to restore or maintain international peace and security, also engaging in peacekeeping and arms control efforts in relation to weapons of mass destruction, confidence- and security-building measures (CSBMs), space and other security-related matters on present-day national and international security agendas.

**INTS 4235 Realism and Great Powers (4 Credits)**

We focus in this course on realist understandings that relate to national security—a focus on the power wielded by states and the balance of power among them. Under anarchy (the absence of central authority), wars and “rumors” of wars are the continual expectation, whether dealing with city-states in ancient Greece, Renaissance Italy, American or European states in the 18th and 19th centuries, or interstate conflicts across the globe in the 20th and 21st centuries. It is a world aptly described by Thucydides and Sun Tzu, Machiavelli and Hobbes—not to mention, among others (and with variations in their approach), Carr, Niebuhr, Morgenthau, Waltz, Hoffmann, Gilpin, Schelling and, in our time (in no particular order), Mearsheimer, Walt, Betts, Layne, Posen, Schweller, Grieco, VanEvera, Snyder, Jervis, and Nye. We also take account of critics of realism (for example, Haas, Ruggie, and Ashley)—as well as those who have made their peace with it (for example, Keohane and Wendt). The central question is what does realism offer to both theorists and policy practitioners?

**INTS 4236 Human Security and Sexuality (4 Credits)**

The root of homophobic views are often religious and cultural (mis)understandings deeply embedded in many societies around the world. Expressed in secular terms, the sexual orientation and identity of the majority trump those of sexuality minorities. Lesbian, gay, bisexual, transgender, other “queer” or questioning, intersex, and asexual (LGBTQIA) individuals have a personal stake in both security and the rights they have as human beings wherever they reside around the world. Violence, threats, discrimination, marginalization and other forms of harm directed to persons due to their sexual orientation or identities are worldwide human-security issues the course addresses.

**INTS 4237 Human Rights and Security (4 Credits)**

Throughout their 200,000 year history, humans have gathered into groups ruled by strongmen, to seek protection or prey on others. Just three centuries ago, Enlightenment thinkers challenged that conception of society and governance, which soon led to a remarkable event: the 1776 creation of a state whose rationale for existing was to secure the inalienable rights of all individuals to “life, liberty, and the pursuit of happiness.” That changed world politics. It meant that while the fate of states would continue to be shaped by their relative power, a new moral standard would be applied to governments: the extent to which they recognized universal human rights. As John Quincy Adams put it in 1817, the mixture of America’s emerging power and its avowed commitment to human freedom made America a “dangerous nation” in the eyes of the world’s authoritarian regimes. It also meant that competing conceptions of human rights would permeate American domestic struggles: over rights for white men vs. equal rights for all, over rights to property vs. labor rights, over national security vs. free speech and privacy rights, and over whether to defend rights only at home vs. the need (or obligation) to advance them internationally. Along the way, those U.S. debates led to a Civil War, a war to defeat fascism, and a cold war (including U.S. support for many “third world” dictators) to defend the market democracies of the West against authoritarian Communism. From the early post-cold war promise of an advance toward globally inclusive universal rights—during which such subjects as a “responsibility to protect” and support for democratic transitions entered mainstream policy debates—a “democratic recession” has now reached the point of serious threat to preserving even the United States as a rights-based Republic. For the first time since the 1930’s, a U.S. President offers a conception of national security that rejects promotion of human rights abroad. Domestically, a struggle over whether the object of “national security” is a Republic based on equal rights for all, or a racially and religiously defined “nation,” evokes memories of the clash that once led to civil war. Finally, Vladimir Putin’s effort to subvert all Western democracies presents us with a “cyber” version of the 20th century’s international, state-led assaults on the West by fascist and communist major powers. Those struggles are the subject of this course.

**INTS 4238 Modern Political Violence and Human Rights (4 Credits)**

The landscape of contemporary political violence is marked by a dizzying array of actors, including rebel groups, militias, gangs, and state governments. In this class, students will develop a better understanding of belligerents in modern conflicts and how they relate to one another. Students will also develop an in-depth understanding of a non-state armed group or conflict of their choice.

**INTS 4271 Sex and Violence (4 Credits)**

Some have described war as “long periods of boredom punctuated by moments of sheer terror.” In these periods of ennui, combatants have often found themselves filling the time with affairs of the heart (and other, less PG organs). This course considers how armed groups—ranging from state militaries to non-state armed groups—manage romance, sex, and family within their ranks. Examining these subjects is not an exercise in voyeurism, but rather a means by which we can better understand the quotidian operations of armed groups and, thus, the conduct of war.

**INTS 4290 Gender, Environment, and Development (4 Credits)**

This course is concerned with how and why gender matters in producing environmental, economic, and social outcomes of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of environmental and related economic planning. Beyond these practical implications of gendered environments, the course will engage theoretical and ideological underpinnings for the gendered structures of environmental control and management encountered in a wide range of physical environments.

**INTS 4301 Introduction to Political Theory (4 Credits)**

Political theory analyzes and interprets the foundations of political life and evaluates its principles, concepts and institutions. It is fundamentally concerned with the normative political relationships among human beings that revolve around the organization and basis of government. This course provides an introduction to Western political theory through key texts and thinkers that are essential reference points in the social science literature. The focus will be on the Enlightenment tradition and the approach will be geared toward understanding how the seminal texts and thinkers of this period have shape—and continue to shape—our understanding of political ideas and norms. This course will also have a pragmatic component, where the books and ideas under consideration will be applied to contemporary international debates and issues. Please note that this course is geared toward students without a strong background in political theory. No previous knowledge is required or assumed. All that is needed is an open mind and willingness to work hard.

**INTS 4303 Econometrics for Decision Making I (4 Credits)**

The first course in a two course sequence in Applied Econometrics. Introduces basic probabilistic techniques for the quantitative analysis of economic and social data and their application to international public policy decision making. Prepares students to: compile and analyze data sets; build and test regression models; interpret and critically evaluate applied econometric studies; and conduct their own applied econometric research using computerized statistical packages. Prerequisite: INTS 4051 or INTS 4057.

**INTS 4310 International Trade (4 Credits)**

An intermediate course analyzing causes and consequences of international trade. Classical, neo-classical, and product-cycle models included. Topics include international specification, terms of trade of developed and less-developed countries, distribution of gains from trade, instruments and uses of commercial policy, nominal and effective protection, and theory of customs unions and economic integration. Prerequisite: grade of B- or better in undergraduate course in Introductory Microeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for INTS 4310 should first complete INTS 4536.

**INTS 4320 Int'l Monetary Relations (4 Credits)**

An intermediate course examining history of the monetary system, foreign exchange rates, balance of payments analysis, and adjustment processes under different exchange systems, current status problems, and prospects for reform. Prerequisite: grade of B- or better in undergraduate course in Introductory Macroeconomics, Principles of Economics (combining Introductory Micro and Macroeconomics), or International Economics. Students who have not completed the undergraduate prerequisites for 4320 should first complete INTS 4536.

**INTS 4324 International Political Economy (4 Credits)**

The course examines 3 contrasting visions of international political economy: economic security, trade and finance.

**INTS 4327 Advanced Issues in International Studies (4 Credits)**

The purpose of this course is to train students in advanced research in the fields of International Relations and Comparative Politics. The course achieves these ends through an investigation into a particular empirical theme (of the professor's choosing in any given year). While due emphasis is placed on the major findings of the specified literature, as much or more attention is given to the research design, methods and evidence of the selected literature. Students will learn what constitutes a falsifiable hypothesis and what the alternatives to falsifiability are, examine various scholars' methods of operationalization and measurement, consider the merits of treating rival explanations to one's own, and judge the veracity of findings by these and other criteria. In addition, students will apply such knowledge gained by writing their own original research paper during the quarter. The course aims to assist primarily PhD candidates in their abilities to carry out research, to assess the quality of other scholars' research, to teach in the fields of International Relations and Comparative Politics, and to excel in their comprehensive exams. Please note that this course is offered only once every other year. Thus PhD candidates must enroll in the first year it is available in their course program.

**INTS 4330 International Business Transactions (4 Credits)****INTS 4332 Data Analysis and Development (4 Credits)****INTS 4333 International Project Design and Monitoring (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Design and Monitoring course (formerly International Project Analysis) is to provide students with an appreciation for the myriad of considerations in designing and monitoring an international development intervention and exposure to conventional and unconventional methods and means for doing so. The international project cycle begins with identifying an intervention to address a development impediment or opportunity faced by a target group. A development intervention typically falls into a sector or thematic area, such as education and health care, and it is generally directed towards physical, human, institutional/legal capacity building, or a combination of them. Projects can be singular in scope, such as building a new primary school, or broadly scoped to mitigate causes of poverty, such as the Millennium Development Villages project, but they all should be a unique endeavor with a beginning and an end. Much of the physical development today is supported by the private sector or state sponsored organizations, with less support through traditional foreign aid unless it is a major reconstruction effort like in Afghanistan. In this course, students will learn that a project proposal should be designed in concert with the beneficiaries to be relevant, feasible, and supported by their needs, but also recognizing their absorption capacities. Such a project proposal should ideally have gone through a systematic analysis of factors that will affect its design and management of risk, including economic, financial, environmental, technical, and social factors, as well as special safeguard areas. Students will also learn about the continued need for project proposals to define the underlying theory of change, assumptions, and logical framework for linking inputs, activities, outputs, outcomes and ultimately desired impacts. Establishing a performance management plan for the project that defines, among other things, the metrics and milestones for monitoring the process is an essential component of most project proposals. However, students will learn that adherence to plans is challenging under complex development conditions.

**INTS 4337 Current Challenges in the Middle East (4 Credits)**

In this course, we will examine some of the issues, events and decisions that may be contributing to this perception and more generally on the evolving role of the U.S. in the Middle East. Is the perception correct? What might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Can the U.S. play an effective role in any of those challenges? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4339 Microfinance Lessons: Inclusive Markets and Development (4 Credits)**

This course provides an overview of why microfinance and financial inclusion are key strategies and platforms to build sustainable development and inclusive markets and how the financial inclusion ecosystem supports development outcomes through direct impact of microfinance institutions (MFIs) and systems change. Microfinance and financial inclusion are important ways to improve economic choices and household resilience among the poor, providing access to credit, safe savings options, payment systems, and even micro-insurance to help the poor manage risk and financial uncertainty. They are also important tools to create local, inclusive markets and economic opportunity by facilitating micro and small business development and access to development assets like clean energy, clean water, agricultural inputs, education, and healthcare. We will focus on lessons and insights from microfinance's evolution into financial inclusion, how digital finance and other technology innovations are creating new opportunities and risks in development, and the shared characteristics of highly effective microfinance institutions and NGOs that integrate microfinance into their development strategies.

**INTS 4341 Illicit Markets in the Americas (4 Credits)**

This course applies the understandings of International Political Economy (IPE) to the study of illicit market activity in the western hemisphere. While sociologists, criminologists, legal scholars and law enforcement agencies have all contributed substantially to this area of study, IPE has only recently been applied. So what can this approach contribute? Through IPE, we can place illicit market activity within the larger structure of trade and monetary relations, the rise of the informal sector and the existence of economic and other inequalities in particular regions. We can consider the nature and impact of North-South relations and the process of structural adjustments as advised by international financial institutions. Further, we can evaluate the overall function and effectiveness of law enforcement, governing institutions and international organizations in controlling illicit market activity. Finally, through IPE, we can consider the ideational context of participation in illicit market activity.

**INTS 4342 Project Management (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the Project Management course is to expose students to right- and left-brain approaches to managing the knowledge areas of project management, such as time and cost management, as well as approaches used by project managers and their teams. This course concentrates on the implementation and completion/transition phases of the international project cycle. The implementation phase commences after stakeholders approve a project proposal—translated into a project charter—from which a detailed project management plan is developed to execute the project. Project managers rely, to a large extent, on internationally recognized management approaches to move workflow smoothly among project phases, allocate project tasks effectively, efficiency track project milestones, and make adjustment for inevitable and often uncontrollable project delays and cost overruns. The completion/transition phase ends the project and transfers control from the project team to the operational team, preferably through a defined exit strategy. The course covers the knowledge and skills needed to meet the educational requirements for certification by the Project Management Institute (PMI). PMI serves practitioners and organizations by providing standards that describe leading practices, globally recognized credentials that certify project management expertise, and resources for professional development, networking and community. PMI credentials certify your knowledge and experience in project management so you can be more confident at work and more competitive in the job market. Several other organizations will be mentioned that also provide certification, but all share in common required education hours, years of experience, and passing a professional examination. Students in the course will exhibit their new knowledge and skills by joining small teams to prepare a professional project management plan for the selected development project charter and through individual examination.

**INTS 4349 Comparative Public Policy and Finance (4 Credits)**

Course aims to provide in-depth treatment of the question "why do size, form, financing, and distributive outcomes of government differ so greatly across nations?".

**INTS 4350 Economic Development (4 Credits)**

This course combines an introduction to the theories and key issues in economic development with a rigorous analysis of empirical evidence from low- and middle-income countries in Asia, Africa, and Latin America. The course enables participants to develop an in-depth understanding of diverse local, national, and regional patterns of economic development, and to critically assess the design and potential social and economic consequences of global policy frameworks and national economic development strategies. The course starts with providing an outline of global trends in poverty, inequality and growth, including a discussion of key concepts and ways of measuring economic development. Part I focuses on classical, neoclassical, and institutional theories of economic development. Linkages between the intellectual basis of different theories and major political currents and ideologies, and the associated policy design, are assessed. In part II, core themes in economic development are explored, including agriculture, trade, industrialization, labor, and the environment. The analysis of diverse country studies illuminates how historically specific social, political, and institutional conditions shape development outcomes. In part III, we examine the design and implementation of economic development policy through an analysis of international aid agendas and institutional modalities of ODA, with a particular focus on emerging donors. We investigate the strength and weaknesses of national economic development policies through an in-depth study of selected country case studies. Please note that a mastering of quantitative economics is not a requirement for this course.

**INTS 4355 Finance and Development (4 Credits)**

An advanced course which examines the relationship between financial system organization and economic performance. The political economy of financial innovation, liberalization and globalization, state-finance-industry relations, micro-lending, stock markets and regional financing are discussed with reference to Latin America, Asia and African countries. Completion of INTS 4320 and INTS 4350 prior to taking this course are recommended but not required; students with questions should contact the professor.

**INTS 4362 Gender and Health (4 Credits)**

This course will introduce students to theories/concepts of gender and health and examine the interlinkages between global health policies and programs. It will cover the design, delivery, reception, and effectiveness of international programs aimed at improving health outcomes for women and men. The course will review women and men's access to health, and the influence of patriarchy/masculinity on health at micro, meso and macro levels. The readings from the course focus on major theoretical and analytical debates in the field of international/global health, such as HIV/AIDS, gender-based violence (especially in relation to emergencies/humanitarian crises), key populations (MSM (Men who have sex with men), Commercial sex workers, IDUs (Injecting drug users)), LGBT health, and sexual and reproductive health. Research projects provide students an opportunity to explore further the linkage between health and gender, health care or health policy and gender, gender and health-related issues in emergencies, and the relevant health and gender interventions in a country of their choice.

**INTS 4364 Global Poverty and Human Rights (4 Credits)**

This course explores the many dimensions of global poverty and human rights and well-being of people around the world. Three particular areas are emphasized and explored in detail. The first is the exact dimensions and extent of globalization. The second is the exact nature of another complex thought called poverty. The third area explores the connections between globalization, poverty, and human rights. After rigorous discussion of the conceptual foundations, we focus on the U.N. millennium development goals for poverty reduction in particular. At the end we will be able to explore the analytical foundation of alternative policies, strategies and evaluate these for formulating alternative strategies addressing human rights issues and global poverty reduction.

**INTS 4367 Global Health Affairs (4 Credits)**

Introductory survey class for all students interested in intersection of international affairs and global health and security, development and economics.

**INTS 4368 HIV & AIDS in International Affairs (4 Credits)**

Upon completion of the course, students will understand (a) the concept of global health security; (b) HIV/AIDS as an epidemiological phenomenon; (c) the political, economic and social contexts of HIV/AIDS in specific regions of the world; (d) HIV/AIDS as a threat to security and gender; (e) security considerations of HIV/AIDS impacts in development and as a human right.

**INTS 4369 Political Economy of Global Poverty & Inequality (4 Credits)**

The main purpose of this course is to understand the underlying causes of inequality and poverty in the world. In order to do this, we look at the relationship between economic growth, poverty, and inequalities in several different dimensions. First, the process of sustainable growth itself is analyzed. Second, the implications of different types of growth for income distribution and poverty are studied. Finally, the implications of such inequalities for human welfare in developing economies in particular are studied. After an initial exploration of the income-based measures of poverty and inequalities we focus on the more recently developed social capabilities approach developed by Amartya Sen and others.

**INTS 4370 The Global Economy: Conflict, Crisis and Cooperation (4 Credits)**

An introductory course on the nature of global economic integration in the postwar period, including contending theoretic perspectives, and several applied issues and policy dilemmas such as the evolving nature of firms (e.g. globalization of production), the "new international of labor," and the status of national sovereignty/policy autonomy in an integrated world economy, politics and markets, and current themes in political economy.

**INTS 4372 Great Books in Political Economy (4 Credits)**

This course investigates several contemporary approaches to Political Economy, ranging from institutionalist to Marxist, anti-essentialist, and (postmodernist) feminist thought. Rather than attempt to survey quickly a lot of literature, we carefully read a limited number of influential (and provocative) texts that present a range of perspectives with which most students are largely unfamiliar. These are very challenging texts, and students must be prepared to spend a good bit of time on the assigned readings weekly.

**INTS 4379 Gender and Development (4 Credits)**

This course is concerned with how and why gender matters in outcomes and impacts of planned and unplanned development. It is also concerned with gender as a human rights issue and the equity and ethical dimensions of development planning. Beyond these practical implications, the course engages theoretical and ideological underpinnings for the gendered structures of economic, political, and social power encountered in a wide range of economic and social development contexts. Throughout the quarter, the class examines interactions among structural and cultural (including ideational) factors that together comprise and construct gendered environments. Structural and cultural factors are, at the least, mutually reinforcing, and may be mutually constitutive. The class interrogates the ways in which each set of economic and social transformations broadly encompassed within a human-rights or human-development approach to international development. The class also engages interacting dimensions of change, including economic, social, political, physical environmental, and human biological dimensions. The class explicitly examines all interactions across scales from global to local. If we were looking for a label for this approach, it could be called "gendered political ecology." We could also use a term coined by Dianne Rocheleau and others, "feminist political ecology," which suggests the need to examine the responsibilities, freedoms, and control of resources, together with the varying forms of agency, strategy, and tactic deployed by women (often in partnership with men) to redress these inequalities. The class considers numerous cases from the Global South, and some from the Global North. These case studies immerse us in the diversity and complexity of gender and development interactions and in the "grounded agency" (Radcliffe 2006) through which women and men attempt to secure livelihoods – that is, "making a living and making living meaningful" (Bebbington 2000) – to enjoy long and healthy lives, and to participate in full citizenship. These cases also illustrate myriad patterns of gender construction across ethnicity, class, age, marital status, and other differences among women and men. This is a policy-oriented course. The class explores the ways in which the gendered division of labor and resources, and the socio-cultural construction of masculinities and femininities, influence perceptions, formulation, and implementation of development policies and practices. The class traces the differential impacts of development policies and initiatives on women, men, and gender relations in the developing world as well as efforts to target women through more gender-sensitive development initiatives. Ultimately, this course considers how ideologies and institutions of global development might yet enable women's empowerment and facilitate equity in a deeply unequal and interconnected world.

**INTS 4384 Middle East and U.S. Security (4 Credits)**

The course will examine current US strategies toward the Middle East, terrorism, and how Homeland Security in US will respond.

**INTS 4391 Financial Management and Fundraising of Non-Profits (4 Credits)**

This course will introduce students to the legal, governance and financial structures that enable non-profit organizations to function effectively. It will also provide a practical orientation to financial management issues, such as budgeting, financial reporting, and independent audits. Finally, a comprehensive presentation will be given of the fundraising methods needed to sustain the viability of non-profit organizations. These methods include: annual campaigns, direct mail, special events, major gifts, corporate fundraising, foundation grants, and planned giving. The course combines exploration of the general conceptual issues with an emphasis on practical "how-to's" and skill building.

**INTS 4394 The Organizational Psychology of Non-Profits (4 Credits)**

Nonprofit management issues and techniques looks at current NGOs and issues in working with corporations.

**INTS 4397 The Environment, The Economy, and Human Well-Being (4 Credits)**

In this course we will explore the role of the environment plays in society and the determination of human well-being, and how this can be addressed from an economic perspective. A core premise of the course is that the human economy is embedded within the broader context of human society, which in turn is embedded within a natural environment. The natural environment provides a variety of goods and services, which, through interactions between the environment, individuals, and society, contribute to human well-being. Some of these services are directly used by people. Others contribute indirectly by allowing for the continued provision of other services. As such, any discussion of human well-being and development that ignores the natural environment is inherently problematic. We will specifically adopt an economic perspective, but one that goes well beyond that of conventional neoclassical economics.

**INTS 4399 Issues in Global Economics and Financial Security (4 Credits)**

This course is for Korbel in DC participants only. The course discusses global economic and financial security issues through the prism of the current crisis and its aftermath. We begin by developing the analytical framework and then applying it to key countries/regions. We consider the causes, the policy responses and prospects. We look at ways of ensuring global monetary and financial stability, including appropriate policies to ward off financial crises and asset prices bubbles. Other key topics, including food and energy security and the role of finance in promoting development, are also discussed as time permits. The focus is on applied economics and finance, and their importance as analytical tools in policy discussions on economic security and development. This course is less narrowly technical, more policy and political economy oriented, but nonetheless appropriate for students concentrating in global markets, development, finance and trade. These are a few guest speakers on special topics, in addition to answering questions about career choices and professional development.

**INTS 4404 Cities, Security, and Health (4 Credits)**

This course will present a framework to analyze the impact of urbanization on human development and security in a comparative context of major urban centers in the developed and developing world. It will provide a practicum for utilizing cross-disciplinary methods and perspectives to address specific challenges to urban and human development. We will examine urbanization through a framework of human development, environmental health and security, and explore how public policy and planning can create short- and long-term impacts on multiple outcomes.

**INTS 4423 Introduction to Epidemiology (4 Credits)**

Decisions and policy related to global health are based on data from various disciplines such as demography, medicine, and epidemiology. Therefore, it is crucial to correctly understand and interpret what health data and the data in general tell us. This course provides the knowledge and skills required to critically assess data, and understand both strengths and limitations of data and research. This course covers the basic principles and concepts of descriptive and analytic methods in epidemiology and their application to research and practice in public and global health.

**INTS 4427 The Political Economy of Sustainable Development in Africa (4 Credits)**

This course introduces the political economy of sustainable Development in sub-Saharan Africa (SSA). It uses a multidisciplinary approach that draws on literature from development economics, international relations, comparative politics, sociology, and history, as well as a broad range of country case studies. We engage with the main theoretical and empirical debates on sustainable economic and human development in SSA and examine a diverse range of country case studies. The topics covered include past and current political and economic conditions for economic growth and the improvement of human welfare levels, sustainable agricultural development and governance of natural resources, increased resilience - socially and economically - to rapid environmental change, and the role of foreign aid in African development. We explore the region's integration into the global political economy and examine the role of the state in Africa's development today. The course helps students to understand the major development challenges facing African societies today by illuminating patterns as well as diversity in development trajectories across the region.

**INTS 4435 Health and Development (4 Credits)**

Looks at how health status of populations affects culture and environment, and also how successful development affects health.

**INTS 4437 American Public Opinion & Foreign Policy (4 Credits)**

This course examines American public opinion and its impact of foreign policy. The course begins with an investigation of what is public opinion in general and how it is collected, analyzed and used. The primary sources of American public opinion data and analyses are identified. The course proceeds to outline the controversies of American public opinion related to foreign policy decision-making using historical perspectives and the most recent challenges from the first Iraq War to the Arab Spring. Although foreign policy is often a secondary issue for the public compared to domestic issues, in recent times it has been mostly responsible for the transition from a Republican-dominated era to the Democrats' ascendance. A series of principles that have informed practitioners and foreign policy experts concerning American opinion related to foreign policy is examined and affirmed or debunked. Also, media and its persuasive power in opinion formation are considered. At the conclusion of the course, students should be familiar with a selection of foreign policy challenges that America has confronted in the modern era, the role of public opinion in the national decision-making and the existence of guiding principles of public opinion and their exceptions.

**INTS 4438 International Public Opinion and Foreign Policy (4 Credits)**

This course examines international public opinion and introduces the major international opinion trends that impact foreign affairs. The course first reviews international public opinion worldwide, then by major regions and finally a selection of leading countries. The theoretical question is how public opinion influences foreign policy in countries around the world, and if and when it does, under what conditions. Also, how international opinion affects American foreign policy, including the views of foreign publics toward America and its policies, is also examined. The course begins with an investigation of the history of collection and diffusion of international survey research, the quality of the data and the techniques used to collect it. The relationship of public opinion research and democratic government and media freedom is examined. The second part of the course outlines some of the public opinion benchmarks, their variations and similarities among countries and regions, and their change over time. A variety of the best sources of opinion data are used. Benchmarks include: level of satisfaction with the direction of own nation; satisfaction with and preferences for form of government; satisfaction with and preferences for economic system, the role of government intervention and entrepreneurial values; nationalism and approach to neighbors; attitudes toward Americans, American leadership and foreign policy; and impact of cell phones and Internet on opinion formation and collection. The course's orientation is both from an American foreign policy perspective and from the perspective of key international organizations, such as the UN, OAS, EU, etc. At the conclusion of the course, students should be familiar with the history and sources of international public opinion research, the major similarities and differences in international and regional public opinion, and the impact that it has on both American and international, multinational organization foreign policy decision-making. When available, there are guest speakers concerning the impact of public opinion on foreign policy decision makers.

**INTS 4447 Making of Chinese Foreign Policy (4 Credits)**

This seminar course examines and analyzes the making of foreign policy in China, a rising power in the 21st-Century. We look at and identify major driving forces behind China's foreign policy-making, including ideational sources (historical legacy, strategic culture, communism, and nationalism), domestic and institutional sources (foreign policy making institutions, elite politics and key players), and international sources (international system and regimes). We also examine China's strategic relations with major powers and its Asian-Pacific neighbors. This course is aimed to equip students with sophisticated understanding of the ongoing debate about the role that a rising China has played and will play in world affairs.

**INTS 4450 Democracy and Militarism in Latin America (4 Credits)**

Many note that even as democratization has taken place throughout Latin America, there has been a persistent and evolving role for the military, police and private security forces in many cases. The purpose of the class is to explore this apparent contradiction by examining the various internal and external pressures that have come to bear on these societies. Through approaches derived from comparative politics and international political economy we study domestic factors such as interest groups, political parties, social movements and governing institutions on one hand, and the role of international relations and organizations on the other. From this standpoint, the state becomes a mediator of internal and external pressures and is shaped by these pressures in turn. In the first half of the class, we specifically apply institutions, political realist, class analytic and market globalization perspectives to the study of the military. In the second half, we look at the interplay between democratic development and security issues in a changing global environment. This includes a study of the nature of democratization in Latin America, so heavily applauded by scholars, politicians and others, the impact of the truth and reconciliation process that emerged after the bureaucratic-authoritarian era, and the role of civil society and international organizations. In the final part of the class, we turn to the issue of citizen security amid high levels of crime, gang activity, and drug trafficking with a focus on Central America.

**INTS 4453 Political Economy of Latin America (4 Credits)**

In any part of the world, the earth and its resources constitute the fundamental framework of economic development. The study of development in Latin America offers an opportunity to study the interplay between the forces of economic development and efforts to restore and maintain ecological balance. In the first part of the class, we consider the legacies of colonial rule and foreign intervention including uneven patterns of land ownership, political and social divisions, tension between democratic and authoritarian forms of governance, and a central role for social movements in the struggle for economic justice. We also discuss the current era of export-led development, which has prompted a surge in mining, lumbering, and other forms of extraction, along with environmentally disruptive commercial projects. While increasing economic growth and facilitating some of the largest fortunes in the world, this development model is currently devastating the environment, human health, and the prospects for community survival in many places. On the other hand, communities, indigenous groups, and civil society organizations are challenging this model by advancing an alternative that stresses ecological balance.

**INTS 4459 Global Business, Governance & Corporate Social Responsibility (4 Credits)**

In an increasingly globalized world, civil society, states and businesses are trying to discern how to govern business conduct across the borders of nation-states. Many of the issues our society faces today—global financial crises, environmental degradation, and corruption, to name a few—are impossible to tackle within a given country. This course will dive into contemporary global governance mechanisms to better understand the opportunities and challenges that states, business, and civil society face when in engaging with issues such as global financial crises, labor standards, respect for human rights and the environment.

**INTS 4460 Politics of China's Modernization (4 Credits)**

After more than a century of decline and stagnation, China is reemerging as a great power in the twenty-first century. China's rise to the glorious has never been easy and still faces many changes in the year ahead. This course is designed to provide students with a comprehensive understanding of China's rise in the context of its political development. We examine how revolution, nationalism, communism and liberalism have all affected the development of modern China with a focus on the political dynamics of the People's Republic of China (PRC) and the politics of post-Mao economic and political reform. We start by analyzing the rise of the Chinese Communist Party and its state and nation building efforts in the early years of the PRC and move on to examine the Mao's failed socialist transformation and political campaigns (the Hundred Flow Campaign, Great Leap Forward, and the Cultural Revolution). The remainder of the course explores political dynamics of post-Mao economic and political reforms and the prospect for a democratic China. This course aims at equipping students with an analytical perspective for understanding contemporary Chinese politics.



**INTS 4468 Politics of Development (4 Credits)**

Course explores political factors and parties which affect developing nations and hinder new development.

**INTS 4478 Donald Trump, Democratic Decline and Authoritarian Populism (4 Credits)**

To affirm that on a global level, liberal democracy is declining and authoritarian populism is ascendant, is to state the obvious. This confirms a trend that Larry Diamond predicted ten years ago about a "democratic recession" that shows no sign of abating. What is most intriguing and in need of explanation is the decline of democracy and the rise of authoritarianism in liberal societies of the West, where democracy has long been established and consolidated. According to the 2018 Democracy Index (published by the Economist Intelligence Unit), the United States in the era of Donald Trump, is better described as a "flawed democracy" rather than a "full democracy." Similar trends are discernible in Europe, Latin America and Asia. How can we explain this development? What social conditions have produced this outcome and what are the implications for world order and the study of international affairs? Can the slide toward authoritarian populism be reversed? We will examine these questions theoretically, historically and comparatively.

**INTS 4483 Global Health in Practice (4 Credits)**

The purpose of the course is to prepare Global Health Practitioners for realistic situations utilizing practical tools and exercises forged from decades of hands-on experience. Heavy emphasis is placed on program design based on context, authentic dilemmas in implementation, critical components of leadership, and best practices of field operations management. No prior field experience is necessary to attend or to complete this course. The student will acquire practical knowledge about the following areas of health program design and management in the field: research and preparation, creation and implementation, along with team management and operational leadership. Students will develop detailed field perspectives, analyze the implications of their programs, and ultimately assemble their own personal toolkits to build for success. The intent is to develop a solid understanding of and to practice the usage of tools and skills for Global Health Practitioners to thrive in international and domestic programs.

**INTS 4484 Agriculture and Sustainable Development (4 Credits)**

This course provides an overview of world agriculture and an introduction to agricultural populations, politics, policy paradigms, and institutions. It contains modules in: the history of agricultural production for economic growth and food security; global distributions of (1) agricultural production regimes, (2) land (including historical and contemporary "land grabs") and other productive factors, and (3) uses of agricultural products for food, fuel, feed, fiber, and agro-based construction materials; effects of agricultural trade on economic growth, livelihoods, and food security; relationship between humanitarian food aid and agricultural production and food security; social organization of agriculture and related productivity and human development issues, with special attention to gender; environmental constraints to agricultural sustainability and agricultural constants to environmental sustainability (climate change, water demands and conservation, agricultural energy production and consumption, causes of soil loss and degradation); technological change and innovation in agriculture; and culture and agriculture.

**INTS 4485 International Trade and Economic Negotiations (4 Credits)**

This course is for Korbel in DC participants only. The purpose of the course is to explore the challenges confronting international trade and economic policy, as well as current negotiations designed to address these circumstances.

**INTS 4492 Health and Humanitarian Aid (4 Credits)**

According to the World Health Organization, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." In order to address health in humanitarian settings we must therefore respond to a range of needs and consider the diversity within affected populations. In this course, students will have the opportunity to explore some key sectors of humanitarian aid and how they relate to health. By following a specific ongoing crisis throughout the quarter, each student will have the opportunity to gain a better understanding of the particular challenges inherent in humanitarian assistance and to analyze how the "theory" is actually implemented in practice. Whether the student's future is in the field or at headquarters, internationally or at home, he or she will likely need to quickly and critically review and summarize available information in order to inform decision-making, and students will have ample opportunity to develop this skill during the quarter.

**INTS 4493 Humanitarian Aid in Complex Emergencies (5 Credits)**

This course will focus on the evolution of humanitarian actions, in the context of the international system, since World War II. Complex humanitarian emergencies will be the focus. Themes will include: disasters, conflicts and humanitarian action; the political economy of conflicts and humanitarian aid; civil-military cooperation; and the impacts of humanitarian intervention on the delivery of aid. Vulnerability analysis, capacity analysis, and risk analysis will be key tools. The structure and function of EWS (early warning systems), especially in the context of famine, also will be key.

**INTS 4496 Field Operations for Humanitarian Assistance (4 Credits)**

Within a disaster response, various interrelating factors determine the ability of the humanitarian community to adequately respond. From coordination among governments, donors, non-governmental organizations (NGOs) to internal working components within an agency that drive programmatic support, the realm of humanitarian operations is a complex system that should be understood by anyone with an interest in supporting relief efforts. The main focus of this course is concentrating on the practical, specific systems that drive field operations - namely security, logistics, finance, monitoring and evaluation, human resources, administration, and advocacy that support program planning and implementation. Through understanding these components, the challenges that are encountered, and how each interrelates within an organization and the wider response community students gain a balanced understanding of humanitarian operations. While each emergency response comes with varying contextual challenges, the humanitarian imperative mandates the relief community to respond in a neutral manner based on need. Doing so, places strains on the operational systems that need to be overcome to provide quality interventions. Through this course we take an in depth look at both theoretical and practical ideals for humanitarian assistance.

**INTS 4497 International Campaign Management (4 Credits)**

This course will examine the principles of political campaign management and their application in a number of international political, public affairs and human rights campaigns. It will be an introduction to the tools of political campaign management: message development, survey research, audience targeting, paid and earned communications, fundraising and organizational structure. Case studies of campaigns in countries such as Sweden, the UK, and Australia will be used as examples of these techniques. Class will be comprised of lectures, discussion and some simulation exercises. Efforts will be made to bring outside specialists and experts to the class or by teleconference. Readings may include contemporary journals, periodicals, newspaper reports and excerpts from major studies of campaign and organizational management.

**INTS 4499 Evolving Global Security Landscape (4 Credits)**

This course is for Korbel in DC participants only. Change brings with it challenges—at the individual, organizational, and systemic levels. It involves behaviors and cultures with often deep-seated traditions. This course will explore the scope and magnitude of the transformational forces at work in the U.S. and to a lesser extent the global security and defense establishments. By its nature the course will be about peace and war—how the nation goes about the business of preparing, equipping, and training itself to deter and if necessary to fight traditional wars and the new kinds of challenges that might lead to armed conflict as well as shaping the post war environment for an enduring peace—but do NOT think about this as a linear process. It will also be about sociology, bureaucratic politics, the role of the media, economics, health care, power.... Most of all this semester it will be about the transformational nature and effects of ROBOTICS, AUTONOMOUS SYSTEMS, and ARTIFICIAL INTELLIGENCE (RAS/AI) on security and the budget pressures on the national security/ defense budgets—and where to consider taking acceptable risks—geographically and functionally and force posture wise (for example, do we need a \$1 Trillion nuclear modernization program; or 2400+ F-35s; or 12 carrier battle groups?). THIS AGENDA NOW IS BEING SHAPED GOVERNMENT and the PRIVATE SECTOR—COMMONLY KNOWN AS THE 3rd OFFSET. (The roots of this can be found in Secretary Hagel's 214 Innovation Initiative. <http://www.defense.gov/News/Article/Article/603658>).

**INTS 4500 Social Science Methods (4 Credits)**

Prerequisites: The course presumes a basic competence in statistics, social science, international relations, and comparative politics. This is an advanced, fast-paced course that seeks to provide students with a sensitivity to research design choices, both for designing their own projects and as critical consumers of the works of other scholars. The course is primarily intended for Ph.D. students at the pre-dissertation prospectus stage as well as for advanced MA candidates pursuing thesis projects. The course content covers diverse methodological approaches from the discipline of Political Science as well as methods from other fields. The course will cover topics including: research questions and 'puzzles' in political and social science; causality and causal inference; theory construction; measurement; the comparative method; case selection; and quantitative and qualitative methods. Students should enter the course with several research interests in mind since the final project for the course entails producing a research design that could serve as the basis for a future prospectus. The class sessions will include a formal introduction to different methods, a discussion of readings, and work-shopping of student work. We will also informally discuss tips and tradeoffs in the academic profession and for publishing. The class meetings will rely heavily on student participation and peer critique. At the end of the course, students should be able to identify the strengths and weaknesses of different research designs.

**INTS 4501 Comparative Politics in the 21st Century (4 Credits)**

INTS 4501, Comparative Politics: States and Societies in the 21st Century, is a core course in the graduate program curriculum of the Josef Korbel School of International Studies. The course explores theoretical perspectives and policy-relevant knowledge in comparative politics, a sub-field of contemporary political science that considers the ways in which states and societies govern themselves or "allocate value" in countries around the world. Governance is arguably the pivotal variable in the realization of contemporary global development and human security objectives. The principal question the course addresses is: What is "governance," and how does it serve to work for, or against, peace and development in countries around the world?

**INTS 4502 Comparative Revolutions (4 Credits)**

An intermediate course focused around the major revolutions that occurred in England, France, 19th century Europe, and in Russia and China during the 20th century. Emphasis is placed on historical facts, key theoretical debates generated during the various social upheavals, and diverse interpretations seeking to understand the nature and causes of revolutions and their impact on societies. Prerequisites: INTS 4702.

**INTS 4516 Major Diseases in Global Health (From Pathophysiology to Action) (4 Credits)**

As future global health practitioners and policy makers, it is imperative that we each have a complete and solid understanding of the mechanisms, physiology, epidemiology, transmission patterns, and clinical impact of the major diseases affecting global health. How and when does a person transition from simple HIV infection to full-blown AIDS? Why is dracunculiasis so readily amenable to eradication whereas filariasis is not? For what populations is co-infection with HIV and TB or HIV and malaria so critical and why? On the individual patient level, how and why do certain diseases manifest so differently in resource-poor versus resource-rich or urban versus rural settings? Who are the vulnerable populations and how does disease impact them physiologically? When and where would specific program interventions work over other programs and for whom? In this course, the students develop an understanding of the etiology, agents, vectors, burden, methods of detection, basic treatment complexities, and life cycles of major diseases impacting the world. Specifically, this course details HIV/AIDS, TB, malaria, maternal/reproductive health, some protozoa, helminthes, and major parasites, chronic disease such as cancers and diabetes, and violence/trauma. As there is no shortage of amazing and interesting diseases globally, students learn a sound method of inquiry with which to address and disease process. Students also apply this method directly toward program analysis, and in the development of teaching sessions for community health workers.

**INTS 4517 Politics of Deeply Divided Societies (4 Credits)**

This course focuses on the politics, conflicts, and conflict transformation approaches to deeply-divided societies. While ethnic, religious, and other types of communal conflict have been around for millennia, since the decline of colonization, and especially since the end of the Cold War, such struggles seemed to have exploded onto the world scene. This course focuses on these "contemporary" ethnic, religious, racial, and other communal conflicts to better understand why and how such conflicts develop. We then examine both theory and practice on what can be done to ameliorate or remedy them. Units focus on the nature of identity and identity politics; the use of political violence to pursue identity or nationalistic goals, and nonviolent approaches to identity conflicts. We then look at alternative political and conflict-transformational approaches to such conflicts including frameworks for living together (such as consociationalism, federalism, and power-sharing, and scenarios for separation (partition or succession). We also look at the negotiation, mediation, and other peace processes that have been utilized to try to accomplish such ends, and examine which have worked better than others and (to the extent possible) why. Readings will include both case study and theoretical material. Students are required to make several short class presentations, participate actively in discussions and exercises, and prepare and present a term paper analyzing one currently destructive deeply-divided society, analyzing the cause of the current unrest, and possible remedies to that situation.

**INTS 4521 Cultures of Development (4 Credits)**

Explores cultural dimensions of economic and social change from perspectives of actors who create, promote, negotiate, and resist different agendas from global to local.

**INTS 4522 Philosophy of Social Science (4 Credits)**

What is the nature of social science and the knowledge that it produces? This course, which is intended to complement INTS 4500 Social Science Methodology and INTS 4010 Epistemology, it introduces students to the leading mainstream perspectives on the philosophy of social science. Special attention is given to Positivism and Post-Positivism, Post-Structuralism, Pragmatism, and Scientific Realism.

**INTS 4525 Religion-State Relations in Comparative Perspectives (4 Credits)**

This seminar course provides an introduction to the key readings, concepts and debates on religion-state relations. While the focus is on the Western political tradition we explore the case of India and the Islamic world at the end of the course. Themes such as freedom of belief, the role of religion in the public sphere and debates over the political construction, location and meaning of secularism are examined.

**INTS 4526 Modern Islamic Political Thought (4 Credits)**

This seminar course explores the key writings of Muslim thinkers who have shaped Islamic political thought during the 20th Century. We begin with the writings of Jamal Eddin Al Afghani and his Egyptian disciple Muhammad Abduh. We then proceed to read from the selected writings and speeches of Hassan al-Banna (founder of the Muslim Brotherhood), Sayyid Qutb (radical Egyptian Islamist theoretician), Adul Ala Maududi (Pakistani Islamic thinker and founder of Jamaat-i Islami) and Ayatollah Ruhollah Khomeini (leader of Iran's 1979 Islamic Revolution). We also investigate some of the writings of Islamic reformist thinkers such as Abdolkarim Soroush, Nasser Hamed Abu Zayd and Khaled Abou El Fadl. The emphasis in this course is on understanding the historical and political context which has shaped Islamic political thought during the 20th Century.

**INTS 4534 Topics in Middle East Politics (4 Credits)**

This is an advanced topics course centered on major issues in Middle East politics. Students should expect to read one book, as well as relevant scholarly reviews, each week, and should expect regular analytic writing assignments. This class is designed for students who seek a deeper grasp of the Middle East and a more refined understanding of the politics and history of this region. This is not an introductory course on the Middle East, Islam, or the Arab world and previous course work is assumed. Those uncertain about their status should consult with the instructor before enrolling.

**INTS 4536 Economics: Fundamental Knowledge, Global Applications (4 Credits)**

This course provides an introduction to the methods used to analyze contemporary global economic events by examining the environment in which individual economic agents interact. We analyze what the economic problem is, how consumers and business firms make economic decisions, how markets work and how they fail, and how government public policy decisions affect individual and aggregate behavior in both domestic and international markets. A special feature of the course is the application of economic principles to real world problems.

**INTS 4539 Food Security in the United States and the World (4 Credits)**

This course discusses: food security in the United States (community food security, food insecurity); stunting and chronic nutritional deficiencies; global water crisis; land degradation; land deals; climate change; dictatorship and kleptocracy; economic approaches (westernized view, food justice, food sovereignty); World Food Summit; achieving food security (the agriculture-hunger-poverty nexus, biotechnology for smallholders in the (sub)tropics); risks to food security (fossil fuel dependence, genetic erosion in agricultural and livestock biodiversity, hybridization, genetic engineering and loss of biodiversity, price setting, treating food the same as other internationally traded commodities); access to basic food supplies; infant feeding; determining nutritional status; supplementary feeding; therapeutic feeding; malnutrition, nutrient requirements and sources.

**INTS 4549 Managing Microfinance: Balancing Business with Development (4 Credits)**

This course builds on the topics in "Introduction to Microfinance" and delves more deeply into the challenges of managing microfinance institutions (MFIs) and effective social entrepreneurship. How do MFIs make sure they stay in business (with good risk management and financial management) and make sure they have real social impact? How can they innovate financial services and other market-based solutions that create lasting economic opportunity or social change? Whether a market-oriented NGO or a socially-motivated business, an MFI needs a clear development strategy, a clear business strategy, and the operational tools to implement both strategies well. Regardless of legal structure, both NGO and for-profit MFIs need good management and financial information to meet both sustainability and social goals. Whether used for poverty alleviation and/or banking services for the poor, there are shared characteristics among successful microfinance organizations, as well as common pitfalls and challenges. As organizations figure out the "business" side of providing loans and savings, they also need to figure out which development services have greatest benefit for clients, choose strategies for social change (e.g. basic education, health care, business skills), and assess how well those strategies are working. For example, large-scale MFIs in India and Latin America have been very successful financially, but have only recently focused on their social impact. Smaller NGOs may serve the poorest and provide many development services, yet struggle to find a viable business strategy and sustainability. MFIs share challenges faced by many development organizations: (1) How do we balance our financial and impact goals; (2) How do we choose where to invest resources for greatest impact (e.g. financial services for many or in-depth assistance for fewer?); (3) What information do we need to ensure financial transparency and accountability; (4) How do we assess social and financial performance to keep improving our business strategies? This class will use weekly readings and case studies of specific microfinance organizations to: Illustrate business challenges and specific business risks in microfinance; Review basic financial statements and key financial measures to assess financial performance and risk, for both for-profit and non-profits; Review different approaches to answering the question "are we making a difference?"; Analyze management situations of "too much profit" and "too much development"; Compare pros and cons of for-profit and NGO legal structures, and implications; Discuss governance and boards of directors, compare and evaluate approaches; Highlight examples of social entrepreneurship powering market-driven change in microfinance and other areas (mobile banking, small-scale solar electricity, etc). Cases include Adelante Foundation, BRAC, Fonkoze, Kenya Women's Finance Trust, ACCION's Center for Financial Inclusion, and others. The first half of each class focuses on a real MFI case study to highlight the issues and understand the topic; the second half on the financial implications of these risks, the financial principles involved, and how well the tools work. Students gain a better understanding of financial statements, MFI operations (with case studies from around the globe), and credit risk, as well as key principles of financial management and good governance.

**INTS 4555 Professional Communications (4 Credits)**

This course is designed to help graduate students improve their ability to communicate professionally to a variety of national and international/intercultural audiences for a variety of purposes, and to manage through communications. While INTS 4557, Cross-Cultural Communications, focused heavily on immersive experiences in verbal and non-verbal communication in professional, cross-cultural scenarios, this course will use professional writing in cross-cultural contexts as its starting point. Students will learn the tools they need to adapt their writing in varied professional, cross-cultural contexts and to translate it into effective verbal presentations in these settings. In particular, students will develop an awareness of professional language, written conventions, and multimodal communication, including verbal, written, and digital/visual modes. Students will learn skills in rhetorical analysis, which will enable them to adapt to multifaceted professional writing scenarios in the future. They will apply these skills in the context of case studies and other examples that will address challenges professionals must problem-solve using written communication. All students will complete a professional writing portfolio by the end of the quarter with the goal of being more prepared for the job search.

**INTS 4557 Cross-Cultural Communications (4 Credits)**

This course is designed to prepare graduate students for careers as international professionals by focusing on the cultural factors that influence communication in international relations as well as the rules that proscribe and prescribe behavior. The course emphasizes culture and will explore how different cultures: perceive and interpret their surroundings, and create and communicate a shared, cultural construct of reality and identity; develop unique communication rules; and evolve culture-specific verbal and non-verbal communication behaviors. Students will immerse themselves in a particular culture (its history, values, world views and associated thought processes, religion, gender and social perception, language, and nonverbal communication) and research its communication conventions, practices, standards, core metaphors, terms, cultural premises, and meaning systems. Students are expected to demonstrate a critical and informed awareness of cultural content and identity, as well as the communication imperatives and procedural issues in their country through class presentations, discussions, and a long paper. The course rationale is that cross-cultural communication is inevitable, and without an understanding of the cultural communication imperatives, it is very difficult, virtually impossible to understand, work with, manage, or influence individuals from another culture. The course will involve theory and proven models, but will primarily focus on cultural immersion, skills development, practical applications, and case studies—exploring how culture both influences and reflects communication dynamics, how to communicate effectively in a multicultural environment, and how to manage and resolve cross-cultural conflicts.

**INTS 4569 Migration (4 Credits)**

Migration is a fundamental feature of our lives. Indeed, every aspect of our civilization and our self-conception is shaped by the exodus of all humans from our origin as a species in Southern Africa 200,000 years ago. In our own era, the aging of western populations, the rise of new economic powers, and dramatic improvements in human capital have given rise to an era of labor migration unparalleled in magnitude and diversity, though not entirely unique. New technologies have risen to facilitate further migration, enable the transmission of resources and knowledge across borders, and create new transnational patterns of residence and livelihood that challenge our notions of nation, identity, and even the very meaning of the term migrant. To put it simply, migration is the human face of our modern era of globalization, entailing incredible costs, risks, and returns for migrants along with important impacts for host societies, and the global system. Migration comes in many varieties in terms of destruction, permanence, and level of coercion, yet common theoretical, empirical, and policy unite these different forms of mobility. This course offers a holistic view of the migration process from multiple perspectives, at multiple levels of analysis, and on multiple aspects of our world today. As a uniquely individual behavior, migration has proven over time to be notoriously unfriendly to policy, which is often ineffectual or even counterproductive. We explore this cross-cutting concern through case studies illustrating the promise and pitfalls of migration policy.

**INTS 4575 Systems Thinking for Social Scientists (4 Credits)**

The purpose of this course is to introduce students to systems thinking as an approach for understanding and analyzing real-world issues. In addition to introducing the basic principles of systems thinking, questions that will be addressed include: Why do systems behave the way they do? Why do systems resist change and often end up getting worse when we try to change them? How do you find points of leverage within a system? This course uses examples drawn from a range of issues across the field of international studies. In doing so, it illustrates how a systems perspective can allow you to see parallels between seemingly disparate issues. This course introduces both qualitative and quantitative approaches for analyzing systems and discusses the benefits and limitations of each. Quantitative, computer-based modeling is used in this course, but no background is required.

**INTS 4579 International Futures (4 Credits)**

Futures forecasting involved decisions about priorities. Decisions require forecasting the trajectory of a society with and without interventions of various kinds. This course involved students in the forecasting and analysis process. In the lab, students learn to use the International Futures (IFs) forecasting system. That system represents multiple issue areas (demographics, economics, energy, agriculture, education, health, socio-political, and environment subsystems) and is supported by a very large database. Students study the structure of each of these modules, learn how they represent the underlying subsystems, how they are linked to other subsystems, and what they tell us about the processes of change globally and in countries and regions around the world. Students use the system for forecasts and analyses of their own.

**INTS 4581 Introduction to Humanitarian Systems (4 Credits)**

The Humanitarian field has changed significantly since the founding, in 1863, of what is now the International Committee of the Red Cross. Since the early 1990s there have been efforts to improve coordination between humanitarian actors and to improve the quality of international humanitarian response. High profile humanitarian crises such as the Rwandan genocide, the 2004 Indian Ocean Tsunami, the Haitian earthquake, and the conflict in Syria have highlighted weaknesses in the system and spurred reform efforts. Through readings, class discussions, guest speakers, group work and individual assignments, students gain a better understanding of the development of humanitarian systems and policies and how these affect current humanitarian practice. Key debates in the humanitarian system are also discussed and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. At the completion of the course, students should be able to: Discuss the history of humanitarianism; Recall key components of the humanitarian infrastructure; Describe the humanitarian principles, their interpretation and application; Identify ethical issues which may arise for humanitarians; and discuss the implications for humanitarian practice of key emerging challenges.

**INTS 4583 International Protection in the Humanitarian Context (4 Credits)**

At the conclusion of World War II after witnessing the horrific and historic loss of life, and in an effort to save future generations from the direct impact of war and conflict, the Western powers created several important legal instruments to protect civilians. These instruments are largely derived from human rights, refugee, and international humanitarian law. These initial legal instruments were later combined with additional instruments, both regional and international in scope, and are collectively and cumulatively considered the legal framework for "International Protections." After sixty years of the progressive legal and theoretical development of international protection and its practical implementation, a slow but evident shift has developed over time. Theoretically speaking, a shift from the end of the Cold War's position of absolute sovereignty to the ideals of the 1990s and the "responsibility to protect" which developed in direct response to the failed efforts of the international community to protect in Bosnia, Rwanda and other conflicts. As a result of the changing nature of conflicts, confusing mandates, ambiguous definitions, and political will, we have witnessed the failure of international protection in numerous humanitarian settings.

**INTS 4591 Advcd Fundraising Workshop (4 Credits)**

This course compliments INTS 4391, in which an overview of non-profit fundraising - along with financial management - is given. In this course, we take an in-depth look at the major methods of non-profit fundraising, namely, annual giving, special events, corporate fundraising, grant writing, major gifts, and planned giving. The teaching methodology to be employed is that each 3 hour class session is, in effect, an intense workshop on a specific fundraising topic. During each class session, a fundraising professional from the community, who is actively engaged in the particular fundraising activity being discussed, joins the professor in leading the workshop. Due to the advanced nature of this course, enrollment is limited to those who have already been introduced to the major methods of fundraising through the previous completion of INTS 4391, the concurrent enrollment of INTS 4391, or previous fundraising experience or educational pursuit in the fundraising field that is judged by the professor to be sufficient to be an active participant in this course.

**INTS 4595 Civil Wars and International Responses: Evaluating Post-War Peacebuilding (4 Credits)**

Today, civil wars constitute the principle, realized threat to international security (measured in lives lost). This seminar critically explores the problems to international peace and security posed by contemporary civil wars and the efforts of international - primarily, United Nations - "peace building" missions to implement negotiated settlements aimed at substantially ending such wars and preventing their recurrence. The concept of peace building seeks to capture the complex, multidimensional task of implementing the terms of settlements to end war preventing the recurrence of war, and addressing the deep-seated causes of social conflict and deep divisions that gave rise to protracted armed conflict in the first place. Furthermore, the notion of peace building have been augmented by the concept of state building, which implies that the principle strategic objective of external efforts is to help develop and create legitimate, capable states that are able to realize the provision of security and human development and to manage future social conflict through nonviolent bargaining processes and institutions. The scope of the course includes the analysis of theories, concepts and empirical research in the analysis of post-war international interventions in civil wars and in-depth, student led evaluation of specific cases. Prerequisite: INTS 4495.

**INTS 4599 Ethics and International Affairs (4 Credits)**

This course examines the following: social "science" and ethics, power-rivalry and capitalism versus human rights and democracy, what are the dimensions of poverty, what role does the World Bank play, "laws of people," two classes of human rights (according to Rawls), national interest, and tolerance.

**INTS 4620 Introduction to Middle East Politics (4 Credits)**

According to 2017 Global Peace Index, the Middle East and North Africa are the least peaceful parts of the world. The instability from this region has gone global and is now destabilizing large parts of the entire world. Why? Answering this question is the focus of this course. The approach taken will be historical and comparative with an emphasis on the relationship between religion and politics in the Islamic Middle East. The politics of the Middle East today cannot be understood without some examination of the West's relationship with the region and the associated view of the Muslim Orient that grew out of this relationship. In light of this reality, the state system that has emerged in the region since the demise of colonialism will form a framework in which to understand the major themes of this course.

**INTS 4622 Global Governance (4 Credits)**

This course surveys a range of arguments about how, whether, and/or the conditions under which global or transnational issues are governed. It examines different ways of thinking about governance and the governance process. It unpacks the variety of authorities that govern transnational issues. This course also considers different arguments about how the variety of actors engaged in a particular issue affects to the amount and type of governance possible. The course is intended for both masters and PhD students.

**INTS 4624 Private Actors and Conflict (4 Credits)**

General approaches to conflict focus on violence between the military forces or states. The conflicts of the last two decades, however, involved a variety of other actors: private military companies training or fighting with armies, relief workers trying to mitigate the impact of conflict on non-combatants, environmental NGOs working to lessen the impact of conflict on endangered species, multinational corporations trying to continue their business dealings, paramilitary and/or other citizen groups trying to defend their private property or other rights, criminal networks working to exploit conflict for personal gain, and terrorist networks. How do these different actors behave in conflict situations? Does their presence alter the way conflict unfolds, strategies of conflict (and conflict resolution), and/or the prospects for long-term security (peace, stability and development)? How? How do we decide whether these actors are public or private? How do today's "private" actors in conflict compare with the past? Is this a new phenomenon or simply a return to what has been typical at numerous points in history? This course explores the questions presented by the variety of actors involved in conflict today, compare today's situation with the past, and examine the way states and non-state actors are coming to terms with each other in conflict situations.

**INTS 4625 East African Development and Human Rights (4 Credits)**

For our purposes, East Africa encompasses the countries of Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, and Tanzania. This course begins with an introduction to the cultural richness and diversity of East African societies, with an overview as to how tribes, chiefdoms, and states function. Religious influences are noted. This history of development, as externally conceptualized, begins with the Berlin Conference of 1884/85 and the so-called "scramble for Africa." It features socio-economic and socio-political processes. 20th- and 21st-Century external development programs are covered, most recently exemplified by the former Soviet Union, the United States, and China. Principles of induced development and participatory development are contrasted. Regarding the latter, indigenous innovations are stressed. The history of human rights, as externally conceptualized, begin much later, with the 1969 refugee-related innovations of the Organization of African Unity (now, the African Union). The "classic" issues of tribalism, corruption, and resource exploitation are covered, as well as the "late-breaking" issues of food security, refugee repatriation, and child soldier rehabilitation. Conceptually and theoretically, the course is grounded in disciplinary understandings derived from cultural anthropology, political science, ecology, and history. Resource use, in the context of socio-cultural systems development, are foundational. Special projects are featured, exemplified by those involving University of Denver personnel in Kibera, Kenya (water and sanitation); Mai Misham, Ethiopia (literacy); and Juba, South Sudan (indigenous leadership). At the broadest level, examples are most often drawn from the water/sanitation, agricultural, and health/mental health sectors.

**INTS 4626 Civil Resistance (4 Credits)**

Civil resistance is the application of unarmed civilian power using nonviolent tactics such as protests, strikes, boycotts, demonstrations, without using or threatening physical harm against the opponent. This method of struggle occurs worldwide in places as diverse as Russia, Moldova, Serbia, Spain, Egypt, Iran, Maldives, the Niger Delta, the West Bank, Thailand, and Burma, among many others. As a consequence of the growing use of civil resistance, the foreign policy community has become interested in understanding the causes, dynamics, outcomes, and consequences of civil resistance campaigns. This course serves as a primer on the topic of civil resistance, introducing students to the primary texts in the field, as well as the policy implications of empirical research on the topic. This five primary goals of this course are to: (1) present leading theories and concepts for understanding civil resistance; (2) explore international history to evaluate theories of civil resistance; (3) apply these theories to analyze current trends and make predictions about future development; (4) provide students with opportunities to synthesize their knowledge in a major written assignment; and (5) allow students to deepen their knowledge about several historical cases around the globe.

**INTS 4630 Civilian Protection in Armed Conflicts (4 Credits)**

Studies of armed conflict tend to focus on the production of violence to the neglect of how civilians might instead be protected. In this course, we will study how to limit violence against civilians. We will begin with an overview of theories of violence and legal and ethical frameworks governing the use of force. We will then consider how various actors throughout society, from state actors, to international actors, to illegal arms actors, to NGO's, to civilians and their communities—the would-be victims of violence—can either promote or restrain the use of violence. We will also consider the conditions under which the protection of civilians is most feasible as well as research methods for analyzing populations and their protection strategies. In their final projects, students will analyze the threats of violence faced by a particular population and design appropriate protection strategies and policies to deal with them.

**INTS 4632 Qualitative Research Methods (4 Credits)**

This course provides training in ethnographic and engaged research methods while giving students the opportunity to apply their skills to the local Denver immigrant community. This class requires a commitment to doing fieldwork outside of the classroom and to organizational partners in the community. Students should expect to spend 3-4 hours a week in the field and 1-2 hours on their field note write-ups. Students will work on the Wage Theft in the Denver Construction Industry project being led by Professor Galemba in collaboration with El Centro Humanitario, a day laborer center in Denver. Or they may choose projects with Casa de Paz and the Colorado Immigrant Rights Coalition. Students will gain experience with participant observation, qualitative interviews, data security protections, qualitative data coding, analysis, reflexivity and positionality in research, and writing. The course culminates in a public presentation to share results with the community. Spanish skills are a plus, but are not required for all students.

**INTS 4633 Int'l Project Evaluation (4 Credits)**

It can be beneficial for graduate students planning careers in multilateral and bilateral development agencies, non-profit organizations, private-sector companies, and professional services organizations to have an understanding of how to develop a project proposal, implement it, and evaluate its results. These are useful skills for entering or reentering employment with these organizations. The Josef Korbel School of International Studies currently offers a trilogy of courses in international project cycle management—international project design and monitoring, project management, and international project evaluation. The three courses are delivered in sequence during the academic year in conformance with the project cycle, but they can be taken out of sequence without prerequisite or need to take them all. Each course uses monitoring and evaluation methods and means to connect the design, management, and evaluation of a project. Students may have been exposed some of these methods in courses covering quantitative and qualitative techniques and field research methods. Each course also shares in common the development teams and managers of those teams to produce the key deliverables at three key stages of the international project cycle. The purpose of the International Project Evaluation course is to provide students with a better understanding of and practical tools for designing, implementing, and reporting project evaluations. In all cases, a good evaluation design that is well implemented will allow the project manager to identify supportable findings, conclusions, and recommendations. The recommendations from both performance and impact evaluations can be directed to decision makers to support changes necessary to correct project deficiencies or to provide lessons learned for designing subsequent development interventions. Project managers can also use community or stakeholder participation in the process to build evaluation capacity and to gain support for the results. More specifically, students will learn about similar approaches used by four organizations that evaluate project, programs, and policies—the U.S. Government Accountability Office, the World Bank, United Nations Development Program, and United States Agency for International Development (USAID). Each of these organizations has developed templates for evaluation design, use similar methods and techniques to collection and analyze data, and share common elements in the framework of their evaluation reports. Two of these organizations have protocols to contract out evaluations to other groups through the preparation of an evaluation statement of work (SOW) or terms of reference (TOR). In this course, students will have the opportunity to compare evaluation approaches and to apply these approaches in preparing evaluation products. Small student teams will produce an evaluation SOW patterned after USAID guidance and defend their design in a final presentation.

**INTS 4635 Civil-Military Relations (4 Credits)**

Who guards the guardians?" has been a long-standing dilemma in international politics. How can we make sure that military leaders enjoying the control of coercive power submit to civilian political authorities? How can military organizations be powerful enough to counter external threats without becoming themselves a threat to the political community they should protect? How can hierarchical institutions created to exert physical violence be compelled to respect human rights and democratic values? These questions lie at the heart of civil-military relations theory. Analyzing the different ways in which military organizations, political authorities and the broader society interact is crucial to understand political outcomes such as state-building, democratization and the outbreak of war. This course provides students with a comprehensive understanding of the problems surrounding civil-military relations. Besides looking at the theoretical foundations of the field, it offers a comprehensive overview of civil-military relations over time and across countries. Specifically, it focuses on some topical and yet poorly understood cases and phenomena, such as the impact of the rise of private military and security companies on control over the use of force and the role played by military in Middle Eastern countries such as Turkey, Egypt, Syria, Libya, and Pakistan.

**INTS 4642 Environmental Security (4 Credits)**

This course surveys the expanding literature on the complex interrelationships between the environment, natural resources, conflict, and human security. Since the dawn of agriculture (~7000 BCE), but rapidly accelerating in the industrial age (1750 CE to present), humanity has conducted an uncontrolled experiment in bending the natural environment to fit human needs and desires. Despite the perceived distance that technology has placed between our physical environments and our daily lives, human interactions with our natural environment are still fundamental. Since the end of the Cold War, much attention has been paid to the role of natural resources and environmental scarcity as a source of conflict, ranging from "water wars" between states sharing a common river basin to communal conflict between pastoralists and farmers in the Sahel. This course will survey the expanding literature on environmental impacts on conflict, as well as conflict impacts on the environment, and the potential for making co-management of valuable natural resources and wildlife a source of cooperation, rather than conflict, between communities and states.

**INTS 4644 Human Rights Research Methods (4 Credits)**

This course is about how social science research can be used as a tool to understand and promote human rights. The field of human rights is bedeviled by several challenging obstacles to research, including reporting bias, hidden abuses, missing data and politicization of the facts. To deal with these obstacles, we learn about various methodological tools and how they are applied for the analysis of special human rights topics. By the end of the course, students are equipped to compile and present information to highlight patterns of rights abuses and identify patterns of cause and effects.

**INTS 4646 European Integration: States in Transition (4 Credits)**

Not only have the global financial turmoil threatened by the Eurozone crisis and the negotiations of a trade agreement between the European Union (EU) and the United States made the study of EU integration increasingly important for students of International Relations. As a unique political entity distinct from both states and traditional international organizations, the EU remains an unidentified object, whose development has challenged the traditional paradigms of both international relations and political science. Besides providing an in-depth knowledge of a crucial political and economic actor, the study of the EU integration process, its drivers and its shortcomings will therefore enhance students' understanding of some of the most crucial theoretical debates underlying today's international studies. This course intends to provide students with a comprehensive knowledge of the politics and institutions of the EU, analyzing its development from its origins until the present day and beyond. It will do so by focusing on the following core issues: Firstly, it will briefly analyze the history of the EU, seeking to identify the rivers of the integration process and explain why, after the end of World War II, European countries have set aside their centuries-old antagonism and embedded themselves within an ever close political Union. Secondly, it will examine what the EU is and how it functions, analyzing its key institutions, the architecture of its system of multilevel governance and its policy-making processes. Thirdly, it will investigate some key consequences of European integration, focusing on topical debates such as whether and to what extent the shifting of national decision-making powers at the EU level has created a democratic deficit, what is the impact of EU enlargement on both the Union and the institutions, societies and economies of new member states and what have been the economic and political consequences of the introduction of a single currency. Finally, the course intends to engage students in a debate on what is the future of the European Union in light of the latest development brought about by the entering into force of the Lisbon Treaty and the economic and financial crisis suffered by Southern European member countries. Prerequisite:.

**INTS 4647 Critical Issues in International Humanitarian Assistance (4 Credits)**

In recent decades, the humanitarian system has undergone significant changes related to developments in global governance, lessons learned and relationships between agencies (UN/NGO), governments (donors, affected countries), as the nature of crises themselves the contexts in which they occur and actors involved in crisis response continue to evolve, the humanitarian system and those that work within it must contend with new challenges and critiques. Through readings, class discussions, guest speakers and assignments, students have the opportunity to gain a better understanding of the major emerging policy issues and internal and external challenges facing the international humanitarian system. The class discusses important debates in the humanitarian system and students have the opportunity to grapple with some of the key ethical dilemmas facing humanitarians today. This course is aimed at those with an interest in humanitarian policy as well those who wish to explore the challenges that may face them as they prepare to work in the humanitarian field. Prerequisite: INTS 4581.

**INTS 4648 Theories of Security in World Politics (4 Credits)**

In the 40 years following World War II, the study of security assumed a divide between international relations (the politics between states) and domestic politics (the politics within states) and gradually became separated from studies of international economics. International or national security largely centered on one empirical and two different theoretical enterprises. The empirical enterprise explored the relationship between the US and Soviet Union, focusing particularly on deterrence and the effect of nuclear weapons. The theoretical enterprises explored the likelihood of conflict between states in different systems and scenarios (when does conflict occur? When is stability more likely?) and examined the causes and consequences for actors of pursuing different strategies (What determines which strategy states will choose and what are the consequences for security – i.e., war, conquest, security gain, security loss, etc. – of different choices). After the end of the Cold War debates about the meaning of security joined change in the prevalence of intra-state conflicts and growing attention to terrorism in ways that led many scholars to question the usefulness of assumed differences between international and domestic politics, and, to a lesser extent, between security and economics. Also studies of conflict and stability have increasingly focused on a variety of transitional and global actors that do not fall into the realm of the nation, the state, or even the "international" system at all. This course focuses on this post-Cold War security agenda. The class begins with a (rather old by now) debate over the definition of security, then consider the role of states and other actors and finally turn to a list of prominent questions. In examining these questions, the class reads studies based in a variety of explanations, research strategies and methods. Students are encouraged to think about prominent explanations that stretch across the questions in different weeks. Students should also consider the costs, benefits, and alternatives to the research strategies and methods that individual authors have chosen. While the focus is on the substance of debates in security studies, the professor hopes to also spend time each session talking about how to frame productive questions and research strategies. In the way of background, if students have never read Kenneth Waltz, *Man, the State, and War*, they are recommended to do so. It would also be useful to have some familiarity with some basic texts in political theory, particularly Hobbes, Machiavelli, Kant, and Weber.

**INTS 4649 Human Rights and the Middle East (4 Credits)**

This course is shaped in three parts; each focuses on a set of critical human rights questions drawn from different phases of the Arab uprisings. Part I focuses on the Arab Uprising and Promises of Human Rights Progress and asks: 1. What can we learn from past contagion of human rights struggles, while the class analyzes the Middle Eastern social transformation? 2. What are the main causes that shook the Arab Middle East? 3. What was/is the role of major social actors? Part II covers the Rise of the 2012 Islamist tides, which gained new momentums after the electoral victory of the Muslim Brotherhood in Tunisia and Egypt and asks: 1. Are these religious trends consistent with human rights efforts? What accounts for waves of contagious revival of religious fundamentalism in the Middle East and North African region before and after 2012? 3. What is the impact of religious fundamentalism and nationalism among Israelis and Palestinians? Part III analyses the Possible Paths of Democratization and Human Rights in the Middle East and explores: 1. What accounts for different Revolutionary Arab Paths? 2. Is there a human rights answer to the Israeli/Palestinian quandary regarding one or two state solution? What are the current and possible roles of external forces for the region (international and/or regional)?



**INTS 4650 Globalization and Economic Crime (4 Credits)**

This course explores the policy issues raised by international economic crime, a phenomenon that has mushroomed with globalization and now accounts by some estimates for one-fifth by value of all international commerce. But who gets to define "crime?" Are there standards applicable globally to all situations? Nation states, corporations, nongovernmental organizations and political advocacy groups have issued multiple and often conflicting definitions of acceptable and unacceptable behavior and have been free in affixing blame on other sectors. To assess the part played by economic liberalization in the increase of crime, readings focuses attention on the political, technological and economic factors that encourage criminal activity and on the direct and indirect economic costs of activities such as identity theft and counterfeiting; mislabeling and trade in illicit goods; political corruption; money-laundering; and securities and accounting fraud. The class discusses activities posing definitional challenges to policymakers, such as currency and commodity speculation, re-export, gray marketing and state sponsorship of organized crime. This class also looks at policy options available when state-supported criminal economic activity is deemed to violate peremptory norms, create a substantial domestic effect, or constitute an act of war. This course examines self-help programs such as due-diligence and know-your-customer rules as well as statutory regimes such as the U.S. Foreign Corrupt Practices Act, and the movement toward transparency and uniform financial standards.

**INTS 4652 Contemporary Issues in Refugee Studies (4 Credits)**

This course is designed to provide a stimulating interdisciplinary environment in which students explore contemporary issues in refugee studies. Through examination of relevant international instruments, research, case studies, agency policies and reports, students will begin to develop the skills necessary for understanding refugee-serving agencies and associated programs in large scale refugee operations. Specific emphasis will be given to recent developments in - refugee terminology, refugee status determination, urban refugee populations, refugee camps, durable solutions, and extremely vulnerable refugees. Throughout, the course will focus on humanitarian assistance and protection frameworks, including analysis of guiding principles and associated policies of refugee-serving organizations such as the United Nations High Commissioner for Refugees (UNHCR). The importance of reliance on refugee voices to frame the debate will also be emphasized. At the end of this course students should be able to integrate and apply knowledge of innovation policy and practice to begin to address contemporary challenges faced by humanitarian agencies working with refugee populations.

**INTS 4653 Political Economy of the Resource Curse (4 Credits)**

This course is about one of the more curious findings/non-findings in the history of economics and international relations; that valuable natural resources, such as oil, natural gas, and other mined commodities are not, in the main, associated with better development outcomes and may even depress long-run rates of economic growth and discourage democratization and effective governance. Common sense would seem to suggest that if one finds oneself sitting on a gold mine, then one should mine gold (or drill oil, as in the example above). But countries that have specialized in the production of extractive or "point-source" resources, such as mined commodities like gold, diamonds, and oil, tend to be poor, creating a nagging sense that specialization in extraction is a losing proposition in the global division of labor, condemning countries to be the "hewers of wood and drawers of water." This course briefly reviews the basic economics of the resource curse before turning to a discussion of its effects for deeper institutional determinants of long-run development outcomes: democracy, gender equality, state capacity, and civil strife. It then moves into the realm of interstate politics, examining the ways that resource wealth shapes the foreign relations of resource exporters and major importers, principally the United States and China. The last third of the class investigates both domestic and multilateral attempts to address the resource curse through policy interventions, including civil society-led good governance initiatives like the Kimberley Process and the Extractive Industries Transparency Initiative. This course presumes no deep knowledge of economics but will be of interest to students across the realms of security and development.

**INTS 4654 Sustainable Energy (4 Credits)**

Sustainable energy is much in the news and high on various policy agendas. It is the seventh of the UN Sustainable Development Goals and part of climate and energy policy for numerous national, state, and local governments. This course will examine the politics and policy involved making a transition to a more sustainable energy system. We will explore the history of energy crises, how they have opened opportunities for making changes to the energy system, and the gradual attachment of sustainable energy to environmental issues, most especially climate change. The course will focus on some of the problems and complexities involved in an energy transition, from technological barriers to the need for a just transition.

**INTS 4656 Power, Institutions, and Justice in Environmental Sustainability (4 Credits)**

Sustainability and environmental justice have become ubiquitous buzzwords in society today. We see them everywhere, from politics to popular culture and corporate strategy to grassroots activism. Through an interdisciplinary approach to environmental science, this course examines the relationships between power, institutions, environmental conservation, and environmental justice and explores how issues are defined as problems. The course will cover the theoretical and practical methods used in environmental policy to assist government agencies, from the local to the global, in addressing immediate and long-term environmental sustainability challenges. Particular attention will be focused on power asymmetries among diverse actors, the formal and informal institutions that facilitate or impede environmental sustainability and environmental justice, and how race, class, and gender impacts recognition, participation, and the distribution of natural resource benefits and harms. Students will examine social theories of "nature", as well as, a range of policy responses to address environmental inequities. Emphasis is placed on disadvantaged communities in the United States and the Global South. Theory will be complemented by real-world environmental controversies that will require group collaboration to produce in-class presentations and the completion of policy memos that engage students critically with the course material.

**INTS 4657 Environment & Crises (4 Credits)**

In recent decades, the relationship between the environment and human lives has been increasingly recognized, including the relationships between the environment and crises, so-called natural disasters, conflict, and related human migration. This course explores these relationships. It looks at aspects of local, regional, and international approaches at the nexus between humanitarianism and development, including preparedness, risk mitigation and responses to environmental crises, the impact of environmental factors including climate change on the nature and severity of crises, and the impact of humanitarian crises and responses on the environment. This course is aimed at those with an interest in environment and crisis-affected contexts. Students are not expected to have a background in crisis response and/or the environment.

**INTS 4664 Emerging Powers: Development in Brazil, India and Beyond (4 Credits)**

This course deals with two emerging powers, Brazil and India. We trace the political economy of both countries over time, and spend particular time exploring their historical trajectory, current emergence, challenges they face, and the significance of emerging powers for the international political economy. The course is organized around an understanding of their insertion into the international economy, the implications of international insertion for domestic transformation, and the politics of incorporating newly mobilized domestic social and political actors, especially as this plays out in existing political institutions. Students help define some areas of concentration for the course by identifying policy areas in which concentrated research will occur. This course takes an interdisciplinary approach by drawing on political science, economics, and sociology, and we are concerned to understand the potential for emerging powers to alter international relations, as well as the implications of different strategies of international insertion for domestic social sectors, especially those that have traditionally been excluded.

**INTS 4666 Civilian Protection Practicum (4 Credits)**

The harm to civilians in contexts of armed conflicts presents an ongoing challenge for humanitarian and defense practitioners. While there are no prerequisites for this course, it is designed as a follow-on to the introductory course on "Civilian Protection in Armed Conflict." The course will enable students to put their insights on the protection of civilians into practice. Students will undertake collaborative research projects with a variety of U.S. and international humanitarian and defense organizations. Faculty and practitioner mentorship will help students learn how to advocate for ethical and evidenced-based protection policymaking. At the end of the course, students will brief their final research products to the practitioner clients.

**INTS 4667 Humanitarian Simulation Preparation (4 Credits)**

What does it feel like to be part of a multi-sectoral team assessing needs and planning responses in an emerging humanitarian crisis? How do you use your expertise to support rather than suppress local knowledge and the work of communities and community-based organizations in a complex setting? This course will focus on how humanitarians assess protection and psychosocial needs in a crisis and prioritize and develop interventions while working in volatile and stressful situations. The course is aimed at those interested in working in humanitarian contexts. In line with efforts to "decolonize" aid, the course will emphasize more equitable frameworks and approaches to humanitarianism.

**INTS 4668 Political Economy of Energy (4 Credits)**

The main purpose of this course is to understand critically the conceptual and empirical issues underlying the linkages between energy and sustainable development within the current global political economy (GPE) and Geopolitics. What is the connection between energy systems globally? What are the global and regional dimensions of the geopolitics and geoeconomics of energy systems? What are the linkages between control over energy sources and 21st century prospects for sustainable development? How does the discourse of the linkages between energy and sustainable development relate to the underlying political economy and geopolitics of global capitalism in an age of global warming and climate change? How does the discourse of the linkages between energy and sustainable development relate to the underlying causes of inequality and poverty in the world? In order to do this, we will look at the relationships among energy, geopolitics, geoeconomics, economic growth, poverty, and inequalities in several different dimensions.

**INTS 4670 Gender, Security and Human Rights (4 Credits)**

This course examines the gendered dimensions of security and human rights, with a particular focus on periods of violence and insecurity. Gender equality has been at the heart of human rights and development efforts over the past half-century. Legal and normative instruments have been created to address the ongoing marginalization of women and girls around the world, including the 1979 Convention on the Elimination of Discrimination Against Women (CEDAW) and the 1995 Beijing Platform of Action. More recently there has been increasing attention to the importance of "gendering" discussions of international security. For instance, UN Security Council Resolution 1325, passed in 2000, is widely seen as a landmark framework for ensuring women's inclusion in the post-war peace process.

**INTS 4671 Climate, Science, and Society (4 Credits)**

This course examines the role of the natural and social sciences in the climate change issue. Climate change is a complex international problem that challenges scientific and policy analysis. Its effects extend far into the future, are globally widespread, and impact many aspects of society and ecosystems. There are also substantial uncertainties in these effects and in how well different policies might work. As a result, the climate issue is ripe for political disagreement. This course will examine the kinds of analyses that underlie key scientific conclusions and policy arguments, as well as the role individual scientists can and do play in scientific and policy discourse. While some familiarity with the climate change issue will be helpful, the course does not assume that students have an extensive scientific background.

**INTS 4672 Environmental Peacebuilding (4 Credits)**

Natural resources and the environment can contribute to and amplify conflict, but they also represent opportunities for creating sustainable peace. This course will examine conceptions of peace, peacemaking and peacebuilding, and the insights an environment-centered lens can add. We examine peacemaking on environmental issues. We also consider three trajectories of environmental peacebuilding: technical cooperation, joint capacity building and dialogue, and joint and equitable resource distribution and management systems. Each of these has the ability to contribute to Positive Peace efforts throughout the conflict lifecycle—as preventive diplomacy, as confidence building and communication channels amidst conflict, and as post-conflict peacebuilding and sustainable development. Each approach in this new field could be strengthened through the consideration and application of relevant theory and research. This course also considers critiques of peacebuilding models and methods, and the push for better program MEL—monitoring, evaluation, and learning.

**INTS 4673 Climate Finance and Other Clean Energy Solutions (4 Credits)**

An introduction to climate finance and understanding its ability to advance renewable energy technologies and activities in the global context as a means of significantly reducing carbon emissions. This course will explore financing mechanisms and Green Banks. We will also learn how microfinance can help reduce vulnerabilities. The coursework will involve regular reference to Project Drawdown and specific clean energy technologies such as solar, tidal, wind, carbon sequestration, agroforestry, net zero building, microgrids, as well as other current innovations and their existing use and potential within the developing world. There will be several practitioners in the field serving as guest speakers for this course.

**INTS 4674 Water Policy (4 Credits)**

Water is a key resource for the sustainment of all life. Under many circumstances, it is scarce, too abundant, and inequitably distributed across groups in society and nature. This diversity of situations produces the conditions for the emergence of conflict among users, hence requiring the design of institutions to facilitate effective management. This makes water governance a complex but urgent issue to tackle. This class examines such institutions in a variety of levels –state, federal, and international- and analyzes how they affect water access and use. Students in the class will also engage in a careful examination of the sources of conflict and cooperation among water stakeholders on a regional and global scale. The main goal of the course is to foster the students' capacity to assess how water-related conflicts can be prevented through the design and implementation of relevant policies.

**INTS 4675 Advanced Topic: Defense and Security Policy Lab (4 Credits)**

This is an advanced topics course centered on International Security students gaining, developing, and practicing their professional skills (specifically research and analytics, integration of creativity, academic material, and analysis, peer to peer leadership and coordination, project management and collaborative tools, and communications) via engagement with material/techniques associated with as well as the actual development and execution of a group based professional grade defense/security policy analysis. While the class will contain some traditional academic elements to provide all participants with an enhanced tool kit of skills and analytic options, the bulk of the class takes place through the development of the group defense/security policy analysis executed by 6 person student Project Teams that will be developed through an iterative process over the course and then presented to a group of defense and security professionals for their appraisal. Through this process, security students will be able to get a sense of how real world projects are developed and executed as well as the challenges that confront the production thereof.

**INTS 4676 Insurgency/Counter-Insurgency (4 Credits)**

This course will begin with an examination of insurgencies, the evolution of counterinsurgency, and how the U.S. policy community debates and decides on counterinsurgency strategies. Through a review of case studies, current conflicts, and fundamentals of military tactics, students will learn how governments combat insurgencies with military force and negotiation, how foreign assistance affects each side, how intelligence gathering impacts the fight, and how different types of leaders can strengthen or weaken a force. At the end of the course, students will analyze a contemporary and historical insurgency, articulate and defend counterinsurgency strategies, and compare it to U.S. policy towards the conflict. Prerequisite: INTS 4735.

**INTS 4677 Introduction to Law, Foreign Policy, Politics, and Moral Theory in Human Rights (4 Credits)**

The authors of the American Declaration of Independence wrote: "We hold these truths to be self-evident: That all men (sic) are endowed by their creator with certain inalienable rights." That first authoritative claim that all human beings regardless of color, class, social status, ethnicity, political and religious beliefs, or location have in common a set of rights did not define or enumerate "rights." The definition implied was an indisputable individual and legitimate demand (with corresponding duties on the part of others) to be treated with respect and given space to shape a life in accordance with ability, opportunity, and will. Roughly a century and a half would pass before the first comprehensive enumeration: The Universal Declaration of Human Rights (1948) and another two decades before the aspirational declaration was translated into formal treaties (the International Covenants respectively on Civil and Political and Economic, Social and Cultural Rights). This course explores the processes by which the language of the Universal Declaration and the enumeration of rights embodied in the Covenants and other international agreements is interpreted, fought over, and applied (or not). Those processes are legal and political. They are suffused with discordant views about the obligations of states in relation to their citizens and the citizens of other states. They expose tensions among rights (for example, between freedom of expression and the obligation of states to outlaw speech tending to incite racial, ethnic, and other loathsome forms of discrimination, between religious freedom and protection from discrimination on the basis of religion [see the Colorado wedding cake case in the US Supreme Court]). Those processes occur both in the international arena and domestic ones. They engage domestic and international institutions, courts, parliaments, presidents, armies, civil society, and NGOs of various kinds. Threading through them are conflicting moral theories, national interests, ideologies, and raw inter-group competition and prejudices. Human Rights can be seen as a collective modifier as in "human-rights perspective." Human rights, after all, are a way of viewing all the great issues of our time including migration, cultural conflict, justifications for the use of force, interrogation of suspected terrorists, poverty and gross inequality, the limits (if any) of religious freedom, the rights of majorities, and those of minorities and indigenous peoples. All of those issues will be on the table in this course.

**INTS 4678 The Politics of Global Trade, Investment and Production: The Origins and Consequences of Open Border (4 Credits)**

The last half century has seen national borders opened to the multiple flows now characterized as 'globalization' – the movement of traded goods, capital and people, all of which deserve attention. But if the financial crisis alerted the world to the consequences of free capital flows some years ago, the consensus on free trade and foreign direct investment outside of the developed economies is only now being questioned in national politics, most recently and notably in the 2016 US presidential campaign. In that campaign, both candidates questioned the wisdom of the mega-trade deals – the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) – and one of them promised reverse the tide of outward US company relocation. The loss by the Democrats of much support among voters in blue-collar states affected by deindustrialization has forced a rethinking of both political strategy and policy orientation. The renewed salience of trade politics invites a number of questions, first about how the world managed the politics of surrendering to a large extent trade protectionism from the 1970s onwards, and second, how countries and regions have managed to govern an increasingly open trading order, both in terms of regulating the flow of goods but also in dealing with the domestic consequences – including initially widespread opposition by organized interests and ongoing battles with labor organizations in particular. There is a third question that is central to understanding what has happened with trade, and that concerns the melding of trade as traditionally understood with the transnationalization of production, whereby older and new forms of foreign direct investment (FDI) have created an international web of supply chains within which the greater part of trade (so-called inter-trade) is now conducted.

**INTS 4679 Economic Statecraft and Diplomacy (4 Credits)**

This course explores how governments use international economic policy to achieve geopolitical objectives. We discuss the ways in which states and international bodies appeal to economic sanctions, foreign aid, and other instruments of economic statecraft in attempts to change the conduct of other state and non-state actors. The course will explore the use of a variety of policy instruments ranging from personal asset freezes and sectoral prohibitions on trade to wholesale trade embargoes and military blockades. We will review the effects of these measures on target countries, discussing the conditions under which sanctions can create incentives for targeted leaders to change their policies and when they can trigger political change. Other topics covered include the effects of sanctions on domestic economies and vulnerable populations, political use of foreign assistance, multilateral vs. unilateral sanctions regimes, international sanctions law, extraterritoriality and the ethics of imposing sanctions. The course will undertake in-depth case studies of the effects of sanctions in several sanctioned economies, including Iran, North Korea, Russia, South Africa, and Venezuela.

**INTS 4681 Modeling for Development, Environment, and Security (4 Credits)**

This course is intended to provide you with a) an overview of the current state of macro-level human development, environment, and security challenges; b) tools to analyze and forecast these dynamics as interdependent systems across long time horizons; and c) deliverables that encourage you to improve your writing for a policy audience. We review various challenges, starting with well-known issues related to climate change and development. We then move forward and explore the relationship between development and conflict, furthering our understanding of how both civil and international conflicts emerge. Finally, we dig more deeply into issues in the field of "traditional" development, focusing on how investments in education, health, infrastructure, and other areas lead to trade-offs and synergies that can help us better shape multidimensional human capabilities moving forward.

**INTS 4700 United States Foreign Policy (4 Credits)**

An intermediate course on issues and perspectives for evaluating American foreign policy. Topics discussed include theories of foreign policy; historical epochs in Superpower relations: the Cold War, Dente, and confrontation; America's role in the post-Cold War; war, peace, and trade in relation to U.S foreign policy planning and assessment.

**INTS 4701 US National Security Policy (4 Credits)**

An intermediate course which examines the post-war history of U.S. policy and America's response to the post-Cold War environment. Current issues include alternative strategies in nuclear deterrence and arms control; and security policy toward the Third World, Europe and the Atlantic Alliance, and Japan. Prerequisite: INTS 4702.

**INTS 4702 Emerging Issues in International Security (4 Credits)**

This course focuses on contemporary challenges to global security. It seeks to familiarize students with the nature of these challenges and analytical tools with which to make sense of (and consider potential responses to) them. In the context of thinking about general issues, students learn about prominent individual instances (or "cases") of problems, think about problems through different theoretical lenses, and consider both logic and empirical evidence in evaluating different arguments. Beyond the substantive focus, the course also encourages students to develop analytical skills and their ability to communicate their analyses effectively.

**INTS 4703 Foundations of Security (4 Credits)**

This course will focus on the array of factors, options, and realities associated with the creation and execution of Strategy in order to achieve security objectives. The course begins with and centers on the classic works, concepts, and thinkers associated with strategy and then seeks to apply these foundational ideas to a range of current security challenges.

**INTS 4705 Democratization (5 Credits)****INTS 4706 Topics in Int'l Studies (1-4 Credits)****INTS 4708 Topics in International Studies (1-4 Credits)****INTS 4709 Topics in International Studies (1-4 Credits)****INTS 4710 Topics in International Studies (1-4 Credits)****INTS 4711 Topics in International Studies (1-4 Credits)****INTS 4715 Debates About Democracy (4 Credits)**

This is a course in the field of comparative democratization studies and democratic quality. We will cover from the political science perspective topics such as the transition to democracy, consolidation of democracies, and how and why democracy has spread around the world. We will also examine the debates on the virtues and perils of democracy and on the nature and quality of the resulting representative democracies. Through this lens we will also analyze the "democratic backsliding" observed even in well-established democracies during the last decade and a half, which has resulted in the proliferation of new hybrid regimes and other very problematic characteristics of present-day democracies. In this course, we will study many of the aspects that might influence the process of democratization and democratic backsliding such as: institutional design and functioning, political culture, democratic support and the structure of the party system and party competition.

**INTS 4720 Capital Markets in Africa (4 Credits)**

Capital markets – the buying and selling of equity and debt – are vital to the functioning of an economy. Using a comparative study of capital markets in America and Africa, we will explore how they work, and how inefficiencies and structural challenges can inhibit private investment and access to capital among middle and lower classes in emerging economies generally. The tools in this course will also allow students to assess the efficiency of capital markets in emerging economies throughout the world. The course comprises five modules: 1) Banking and microfinance; 2) Mortgage and housing finance; 3) Private equity (including venture capital); 4) Stock markets; 5) Mobile money. For each module, we will begin with a study of how the industry functions in the United States, which is widely regarded to have the most efficient capital markets. We will then compare the US model to markets in Africa, examining the structural and practical limitations that impede those markets in sub-Saharan Africa (and, by extension, other emerging markets). The course will not attempt a comprehensive analysis of specific African countries, although examples will be drawn from specific markets. Instead, we will focus on many of the structural challenges to the development of mature capital markets in sub-Saharan African countries (mostly excluding South Africa). We will explore questions such as, Can microfinance be profitable? Why isn't housing finance widely available? What types of "mobile money" systems are developing in Africa, and what are their business models? Why aren't there more IPOs in Africa? Class participation is important, as the subject matter will range beyond the readings.

**INTS 4722 U.S. Policy in the Middle East Since World War II (4 Credits)**

Various experts and commentators now claim that the U.S. is surrendering its preeminent position of power in the Middle East after more than 70 years of almost unchallenged dominance. In this course, we will examine some of the issues, events, and decisions that may be contributing to this perception and more generally to the evolving role of the U.S. in the Middle East. Is the perception correct? What is might be happening with U.S. policy in the region? What might we expect as the Trump administration's decidedly pro-Israel/pro-Saudi approach solidifies? What are America's genuine policy interests in the region and how should the U.S. be addressing those? And what are the challenges and responsibilities of the governments and peoples of the region in tackling their many problems, from sectarianism to poor economic growth to environmental degradation? Through the study of specific issues, we will focus our attention on the policy-making process and decisions, key interests and motivations, alternatives, the decision makers and their unique roles, and the ultimate impact their decisions may have today and in the future. We will also try to understand American attitudes and perceptions that shape policy as well as those of the people in the region. As we proceed through our study, we will ask ourselves how decisions impact the region and the U.S. today and in the future.

**INTS 4730 Foundations in Homeland Security: Response and Recovery (4 Credits)**

This course will examine the post-1945 history of United States efforts at homeland security, and include an overview of other national efforts (e.g., by the Soviet Union, Switzerland, and Israel.) It will then turn to identifying and analyzing the spectrum of issues associated with U.S. homeland security, in the context of evaluating the United States post-9/11 response to date. Those issues include: framing homeland security, prevention, response and recovery overview, foreign actors and issues, domestic actors/issues, problems of intelligence, terrorism vs. violent crime, public expectations, role of the media, funding and resources, and how to address broad spectrum threats.

**INTS 4731 Homeland Defense: Prevention & Mitigation (4 Credits)**

This course will examine the following issues: political leadership, foreign and domestic intelligence organization and functions, role of intelligence, principles of indications and warning, legal/civil rights issues: balancing human rights and security, law enforcement, Public health, and the role of various U.S. federal agencies: Department of Energy, Environmental Protection Agency, the INS, border security among others, plus the role of first responders in prevention/detection, and establishing indicators and reporting procedures.

**INTS 4733 Introduction to Strategic Cyber Threats and Policy (4 Credits)**

At its core, cyber is a suite of complex, interrelated technologies affiliated with computers, communications networks, and digitalization. Like any powerful technology, cyber provides the capabilities for a range of political actors across a range of levels of analysis to increase their capabilities to achieve both benevolent and malignant goals (and which of these any particular effort is often rests in the eyes of the beholder). Yet, the massive scale of the utilization, both current and future, of cyber technologies and the speed, range, and impact that these technologies potentially generate also make cyber a realm, an area of practice, action, and, thus, policy. The challenge with the rise of such a sweeping development in national and international security is understanding the nature of the threat, how unique the characteristics of the threat are versus how much they resemble previous security challenges, how much existing security mechanisms and policies are applicable versus the need for the development of novel solutions and what are the trade-offs that have to be made, and thus will come to define, cyber security policy at the national and international level. This course will engage all four of these basic questions in survey fashion, setting students up for follow-on academic or professional engagement with the realities of strategic level cyber security issues.

**INTS 4735 Defense and Security Methods (4 Credits)**

The purpose of this overview course in defense analysis methods is to provide students with the foundations to successfully conduct research and analysis in defense-related topics, whether within the national security community, in academia, or as a contractor. This course should also help prepare the student to complete his or her Master's thesis. The course aims to improve the student's ability to comprehend and assess the graduate-level readings assigned in other courses, and to write research papers and complete other written assignments for those courses. The course is intended to provide take-away skills that can be applied to professional activities after graduation: in particular, students should have greater confidence in their abilities to locate, read, commission, design, or conduct relevant research, and to draft research proposals. This class focuses on methods employed in both policy analysis and the social sciences. The emphasis is on qualitative rather than quantitative methods.

**INTS 4736 Strategic Intelligence Data Collection and Analysis (4 Credits)**

Course focuses on analytical prod. of strategic intell relative to int'l security issues.

**INTS 4738 Current Issues in Strategic Intelligence (4 Credits)**

Advanced seminar which investigates current issues relative to strategic intell within international studies.

**INTS 4739 Defense and Security Quantitative Analysis (4 Credits)**

This course is the follow-on to INTS 4735 Defense and Security Methods and is designed to engage students in a professional conversation about the applicability of quantitative analysis and big data based analytics for the execution of defense and security analysis/research. Continuing the development of the students' individual research design proposal, but now introducing an array of quantitative ideas, options, and methods, this course begins with the foundational realities of coding and descriptive statistics before introducing students to bivariate and multivariate analysis, index/scale construction, and hypothesis testing techniques. In addition, the course continues to develop the students ability to engage with and understand real world defense and security research, in this case particularly quantitative analysis. Prerequisites: INTS 4735.

**INTS 4750 The Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details from country to country and even from issue to issue within the same country. In this course we study various parts of those processes and some of the inputs into them. In addition, we play close attention to problem framing or problem definition in those policy processes. Within all these disparate policy processes political actors must have some notion of what problem they are trying to solve and what constitutes the set of feasible solutions to those problems. These ideas about problems and feasible solutions are not given exogenously, are not some fact of nature, but instead arise from complicated interactions among actors and institutions in the policy process. The quest we ask throughout the course is how policy problems and solutions could be framed differently, how we can learn to look outside the conceptual box that partisans to policy debates try to draw for us. Students write a series of papers during the course following a policy issue of their choice through the policy process.

**INTS 4753 Intelligence and National Security (4 Credits)**

Focuses on the craft of U.S. Intelligence and its role in the making and implementation of national security policy.

**INTS 4760 Russian Foreign and Defense Policy (4 Credits)**

Course explores Russian foreign and defense policy from Vladimir Lenin to Vladimir Putin - heavy focus on security policy.

**INTS 4786 Planning and Assessment in Complex Environments (4 Credits)**

The primary mission of this course is to provide participating students grounding in the planning methodologies, approaches, and expectations used within the US government in both military and civilian agencies as well as increasingly in the security related private and non-profit sectors. The starting point for this effort is Operational Art & Design and the military's Joint Operational Planning Process (JOPP) as well as related literature. Military planning serves as the starting point both because it is the most mature and sophisticated government planning methodology and because most other US government planning practices are direct, contextually appropriate derivatives of DoD planning mechanics.

**INTS 4787 Civil-Military Practices in Humanitarian Responses (4 Credits)**

Changing U.S. national security priorities following 9/11, including updated Department of Defense doctrine, have led to U.S. military actors prioritizing humanitarian assistance as a central component of theater security cooperation arrangements. This trend includes not only considerations of protection of civilians during military operations but also planning for natural disaster response and steady state engagement to build the capacities of host nations to address crises, including natural and man-made disasters. Through readings, class discussions, group work and individual assignments, students in this course will gain a better understanding of the issues and roles of civilian and military actors in the humanitarian space, with a specific focus on how legal and policy guidance impacts the decision to utilize U.S. military forces in disaster response situations. While this course will focus specifically on how the U.S. government approaches humanitarian activities and the role of the U.S. Department of Defense assets, it will locate this discussion within the broader about the appropriate use of Military and Civil and Defense Assets in international humanitarian community.

**INTS 4801 Major Issues in Human Rights (4 Credits)**

This co-taught course looks at a wide range of contemporary issues in human rights. It is intended equally as an introductory course for students in other degrees and as an advanced course for Human Rights degree students. Each week will be run by the faculty member who has selected the topic. Readings and any other before-class assignments will be on the Canvas page for the course, in the Files tab, in the folder for the instructor.

**INTS 4802 Foundational Ideas in Social Science: Marx and Weber (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.

**INTS 4807 Civil-Military Relations During War (1 Credit)**

The focus of the course will be on civil-military relations—the interaction between the senior military leadership and elected and appointed civilian officials. Students will have a unique opportunity to learn about the development of national security policy and related issues. The course will examine the civil-military relations during three 20th Century wars and two 21st century conflicts and draw insights about the impact of civil-military relations on national security and the requirements for effective civil-military interaction in the future.

**INTS 4808 Foundations of Global Justice: Theories of Power and Transformation (4 Credits)**

Our primary goal will be to understand and assess different approaches and frameworks for pursuing social change – from civil resistance and nonviolent direct action to narrative, experimental cities, and activism. Our goal will be to understand when and why these approaches work – and when and why they don't. Students will hear from activists working in ongoing movements for social change around the world and will get acquainted with their work. We will explore case studies of historical and ongoing social movements, which include struggles for democracy, peace, human rights, environmental justice, racial and gender justice, and more. We will also strategize how movements manage violent repression, backlash, and opposition in different contexts. Students will walk away with practical understandings of how to organize for social change, skills to support ongoing movements, and applied opportunities to understand when, where, how, and why certain efforts at social change succeed, while others fall short of their goals.

**INTS 4810 Social Movements, Global Justice (4 Credits)**

This course is intended for students seeking to gain a theoretical and practical understanding of social movements. It is organized in two parts: (1) (re)imagining power and social movement theory, and case studies of social movements; followed by (2) developments, dilemmas, coalition-building, and other questions in the study of social movements. Students will develop a project to learn about a movement (or nonprofit organization) of their choice. Taking the Foundations to Global Justice course is a useful, but not necessary pre-requisite. Students will conduct assignments scaffolded throughout the term and share their work with peers in teams. We will explore movements from local ones on college campuses, to Women Life Freedom, to the Black Panthers. The class is designed so that students concurrently learn practically to organize collectively with others or ways of engaging in solidarity, and understand theoretically and empirically, the role of social movements.

**INTS 4812 Capstone: Applied Strategies for Catalyzing Social Change (4 Credits)**

Capstone: Applied Strategies for Catalyzing Social Change is a core course required for the Global Justice Certificate. Students will work with activists and/or movements on a specific project identified as a need. Students will gain concrete, real-world skills and training in how to strengthen the work of grassroots movements.

**INTS 4816 Power and Oppression (4 Credits)**

This course is designed to be an introspective practice in examining how frameworks apply to societal norms, personal and cultural identity, and academic settings. We will explore frameworks on racial equity, oppression, gender, implicit bias, and intercultural conflict, in addition to others. We will critique white supremacist structures that influence our everyday interactions, work-environment, and how we view and engage in the world around us.

**INTS 4817 Restorative Justice (2 Credits)**

Restorative Justice is an alternative to punitive discipline methods; restorative approaches focus on building relationships, trust, and respect. Restorative methods center around repairing harm, accepting responsibility, and reintegrating the parties responsible for causing harm back into the community. Reconciliation is paramount in community building to restore communal harm and prevent further harm and violence post resolution. This course centers around domestic and international approaches to Restorative Justice, including restorative circles, truth commissions, and victim offender dialogue. Internationally, we will explore restorative work in Rwanda, South Africa, Bosnia, India, and New Zealand. We will learn methodologies used in restorative approaches in schools, judicial systems, communities, and diversion programming. This course will focus on the mindset shift to culturally integrate restorative approaches systemically in communities.

**INTS 4818 Conflict Sensitive Interventions (2 Credits)**

While interventions are designed to have impacts, these impacts often include unintended and even negative consequences. Particularly in fragile and conflict-affected contexts and contexts of inequality, interventions done without sensitivity to context can undermine sustainability and exacerbate conflicts. Conflict sensitivity is an approach to ensure that interventions do not unintentionally contribute to conflict, but rather, strengthen opportunities for peace and inclusion. It focuses on mitigating the risk of negative impacts and enhancing positive ones. This course will develop skills for analyzing conflict dynamics and actor incentives, mapping an intervention's potential positive and negative influence on systems of inequality and conflict, locating opportunities as well as risks, modifying an intervention to minimize harm and maximize peace and sustainability, and building in the adaptation mechanisms needed for ongoing change in dynamic contexts.

**INTS 4820 Democracy and War (4 Credits)**

This course explores Socrates' speech at his trial and decision to go to his death as, surprisingly, initiating two central features of modern democratic theory. First, Socrates is often depicted as simply hostile to the many, looking down on Athenian democracy. But what he in fact looks down on is tyrannical mob rule, the "democracy" of a particular interest arbitrarily enforced (what we might call a demented Joe McCarthy-kind of democracy). In contrast, Socrates also incarnates the idea of asking questions in a democracy, that is, dissent (prefiguring what is sometimes called today deliberative democracy). That makes a democracy capable of realizing, sometimes, a common good. Second, Socrates provides a paradigm for modern civil disobedience or satyagraha in Gandhi - we read Gandhi's translation of Plato's Apology - and Martin Luther King's letter from the Birmingham City Jail. Nonviolent civil disobedience is necessary in a modern democracy because party-competition focuses mostly on personality issues and not on fundamental injustices. Further, this kind of protest promises major change even in dictatorships (consider Erica Chenoweth and Maria Stephan, *Why Civil Resistance Works*). Thus, this emphasis is a novel interpretation of Plato as opposed to, in scholarship and politics, Plato's supposed link to authoritarian "commander-in-chief" power (Heidegger, Leo Strauss and William Kristol for example) which we also contrast in this course. The course explores the subtlety of these dialogues - the question of what Plato intended to teach his long-standing students like Aristotle who studied with him for 20 years - but leave the main points of Gandhi's and King's interpretation intact. Third, the course explores Thucydides, *History of the Peloponnesian War* and Plato's response to it in the *Republic* in terms of modern critiques of Empire building and the "unhinged" wars by American democracy (we look at W. Robert Connor's elegant break with previous understandings of Thucydides during Viet Nam and John Mearsheimer's striking criticisms of post-Cold War American policy, echoing Obama's 2013 speech at the National Defense University, in "America Unhinged." Thucydides is a far deeper account of imperial expansion and the corruption of and threat to democracy at home than modern realist and neo-realist gestures at him. Neo-realists methodologically attempt to separate global politics from its domestic consequences as supposedly different levels of analysis; this interplay is the heart of Thucydides' argument and deepest insight into the meaning of war and democracy.

**INTS 4822 Contemporary Political Theory (4 Credits)**

An examination of current 21st century political theory and how the events of the 20th century helped mold these ideas/ concepts.

**INTS 4854 Rising China and Challenges to the Global Order (4 Credits)**

This course is for Korbel in DC program participants only. This seminar focuses on contemporary challenges to the global order posed by China's growing economic power. The course charts China's reform and opening, its development and integration into the global economy, and the challenges created for Western economic and security institutions and alliances. Specific topic areas covered include China's non-market status and trade conflict, competition for technological leadership, ICT governance and standard setting, the Belt and Road Initiative, and the implications of China's South China Sea activity. The course will combine extensive background readings, lectures, and discussion. Students will benefit from frequent guest lectures and discussions with experts from the Center for Strategic and International Studies.

**INTS 4856 Global Sustainability and Development (4 Credits)**

This course is for Korbel in DC participants only. This course considers the interaction of environmental, economics, and energy issues on global ecological systems. It offers an overview of relevant international legal frameworks and national governance systems, the state of major ecosystems - forests and species habitats; wetlands, oceans and rivers, and the atmosphere and selected policy issues related to each. Emphasis is less on "what" to think than "how" to think about and formulate policy responses to complex, multidimensional issues.

**INTS 4875 Human Rights and Foreign Policy (4 Credits)**

Global human rights issues and how those issues help mold foreign policy decisions.

**INTS 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**INTS 4890 The Revolutions of Black, Brown, and Indigenous Peoples: Violence or Nonviolence? (4 Credits)**

Marx's is the most striking and complex theory of revolutionary change. It has inspired millions of workers, peasants, soldiers, students and intellectuals in three large international movements (the International Workingmen's Association, the Second International, the Third International). "Capital" is perhaps the most striking depiction of how factories and capitalist society operate, from the point of view of workers, of any modern economic theory. It is a theory which novelly explains the tensions in the experience of most non-University educated people between their work experience and the current Washington "consensus" about free markets and democracy. It has motivated and empowered striking democratic movements, often across national boundaries, of the oppressed against the privileged. Where successful, however, Marxian movements both brought about significant, common good oriented improvements and failed to withstand external and internal attacks or resolve basic problems in radicals' vision of a new society. Further, Marx's vision has often been interpreted as, except in the immediate unfolding of the revolutions themselves, having little to do with democracy. In radical movements as well as in capitalist societies and academia, Marx has been fiercely attacked. For much of the Cold War, not having read Marx permitted one to expatiate on what Marx's views are; reading Marx was, until the late 1970s and early 1980s a disqualification even in teaching, let alone in the media. Marx's views are often misrepresented, dismissed without investigation as "obviously wrong." This course provides an opportunity to read the first volume of "Capital" and some of Marx's other main works and test them, in whatever depth desired, against Max Weber, the dominant theorist of American sociology and political science.



**INTS 4891 American Intersectional Inequality: From Local to Homeland Security (4 Credits)**

This course advances understanding of how inequality manifest differently by race and ethnicity, class, and gender. Policy topics and case studies will span (1) immigration laws, citizenship, and race-making; (2) state violence, mob rule, and the origins of the American penal system; (3) local law enforcement, courts, and prisons (5) detention centers and homeland security; and (6) demography, census, and democratic representation. The course will feature African American and Latinx populations prominently and incorporate Indigenous, Asian-American, and White populations throughout. The class will center the perspectives of poor Americans, but will incorporate working class, middle class, and elite perspectives when useful comparisons and contrasts are in order. Theories and case studies will be rooted in a U.S. context but occasionally include readings from other democratic nations. Readings will encompass enduring problems and landmark policies, as well as contemporary challenges. Given that this is a writing-in-the-disciplines course, we will devote attention to developing public policy research and memo-writing skills. Students will also gain practice working in teams to sharpen analytical skills and written work.

**INTS 4900 International Politics (4 Credits)**

Topics on discussion include: levels of analysis; realism; neo-realist structuralism; international society and the English school; international anarchy; process variables and international institutions; international security institutions; rationalism, constructivism, and the purposes of theory; norms and ideas; gender and identity; and postmodernism and post-structuralism.

**INTS 4903 Relational Theories of International Relations (4 Credits)**

Examines recent theoretical work in the field of international relations that treats international society and its practices as social constructs.

**INTS 4906 Classics of International Theory (4 Credits)**

Professor will choose various books by classic political theorists for students to read and discuss in class.

**INTS 4907 Terrorism (4 Credits)**

Terrorist violence, an issue facing many countries in international and domestic politics, is used by left and right-wing groups, nationalist and religious organizations, revolutionary movements, and state institutions seeking political power. This course is focused on: understanding terrorism (definitions, causes, evolving tactics); analyzing who becomes a terrorist (jihadist, separatist, supremacist ideologies plus radicalization processes); and evaluating effective counter-terrorism measures to reduce or resolve the problem.

**INTS 4909 Climate Migration and Human Rights (4 Credits)**

The science of climate change, while continuing to become more exact and nuanced, is clear – human behavior has caused the planet to warm unnaturally. Now that the science has been established the next question is how will it affect the ecosystem and, especially human habitation. As seems to be the norm, those most affected by climate change will be the poor, the disempowered, and native populations. The understanding and the possible solutions must be interdisciplinary – human rights, law, economics, development, gender and race equity, security, science – to name a few. The course will look at the history and philosophy of climate justice, which includes such disciplines as environmental justice and sustainability, move through an analysis via a number of different viewpoints, and conclude with a look into the future in terms of education and activism. Climate justice requires a sharp, critical look at systems and an understanding of the interconnectedness of science, ethics, and politics. Examples of this might include the rising of sea levels displacing very large numbers of people adding to the already impossible strain on refugee and IDP resettlement. Or the Brazilian economy's almost sole reliance on hydro-electric power in face of the drying up of rivers and water basins. Or the role of the world's religions and religious leaders in climate justice. One of the unique characteristics of this course will be the number of guest lecturers. It is incumbent on universities and colleges to take a multi-disciplinary approach to climate justice and lower the "silos" between academic units. To that end colleagues from DU and other institutions will bring their disciplines and insights to bear on the topic.

**INTS 4912 Development in Africa: Challenges, Constraints and Strategies (4 Credits)**

This course is for Korbelt in DC participants only. As the Developed World falters over its financial difficulties, many eyes are turning to the third world for resources, markets and solutions. In a real sense, Africa is the "last frontier." With this in mind, this seminar provides an overview of Africa and Development through the eyes of practitioners and scholars from the US and Africa who have devoted considerable effort to trying to affect development on the continent and speculating on what more it will take to make Africa prosperous. Beginning with an overview, the course proceeds through traditional development sectors (agriculture, health and education), newer perspectives and drivers (private sector, ICTs, democratization and China), and the three "C" barriers (corruption, conflict and climate change). Lively exchanges over the role of outsiders and the efficacy of aid as well as Africa's growing role in the outside world, balance more traditional development perspectives.

**INTS 4914 Statecraft and Smart Power in the Digital Era (4 Credits)**

This course is for Korbelt in DC participants only. This course examines new approaches to the practice of statecraft in an era of rapid global change. Globalization is upsetting traditional international order and institutions, and changing the pace and intensity of decision making. Nation-state governments, while still the primary actors, must adjust to new sub-national, regional and transnational forces and players in a far more complex global arena. Digital Communication is revolutionizing relationships and interaction in the global arena. More groups and the general public are involved or mobilized in public participation than ever before. Vastly more information flows ever more quickly. Partisanship rises with segmentation, threatening fragmentation in public life. The new era reflects the imbalances and strains of major demographic change, especially the impact of an expanding tech-savvy younger generation. A significant youth bulge in volatile developing nations fuels reform efforts, but also creates the potential for conflict arising from continuing injustice and unmet expectations. Foreign policy institutions and decision makers here and abroad are increasingly subject to cross-pressures from competing domestic and transnational interests. In the U.S. the Inter-Agency must balance influential single-issue stakeholders and constituencies here and abroad. The course explores how the U.S. and other governments are responding to the new global challenges. Participants see to frame new "rules" of statecraft in the digital era.

**INTS 4920 Conflict Resolution (4 Credits)**

An introductory course which identifies the collective factors leading to successful reconciliation or agreeable compromises in conflicts; analyzes the role and influence of cultural norms, gender conditioning and different bargaining strategies on the resolution process; applies the practical fundamental of negotiation on particular problem-solving techniques.

**INTS 4928 Torture (4 Credits)**

This is a reading/seminar course. Students are asked to be well-prepared and contribute to the discussion. We explore mostly modern forms of torture. The use of torture has not abated in the last 100 years despite conventions, treaties and watchdog organizations. What has occurred is that torture has become "stealth", to use Professor Rejali's term. These "stealth" techniques leave no mark and have been developed equally by democratic states and totalitarian regimes. It is also clear that the U.S. has engaged in state sponsored torture (see The Constitution Project bi-partisan report of April, 2013). An important question before us is if there is any place for torture in the 21st century and if torture is an effective means to gather intelligence. If the answer to both questions is "no," and torture violates the most basic ethical, moral, and legal norms of humanity, they why does it persist?

**INTS 4929 Foundations of Human Rights (4 Credits)**

There are many ways to approach human rights. This course has a historical and thematic emphasis, raising questions relevant to contemporary issues. What are the origins of human rights? Is religion compatible to secular views of universal rights? Are human rights predominantly Western? Did the industrial revolution and socialist tradition contribute to human rights? What are the limits of the rights to self-determination? Is globalization improving or harming human rights? Is globalization increasing or decreasing the potential for a vibrant civil society? What are the tensions between cultural rights and universalism? Are there tensions between security and universal rights? Are human rights for ALL humans? What political systems, under what circumstances, are most hospitable for social cohesion and/or human rights?

**INTS 4931 International Organizations (4 Credits)**

An intermediate course on approaches to the study of international organizations, including institutionalism, neofunctionalism, complex interdependence, international regimes, and epistemic communities. Case studies examining collective security and peacekeeping, human rights, Antarctica, and the environment are discussed.

**INTS 4935 International Humanitarian Law of Armed Conflict (4 Credits)**

This course is a theoretical and practical introduction to international humanitarianism law (IHL). IHL is known by many other names such as "humanitarian law," "law of conflict," and "laws of war." All these terms refer to the rules regarding the treatment of civilians and non-combatants in areas of armed conflict and the rules of engagement for soldiers and combatants. These "rules" are especially important to know if you eventually work for an IO or NGO that finds itself in areas of armed conflict. Cross listed with CPSY 4560.

**INTS 4936 International Law and Human Rights (4 Credits)**

An introductory course examining the concept of human rights, including political, economic, social, and cultural rights. International, regional and national institutions, norms and procedures to protect individual and group rights are discussed.

**INTS 4940 Introduction to Human Rights (4 Credits)**

An introductory course focused around historical and theoretically relevant texts in human rights. First and second generation rights are emphasized. Early liberal, conservative, and socialist understandings of human rights are highlighted against their respective historical background.

**INTS 4941 Human Rights and International Organizations (4 Credits)**

An introductory course exploring the changing roles of international organizations in their efforts to protect and promote human rights. Examination of both the global and regional levels of human rights activities of international intergovernmental organizations are discussed. Recommended prerequisite: INTS 4940.

**INTS 4947 Human Rights and Security (4 Credits)**

In a sense, the debate over human rights and security is rooted in ancient arguments over power and morality. Yet it is particularly since the end of World War II and the defeat of the Nazis, the emergence of the United States as the leading world power, and the onset of the nuclear age, that the debate over the relationship between human rights and national security has been part of operational discourse in real world politics as well as in university classrooms. The course title suggests an amplitude of subject matter far greater than can be encompassed in the ten weeks of the quarter. So, instructors are likely to differ about which issues to explore in the available time, and inevitably, they will differ in their pedagogical methods. Differences in methodology will reflect differences in taste, personality, training and experience.

**INTS 4955 Human Rights Clinic I (0 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4956 Human Rights Clinic II (4 Credits)**

Students in the Human Trafficking Clinic will be asked to undertake a case study on a human rights violation and provide an advocacy report (roughly 5000 words, i.e., 20 double-spaced pages) that includes (a) a synopsis of relevant facts, (b) pertinent domestic (usually constitutional) law of the country where the violation occurs as well as relevant regional and international human rights law, and (c) a recommended course of remedial action using the rule of law. Non-graduating law and JKSSIS students may seek an overseas assignment in order to either advance their research or initiate the recommendations in their advocacy report. Additional internship or independent research credit may be available for these overseas ventures.

**INTS 4958 Human Rights Global Governance, Nationalism and Internationalism (4 Credits)**

The decline of internationalism in its neoliberal garb calls for reflection on the past thirty years of crisis. After over two years of pandemic, and the Russian invasion of Ukraine and now the war between Israel and Hamas, nationalism is spreading across the globe. And yet history shows us that manifestations of internationalism tend to appear with urgency to counter old familiar foes: illiberal nationalism and ultra-religious radicalism. The main question of this course is: How can we build a new internationalism to address global crises driven by nationalist interests? What are the main lampposts to guide us in that search? Informed by history, this course is structured in three parts: First, how did past forms of internationalism gain traction and supersede nationalism, and what was the contribution of progressive internationalist worldviews? Second, how has the neoliberal globalized order, established after the Cold War, brought us to a series of cataclysms? Third, amidst nationalist challenges, how do we approach the possible reconstruction of a new inclusive internationalism, one that could address both lingering and emerging crises and create the conditions for a more robust global governance guided by human rights? In this sense, this course also proposes to map current and future agreements between great powers, states, and civil society to strengthen a new internationalist order.

**INTS 4964 Political Risk Analysis (4 Credits)**

Investigates risks associated with political instability or uncertainty in countries with emerging markets.

**INTS 4966 Applied Field Methods: Africa (4 Credits)**

An introductory course for students planning to conduct research in developing countries. Practical information is presented on transforming hypothesis into a fieldwork setting, questionnaire construction and administration, and interviewing techniques.

**INTS 4972 Global Environmental Governance (4 Credits)**

Global environmental problems pose seemingly intractable problems for international relations and policy. In this seminar, we probe some of the practical and theoretical difficulties associated with solving such problems. These problems include: How can sovereign nation-states agree to cooperate on environmental problems and how can such cooperation include businesses and civil society? No international institution can legitimately coerce nations into such cooperation. Therefore, international institutions must get them to agree to cooperate, must find ways to bring business and civil society into those agreements, and then find ways to monitor and enforce the agreements. This task is harder than it might seem, and we explore both theories and cases that illuminate it.

**INTS 4981 Internship (0-4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. An internship should both complement the student's academic field of study and relate to his/her career goals. Through internships, students will: Apply acquired academic theory, knowledge, and skills to professional practice; Further develop knowledge and skills needed to work effectively in the field; Gain greater understanding of the private, public, or nonprofit/NGO sectors; Build a network of professional contacts; and Develop career-related skills applicable to the future job search. This course requires the internship be at an organization that is not the University of Denver, and is the course that satisfies the degree requirement for all Korbel MA programs. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4986 Humanitarian Assistance Internship (4 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her/their career goals. Students will apply acquired academic theory, knowledge, and skills to professional practice; and further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates who are using their internship to also satisfy requirements for the Humanitarian Assistance Certificate. Registration is by instructor and the Director of the Humanitarian Assistance Program after review and approval of materials.

**INTS 4987 Forced Labor and Human Trafficking (4 Credits)**

This course looks at a brief history of slavery, especially as it pertains to the British, West African, West Indies, and American triangle. We then look at contemporary issues of forced labor, human trafficking and contemporary slavery. Human trafficking is a very complex problem that requires a sophisticated, inter-disciplinary critique.

**INTS 4989 North American Defense and Security (4 Credits)**

This course will challenge students to analyze the evolving North American Defense and Security environment since 1945. The course will begin by focusing on the history of the Canada - United States (CANUS) defense and security relationship that began in the wake of World War Two and was predicated upon protecting the North American continent from Soviet attack with the formation of the Permanent Joint Board on Defense (PJBD), Military Cooperation Committee (MCC), and North American Air Defense Command (NORAD). However, the end of the Cold War and subsequent terror attacks of 9/11 dramatically changed the North American Defense and Security environment and created the need for enhanced cooperation between the United States, Canada, and Mexico.

**INTS 4991 Independent Study (1-12 Credits)**

A special individual arrangement for students to pursue more advanced work beyond that available through regular courses. Such study is arranged between professor and student prior to registration. Academic grades are assigned for course performance. Tutorial Record Form required.

**INTS 4995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the master's thesis. Such study is arranged between professor and student. Academic grades are assigned for performance. Independent Research form required.

**INTS 4996 Substantial Research Paper (0-4 Credits)**

A Substantial Research Paper (SRP) is a problem-focused paper designed to engage student in the process of applied research. In contrast, an independent study tends to be a more general research project, while an MA thesis involves in-depth academic research typically undertaken by students interested in pursuing a PhD. An SRP is typically shorter than an MA thesis, and does not require a review committee or an oral defense. Rather, the SRP will be supervised and graded by a single appointed faculty member.

**INTS 4998 Experiential Learning (0 Credits)**

The Josef Korbel School of International Studies (JKSIS) recognizes the importance of practical experience as an integral component of a student's education. Experiential learning should both complement the student's academic field of study and relate to his/her career goals. JKISIS recognizes the professional benefits of experiential learning work that occurs on the University of Denver campus. Through on-campus experiential learning, students will: Apply acquired academic theory, knowledge, and skills to professional practice; and Further develop knowledge and skills needed to work effectively in the field. The course is open to currently enrolled Korbel MA candidates, and registration is by instructor approval after review of materials.

**INTS 4999 Research Design: Ph.D. Prospectus, Substantial Research Paper, and MA Thesis (4 Credits)**

This workshop is designed for students interested in developing a well-crafted thesis proposal, sustaining their research and writing agenda throughout their studies, and learning about the academic profession as a whole. There will be short formal lectures or presentations by the instructor; yet each student needs have a paper on the subject of interest prior to registration to this class, each needs to be prepared weekly to receive constructive suggestions and assessments from the instructor and peers.

**INTS 5500 Social Science Methods (4 Credits)**

This course is about how to unleash the power of social science to explain and make sense of social behavior, phenomena, and research programs. The course is intended for Ph.D. students interested in developing their skills in research and analysis. As part of the "professionalization" process, the goal of the course is to teach the basic structure of how to produce a research article or larger work—"how to do" political science. We will primarily rely on methodological approaches from the discipline of Political Science but also cover methods from other fields.

**INTS 5991 Independent Study (1-12 Credits)****INTS 5995 Independent Research (1-8 Credits)**

This course allows a student to receive credit for research and writing undertaken as part of the doctoral dissertation preparation. Grades of "P" (pass) are assigned after the dissertation is accepted by the committee. Prerequisite: Ph.D Candidacy (passing Comprehensive exams).

## Judaic Studies (JUST)

**JUST 3023 Great Thinkers: Maimonides-Politics, Prophecy and Providence (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on: principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and RLGS 3023.

Prerequisite: junior standing or instructor's permission.

**JUST 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with PHIL 3024 and RLGS 3024. Prerequisite: Junior standing or instructor's permission.

**JUST 3026 Levinas and the Political (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting insight of "ethics as first philosophy," is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas' thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as "Reflections on the Philosophy of Hitlerism" (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and "Peace and Proximity" (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other "Jewish theologies" of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitalities and strangers, friends and enemies; liberalism, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; "the 3rd"; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

**JUST 3150 The Bible and the Dead Sea Scrolls (4 Credits)**

This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of "Bible" itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with RLGS 3150. Prerequisites: None. The Scrolls will be read in English translation, but those with Hebrew reading skills will have an opportunity to read/translate portions of the Scrolls in community.

**JUST 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)**

Neoplatonism is a unique genre - somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we investigate a host of philosophical writings, including the Theology of Aristotle and the Liber de Causis, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Avicenna, Isaac Israeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection, and the call to virtue. Cross listed with PHIL 3152. Prerequisite: junior standing or instructor's permission.

**JUST 3700 Topics in Judaic Studies (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 3703 Topics in Judaic Studies (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 3704 Topics in Judaic Studies (1-4 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 3740 Bodies and Souls (4 Credits)**

This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a "human" does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How has Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand "out-of-body" experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, RLGS 3740.

**JUST 3891 Justice: A Biblical Perspective (4 Credits)**

This course explores the ways in which the Bible has been applied to questions of social justice in contemporary society. In addition to studying major theological and philosophical theories of justice, students read a variety of biblical texts related to major issues of social and economic justice such as world hunger, the poor, revolution, just war theory and pacifism, environmentalism, and the role of government. This course includes a service-learning component. Cross listed with RLGS 3891.

**JUST 3991 Independent Study (1-5 Credits)**

Prerequisites: HEBR 1003 or JUST 1003 or equivalent and instructor's permission.

**JUST 4700 Topics in Judaic Studies (1-5 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 4701 Topics in Judaic Studies (1-5 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 4702 Topics in Judaic Studies (1-5 Credits)**

Topics vary reflecting the interdisciplinary nature of the department and studies of the faculty.

**JUST 4991 Independent Study (1-10 Credits)**

## K-12 Administration (ADMN)

**ADMN 4330 Culturally Responsive Leadership, Mentoring & Supervision (3 Credits)**

The course is designed to assist mentors and instructional leaders in the development and application of skills and to bring these to day-to-day leadership in the current role of supporting a pre-service teacher. Students will analyze their leadership styles and apply their learning to leadership scenarios to refine their school leadership skills. Students will explore the mentor's role as an educational leader to enhance the existing educational experience for their pre-service teacher and classroom students. This course reviews adult learning theory, communication strategies, and problem-solving approaches for continuous school improvement and pre-service teacher supervision and feedback. This course includes studying and applying a variety of approaches for supporting, supervising, and evaluating educator effectiveness, including approaches to classroom observation; mentoring and peer support systems; and tenets of change theory related to school improvement initiatives.

**ADMN 4700 Special Topics in K-12 Administration (1-5 Credits)****ADMN 4810 School Administration: Case Studies (3 Credits)**

Focus on current critical aspects of work of effective superintendents and other administrators in key decision-making roles; includes reading, discussions and guest presenters who are practicing administrators; problem scenarios presented for resolution.

**ADMN 4812 Perspectives in District Leadership (4 Credits)**

District leaders must focus their actions on the common goal of improving student learning and school systems must be organized to make this the fundamental priority. The purpose of this course is to examine district-level leadership, policies, and practices that support a school community committed to and focused on achievement of all students. The district role is emphasized in supporting school improvement, closing achievement gaps, providing resources, monitoring and using accountability data, and working with the community and school board leadership. Responsible administration of human and fiscal resources is necessary to accomplish systemic instructional improvement at the district level. The goal is to prepare leaders who will lead school districts that are culturally responsive and promote equity and excellence. This course includes an experiential learning component.

**ADMN 4817 Administrative Internship (0-6 Credits)**

Opportunity to be supervised in on-the-job experience to better prepare school administration students for district administration careers.

**ADMN 4819 Organization Theory & Behavior (4 Credits)**

Educational institutions are complex, political organizations with a wide variety of constituents and many layers of sometimes competing cultures, systems, and explicit and implicit goals. Leaders who work with these systems must find ways to make meaning of the organization and the context in which work occurs. This course will look at organizational behavior from several points of view, with the goal of understanding major theories that have been developed and learning to apply these theories in the management and study of organizations. The roles and responsibilities of various members of the organizations will be examined as well as the governance and control issues surrounding education. Organizational analysis will be viewed through the lens of structural, political, human resource and symbolic frames. Students will critically learn and apply various organizational theories to expand your own beliefs about leadership and learning. This course includes an experiential learning component.

**ADMN 4820 Educational Program Evaluation (4 Credits)**

The purpose of this course is to review theories of program evaluation, evaluation designs and analysis, and current trends in evaluation. Program evaluation aims to determine whether a program, regulation, or policy is achieving its objectives by ascertaining whether it had the desired effect on intended outcomes. The evaluation process may include evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself. The course equips students with basic evaluation tools and understandings necessary to be thoughtful consumers and effective users of program evaluations in improving policy outcomes and designing more effective programs and policies. It is designed to provide students with the meaning and methods of program and policy instrument evaluation in education with the intent to contribute to informed decision making and enlightened change. Students analyze evaluations of the effectiveness of a variety of programs through discussion, field work, and case studies. This course includes an experiential learning component.

**ADMN 4821 Leading Design Improvement for Equity (4 Credits)**

The course focuses on school reform and improvement through improvement science. Improvement science is an emerging concept which focuses on exploring how to undertake continuous quality improvement. The aim of this class is to explore strategies of improvement science to develop educators' knowledge and skills to uncover and use data that exist in classrooms and schools for the purpose of promoting educational change and improvement. The participants in this course will create and conduct an improvement science project. This course includes an experiential learning component.

**ADMN 4822 Action Research and Systems Leadership (4 Credits)**

This course will prepare students, as scholarly practitioners and academic researchers, to use action research methodology and systems leadership to solve equity related educational problems of practice. Action research, which was developed in education in 1940's by Kurt Lewin, is practitioner-based research, based in traditional research designs. It is focused on improvement, connects theory to practice, encourages empowerment, and advocates for social justice.

**ADMN 4823 Equitable & Socially Just Educational Policy Making in the United States (4 Credits)**

This course focuses on the educational policy system, the policy process, and current educational reforms. In addition to an overview of the basic governmental structure, this course addresses the micropolitics of education, including how to implement and advocate for more equitable, socially just, and anti-racist policies to improve the quality and effectiveness of learning for children and families. Course activities facilitate the development of skills for addressing policies and practices that affect the success of all students and schools, learning how to identify and unpack current critical issues, and identifying where and how to act to influence policy decisions. This course includes an experiential learning component.

**ADMN 4827 Foundations of Educational History and Philosophy (4 Credits)**

This foundational course examines the various theoretical, ethical, historical and philosophical perspectives that will inform educational leaders as policy and change strategies are formulated. This course includes an experiential learning component.

**ADMN 4828 Leadership for the 21st Century: Using Creativity to Build Effective Schools (3 Credits)**

Designed to assist leaders, at the district or building level, in the implementation of standards-based education to improve student learning and achievement. Primary emphasis is given to applying strategies for addressing critical issues in sustaining the equitable access to learning in a standards-based educational organization.

**ADMN 4834 Culturally Responsive School Leadership (3 Credits)**

Extends understanding of complex systems' operations and responses by examining multicultural issues in the historical and social context and complexity of schools and school districts. Opportunities will be provided for students to develop an understanding of issues of diversity and the relationship of these issues to the roles and work of school/district administrators. The exploration of multicultural issues will occur through the examination of various themes relative to school/district administration such as curriculum, administration, human resources, policy and reform. Particular emphasis will be given to the exploration of the historical and future purposes of schooling in a democratic/pluralistic society in an effort to help students to develop critical knowledge and skills essential for providing leadership in 21st century schools.

**ADMN 4835 Leading Teaching and Learning (4 Credits)**

In this course, students will examine what it means to be a district-level leader focused on and supportive of learning by considering the roles and responsibilities of leaders related to teaching and learning, and by examining the challenges and opportunities inherent in that role. Topics of study relevant to instructional leadership include developing (a) coherent systems of teaching and learning, (b) professional community, (c) professional capacity, and (d) an equitable, student-centered learning climate. Students will gain practical and theoretical tools to improve curriculum development, instruction, and student achievement district wide. Students will meld theory and practice by using empirical thinking and evidence-based change to address social justice concerns within instructional programs in schools and school districts. We will look at how curriculum both reproduces and transforms society and how society both reproduces and transforms curriculum in schools. This course includes an experiential learning component.

**ADMN 4836 Improving Organizational Culture (4 Credits)**

The purpose of this course is to understand organizational culture as a complex and challenging issue to shape and lead. The complex culture of schools or other educational organizations means many things including climate, organizational members' engagement, culturally competent practices and the quality of human relationships in the organizational environment. This course will enable leaders to analyze the components of an educational organization's culture and develop specific plans to create a culture that supports improved learning outcomes for every student, using high-quality, best instructional practices. Following the collection and analysis of data, students will be prepared to serve as Equity Oriented Change Agents (EOCA), leading the improvement of school culture focused on equitable access to high-quality instruction and services for every student. This course includes an experiential learning component.

**ADMN 4840 Strategic and Transformative School Leadership (9 Credits)**

Effective school administration is guided by research and best practices which inform governance, vision, leadership, and implementation processes. Effective principals base their work on commitment to moral principles, core values, and the many dimensions of effective theory and practice. Understanding personal values, developing leadership skills and building a strong knowledge base regarding research and best practice are a key focus of the course. In addition, this course also examines strategies for visioning, mission building and branding; defining and assessing value and quality; developing competitive strategy; building networks and partnerships; assessing risk and gauging opportunity; building systems and sustainability; recruiting and developing staff, boards and stakeholders; engaging communities; and acquiring sources of funding. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4841 Instructional Leadership for Equitable Schools (5 Credits)**

This course serves aspiring principals in the development and application of skills and knowledge associated with standards-based instructional practices, curriculum planning and development, assessment, and program evaluation. Students are assisted in developing and understanding issues of diversity and multiculturalism and their influence on the development and supervision of the instructional program. Although the major focus is on local aspects of standards-based education, some attention is given to the national role in this area. School leaders need to apply quantitative and qualitative research skills in a variety of ways to understand and improve the work of schools. This course reviews methods, applications, and data sources, including assessments and large-scale datasets, for continuous school improvement and program evaluation. In addition to the issues of instructional leadership, considerable attention is given to the examination of the needs of the individual student in the learning environment as well as research on learning styles, learning theories and models of teaching. Primary focus areas are supports for special education students, English Language learners, gifted students, and students in poverty. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4842 Human Resource Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation are discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Form and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4843 Strategic Resource Management for School Leadership (5 Credits)**

This course focuses upon specific content relative to helping the principal effectively manage human resources within the school setting. It provides examination of organizational dimensions, planning, recruitment, selection, placement and induction, staff development, appraisal, rewards, collective bargaining, and practice of negotiation skills. The course includes study and application of a variety of approaches for supervising and evaluating instruction, including approaches to classroom observation; adapting, adopting, and designing various evaluation systems; advantages and problems of various student achievement and engagement indicators; induction, mentoring, and peer support systems; and leading professional development for self and staff. It includes the relationship of supervision and evaluation of teachers to the improvement of student learning, instruction, assessment and professional development. The legal and technical aspects of teacher evaluation will be discussed, while outlining the role and responsibilities of the licensed evaluator in the annual process. Formal and informal classroom observations and conferencing with practicing teachers are part of the requirements for this course. Students must be accepted into an ELPS certificate or MA program.

**ADMN 4844 Critical Policy Analysis for Educational Systems (4 Credits)**

Welcome to Policy Analysis for Educational Systems! Students in this experiential course will develop policy knowledge and skills to analyze P-12 educational policies and legislations with a more critical, equity-oriented lens. Students will also build their knowledge and skills to engage in critical discourse that depolarizes communities, fosters mutual understanding, and a shared vision of equity with groups that hold opposing viewpoints. Students will walk away from this course with a trained eye and skillset to critically analyze policy through a social justice lens and draw out implications for P-12 educational leadership, policy, and praxis.

**ADMN 4848 Liberatory Design for School Improvement (4 Credits)**

A school district is a large and complex business organization. By design, the course has a broad focus ranging from legislative issues, to manners and matters of local governance, to school finance, capital planning and budgeting concerns to more directed school and district support services. The course demands practitioners become aware of and demonstrate critical thinking as to what constitutes an effective and equitable use of people, time, technology and money in order to ensure achievement for all students. Being able to think differently, create a culture of innovation, and lead a systematic approach to implementing new ways of doing things is one of the most critical aspects of being a school leader. This course will be enhanced with a design thinking framework that takes a human-centered design approach to helping organizations innovate and grow.

**ADMN 4849 Action Research for School Leaders (4 Credits)**

This course emphasizes the use of research methods which are linked to research needed in schools. Students will learn to identify, analyze and solve problems. Some of the action research methods include focus groups, interviews, observations, school records and surveys. Capstone project will relate directly to the improvement of school policy and practice.

**ADMN 4859 Action Research Capstone (1 Credit)**

Provides support for students as they develop their action research project into the Capstone for the Masters in Educational Leadership and Policy Studies.

**ADMN 4860 Principal Internship (2 Credits)**

The purpose of a formal internship with a principal is to participate in supervised practical training in many of the aspects of school building administration. It is imperative that an applicant have as many first hand experiences as possible in all phases of building administration which focus upon the standards set for principals in Colorado. Must be accepted into an ELPS certificate or MA program.

**ADMN 4900 Advanced Inquiry and Analysis (4 Credits)**

This course is part two of a two-part course series. In part one of this series, Introductory Qualitative Research (RMS 4941), you learned about the foundations of qualitative research including philosophical perspectives, theoretical underpinnings, key characteristics, and common approaches to inquiry and research design: case studies, ethnography, narrative (testimonios), grounded theory, phenomenology, and action research. You ended the course with a design of a qualitative study proposal informed by the extant literature and your personal, practical, and intellectual goals. You completed the course with the design of a qualitative research study. ADMN [xxxx], Advanced Inquiry and Analysis, is the counterpart where you will go in the field to execute your qualitative study designed in your Introductory Qualitative Course. This intermediate level qualitative course builds on the content of other qualitative research courses at the University of Denver. In this course, you will continue to learn the skills and competencies needed to gather, analyze, and report high quality data. You will leave the course well-grounded in the application of the IRB process, data collection, data analysis, data interpretation, handling concerns about reliability, validity, and ethics; and writing the final report. The final product for this course will be the execution of a rigorous qualitative research design with preliminary findings that could be presented at a professional conference and with further development for manuscript publication.

**ADMN 4991 MA Independent Study (1-10 Credits)****ADMN 4995 Independent Research (1-10 Credits)****ADMN 5900 Research Planning and Design (3 Credits)**

This course is designed to support doctoral students to design research and successfully defend a research proposal for their culminating project/dissertation.

**ADMN 5910 Dissertation Seminar for Educational Leadership and Policy Studies (2 Credits)**

This course is designed as a workshop to support students in the ongoing development of the EdD Dissertation in Practice (DiP) or their PhD dissertation, to work collaboratively to finalize the literature review, research plan, and/or data analysis. Our work together will be highly interactive. Students are expected to work closely with their chairs /dissertation directors/advisors and other committee members throughout the process. Feedback from the instructor will in no way supersede the judgment of the chair/dissertation director or committee members. The purpose of this course is to guide students in completing the DiP or the dissertation. This is not a research methods course, but a doctoral dissertation course focused on the application of research understandings, knowledge, concepts, and terminology in the design of a dissertation. It is assumed that prerequisite research courses provide students with considerable information, foundational knowledge, and conceptual understandings of both quantitative and qualitative research methodologies and other relevant topics.

**ADMN 5991 PhD Independent Study (1-10 Credits)**

Special projects in the field of education, taken by arrangement of Educational Administration faculty.

**ADMN 5993 Doctoral Research Seminar (1-5 Credits)**

The Doctoral Research Seminar is designed to prepare students to undertake the completion of doctoral research or a dissertation. The research process can often be confusing and overwhelming, especially for students coming from a cohort-based program. This course assists students in turning a research idea into the EDD doctoral research project or a polished dissertation proposal and provides students strategies for making the process manageable and enjoyable.



**ADMN 5995 Independent Research (1-10 Credits)**

## Liberal Studies (MALS)

**MALS 4050 World Visual & Performance Art (4 Credits)**

This course draws upon global artistic traditions of visual art and performance in conveying how human beings express ideas, themes, and emotions. Students view and experience artistic forms and movements throughout history and from a variety of traditions across the world, critically analyzing art movements and forms across time. They synthesize ideas across cultures, traditions, and types of creative expression and make connections and distinctions between genres and art forms. A different, rich, artistic theme is the focus each time the course is taught.

**MALS 4200 Grant Writing (4 Credits)**

This course gives students the opportunity to develop a thorough understanding of proposal writing. Students will receive practical grant writing advice and support, and they will work to sharpen their writing, program design, budgeting, and evaluation skills. Prospect research, development planning, and grasping the dynamics of the broader philanthropic landscape are important components of a holistic funding strategy that produces a successful fundraising program. Students will explore the place of contributed income in a healthy and diversified funding plan, develop research and planning skills, and learn the best practices that are fundamental to building strong philanthropic relationships.

**MALS 4210 Fundraising for Sustainable Arts Organizations (4 Credits)**

Every sustainable arts and culture organization requires a diversified funding base—usually a mix of earned income, contributions from individuals, and grants from foundations and government programs. This survey course allows students to explore the professional skills they will need to respond effectively to a variety of funding scenarios. The course is tailored for creatives — artists, cultural workers, and organizers in need of a user-friendly approach to the critical activity of fundraising.

**MALS 4281 Event Planning (4 Credits)**

Events play a large role in connecting community and audiences within the arts and culture sector. Students will learn to develop and manage arts and culture events to achieve an organization's mission, goals, and objectives within the constraints of the event's scope, timing, and budget. Event management systems addressed include strategic planning, event design, marketing and audience development, site management, and partnership development. Students will create a program and plan for an event supporting a particular arts and culture organization.

**MALS 4283 Strategic Marketing Planning for Arts and Culture (4 Credits)**

This course provides a strategic approach to attracting audiences through arts marketing. Students learn to build a cohesive strategic marketing plan that aligns with the mission and programming of a real-life arts organization. Students will make a wide range of strategic marketing management decisions, preparing them for decision-making positions in arts marketing.

**MALS 4284 Arts and Culture Entrepreneurship (4 Credits)**

In any sector of the Arts and Culture field, whether government, nonprofit, or for profit, it is essential to be able to develop programs and/or organizations from conception through implementation and assessment. This development requires the clear communication of what is needed to develop, implement, and sustain this plan over time. In this course, students take an entrepreneurial approach to develop a program or organization in the arts and culture field. Students will develop and present a comprehensive business plan to define, map, structure, and assess the program/organization in either the nonprofit or for-profit sector.

**MALS 4285 Basics of Arts and Culture Marketing (4 Credits)**

This course provides a strategic approach to audiences and markets through an arts and cultural lens. Students will study basic principles of marketing, audience characteristics, and theories of creating commitment to the arts.

**MALS 4286 Social Media and Digital Marketing for Arts and Culture (4 Credits)**

Marketing arts and culture in the digital age is an art unto itself. Today's arts marketers are expected to produce visual, audio, and written content that matches the quality of the art, on stage or in the gallery, or the cultural programming presented to the public. This course provides students with a framework for planning, producing, executing, and measuring the impact of digital campaigns that build communities around art and culture.

**MALS 4287 Managing Demand and Pricing for Arts and Culture (4 Credits)**

Tomorrow's arts leaders need to be prepared to face the emotional subject of pricing in a way that is responsive to the community yet supports a sustainable business model. This class takes an evidence-based approach to determining the demand for arts and culture programming and setting prices for programs and events offered by arts and culture organizations. Students will explore dynamic pricing strategies, approaches to communicating the relationship between price and value, and how artistic and cultural programming enriches the broader community.

**MALS 4340 Arts and Culture Leadership for Social Change (4 Credits)**

Art and culture are powerful tools for the transformation of society and individuals: they sustain communities in resistance, provide powerful social critiques, expose audiences to multiple experiences and points of view and utilize collaboration, co-creation, dialogue, and exchange, to effect social change. In this course, students will learn how cultural institutions can become active agents in the work of social change. We will examine theories of movement building, explore case studies and develop advocacy, outreach, and program planning strategies for successful arts and social justice leadership.

**MALS 4444 Emerging Trends in Visual and Performance Art (4 Credits)**

Whether you're curating visual art for a large regional venue or staging work at a local theater or gallery, understanding current artistic trends can be critical to your success. This course looks into major developments in Contemporary visual and performance art around the world. From new approaches to materials and techniques to expressions of identity and cultural/political critique, students will examine and engage with the latest, most significant artistic trends that are shaping the Contemporary art experience.

**MALS 4470 Arts and Culture: History, Context, and Trends (4 Credits)**

This course examines the significant and growing economic, social, and educational impact of the arts and culture sector on our increasingly diverse communities. Focusing on historical and current trends in the visual, performing, literary, and media arts, students will develop a stronger grasp of the role arts and culture organizations play in enriching our understanding of the world around us.

**MALS 4475 Organizational Vibrancy and Measurement (4 Credits)**

As database and analytics systems for arts organizations grow ever more sophisticated, arts leaders must be literate in basics concepts of statistics, finance, and data analysis. This course will prepare students to examine data critically, explore the stories that data can tell, and determine how to measure success and vibrancy.

**MALS 4480 Arts and Culture: Best Practices and Practical Skills (4 Credits)**

This course will engage students in the management and operations of arts and cultural non-profits through terms, techniques, and applications specifically focusing on analysis of mission/visioning, planning, staffing, volunteerism, board governance, fiduciary actions, fundraising/development, marketing/promotion and assessment. This is in preparation for a variety of experiences students may explore, including new aspects of arts management, either in positions of leadership, employment in the field, or a higher interest in volunteerism.

**MALS 4485 Legal Landscape of Arts and Culture (4 Credits)**

Professionals in arts and culture, whether they are artists, managers, directors, or others working in the private, government, or nonprofit sector, will encounter a variety of legal issues during their careers. Through readings, case studies, assignments, and research, students will be introduced to a complex interdisciplinary system of relevant laws that impact and, in some cases, govern arts and culture organizational activities.

**MALS 4490 Arts and Culture Programs for Social Impact (4 Credits)**

In this course, students explore changing attitudes toward arts participation and cultural philanthropy, focusing especially on the need for new approaches to engaging and working with culturally diverse populations. Students explore the cultivation of effective cross-disciplinary partnerships to create impactful programs that can transform communities. Programs at diverse arts organizations serve as case studies for practical applications. Students use theory-of-change models to develop programs that connect arts and cultural work with social-impact activities beyond the arts and culture sector.

**MALS 4701 Topics in Arts and Culture (4 Credits)**

The content of this course varies each term. The topics may include time-sensitive issues in the area of literature, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**MALS 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**MALS 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**MALS 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**MALS 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry-related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**MALS 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Library & Information Science (LIS)

**LIS 4000 Libraries, Information and Society (3 Credits)**

An overview of the theoretical and conceptual foundations of library, archival, and information sciences and an introduction to the information professions, including principles, values, professional organizations, publications, current and future challenges.

**LIS 4001 Immersion (0 Credits)**

This on-campus experience is for students in the MLIS@Denver online program.

**LIS 4005 Privilege & Equity (3 Credits)**

This course is a reflection and discussion-guided exploration of various societal privileges and how they affect equity in library, archives, and other information professions. The topics of race, ethnicity, gender, socio-economic status, and education will be considered.

**LIS 4010 Organization of Information (3 Credits)**

This course introduces basic concepts in the theoretical, practical, and technological aspects of information organization. It provides an overview of the methodologies for organizing and representing information resources in the library, archives, and museum settings.

**LIS 4011 Information Access & Retrieval (3 Credits)**

Information retrieval is defined as the process of searching for (and retrieving) relevant information within a document collection. The document collection could be textual (bibliographic records), structured and unstructured data, library databases, web based information resources, multimedia resources, and numerical data. This course introduces students to important access and retrieval tools and technologies used to retrieve information that are relevant to a user's information need. In addition to the underlying principles and processes revolving around access and retrieval such as text operations, indexing, query languages, and searching, the course covers relevant topics such as library discovery systems, web based information retrieval technologies, and enterprise search systems.

**LIS 4015 User and Access Services (3 Credits)**

Overview of human information processing and user services in the changing information environment and different communities of practice. This course introduces the concepts of user information needs, seeking, and processing as a foundation for understanding users and designing user-centered information services. The course examines both traditional reference and current/emerging information services in different settings and populations. Course also introduces the concepts of information literacy, user education, and assessment of information services.

**LIS 4040 Management of Information Organizations (3 Credits)**

An introduction to current theory and practice of management in information organizations through the study of organizations, communications, decision making, planning, leadership, human resources and budgeting. Prerequisite: LIS 4000 or instructor approval.

**LIS 4043 Advocacy and Marketing in LIS (3 Credits)**

An overview of advocacy and marketing foundations as they relate to libraries. The course examines practical tools and applications of both marketing and advocacy. It helps to distinguish the difference between the two disciplines and when the two should be used together.

**LIS 4050 Library and Information Technologies (3 Credits)**

A foundation course on the applications of information and communications technology in libraries and information agencies. Integrated library systems and the acquisition, evaluation, and implementation of library automation solutions, including electronic resource management systems are explored. The course further introduces database design, Internet technology, web services, cloud computing, computer networks, telecommunications, and computer security. Hardware, software, and other productivity tools and utilities from organizations such as OCLC, Amazon, and Google are discussed.

**LIS 4060 Reference (3 Credits)**

Information resources include a number of different kinds of reference materials in a wide variety of formats. These include guidebooks, encyclopedias and dictionaries, indexes and abstracts, handbooks, bibliographies, biographical finding tools and biographies, data sets and much more. Many of these resources are available on-line, as well as in print and other digital formats. This course will help students identify and evaluate the most likely resources for information queries in particular settings. It will also provide the opportunity to find answers to real research questions. The course will cover the primary resources for the broad disciplines of business, humanities, sciences, social sciences and government publications in print and electronic formats. Class exercises will reflect the multidisciplinary and multicultural interests and characteristics of library users. Prerequisite: LIS 4015. Recommended prerequisites: LIS 4000 and LIS 4011.

**LIS 4070 Cataloging & Classification (3 Credits)**

Theory and practice of bibliographic control including the study of representative cataloging using Anglo American Cataloging Rules, 2d ed., rev. with amendments and Library of Congress Rule Interpretations, machine-based representation using the USMARC formats and other standards, and subject analysis and classification using Library of Congress Subject Headings, Dewey Decimal Classification, and Library of Congress Classification, with principle focus on monographs, major media, sound recordings, and serials. Prerequisite: LIS 4010 or instructor approval.

**LIS 4135 Scholarly Communication (3 Credits)**

This course will provide a broad understanding of scholarly communication systems regarding the creation, dissemination, and evaluation of scientific information. The concept of scholarly communication refers to the ways researchers publish and disseminate their research findings in the digital environment and encompasses formal and informal channels of communication among scholars. Traditionally, scholarly dissemination systems have involved conference presentations and publication of books and articles in subscription-based journals. Digital technology has transformed scholarly communication by introducing open access publishing models and alternative ways of measuring scholarly impact. This course will explore the changing nature of scholarship and will examine the topics of scholarly publishing, peer review, intellectual property, the open access movement, digital repositories, bibliometrics, and altmetrics.

**LIS 4206 Web Content Management (3 Credits)**

This course will include instruction in web page creation, selection, and evaluation of web content as well as web site management. Selection of web page content will be discussed in the context of organizational knowledge management and competitive intelligence needs. Differences in information needs for provision of public information and competitive intelligence on Internet pages versus the organizational information needs of Intranets in knowledge management will be explored. This course also will address human-computer interface design to allow web page designers to create effective web pages according to established principles of design.

**LIS 4208 Usability (3 Credits)**

This course provides an overview of usability analysis and user experience research and introduces students to practical methods and techniques in conducting usability evaluation. The focus of the course will be on the selection of appropriate evaluation methods, as well as planning, designing, and conducting usability evaluations of information services. In addition, the course will discuss the methods and tools of user-experience research, the theoretical underpinnings of usability, and the role of usability in iterative design and the development of information systems.

**LIS 4209 Information Architecture (3 Credits)**

The web is a complex information environment consisting of billions of web pages, users, and clicks and interaction every single day. This course introduces students to the fundamentals of web information architecture (IA) - a discipline that aims to understand the information needs and activities of web visitors and create design elements to help users find their way around in the complex information environment with ease. The course will cover various strategies and skills, in which information architects structure, organize, label, navigate, and search for information on large websites. A service learning component is built into this course so that students can transfer their IA knowledge and skills to a real-world project. The course is designed following a project management approach and students will be exposed to different activities from start to finish.

**LIS 4210 Data Visualization (3 Credits)**

This course provides a practical introduction to the principles, theories, and applications of information visualization in the research data context. This course contextualizes modern practices in information visualization by examining historical approaches to visualization with an eye on theories that inform contemporary visualization best practices. Using a hands-on component, students will get real-world experience in visualizing datasets, and building visualization dashboards that integrate multiple visualizations.

**LIS 4220 Data Curation (3 Credits)**

Across the academic domains, digital data are becoming more visible as critical products of scholarly work. Digital technologies, such as sensor networks in the environmental sciences, social networking tools in the social sciences, and the digitization of cultural artifacts in the humanities, allow researchers to produce far greater volumes and complexities of digital data than were possible in the past. Digital technologies, and the data that they produce, offer tremendous opportunity for researchers in every academic discipline to ask questions that were previously impossible to study. Some digital technologies enable researchers to study very local phenomena in great detail. Others enable the integration of many diverse data streams in order to conduct synthesis and longitudinal studies. But while the possibilities of digital data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse user communities, and how to store and preserve data over the long term.

**LIS 4230 Database Management Systems (3 Credits)**

This is a foundation course on the principles of database design and the use of database management systems for information professionals. The course covers database systems, data modeling, relational models, relational algebra, SQL, emerging NoSQL systems, data storage and querying, query languages, query optimization, OLAP, transaction management, data warehousing, and data mining. In addition, fundamentals on systems analysis and the database application lifecycle will be reviewed.

**LIS 4235 Scripting for Large Databases (4 Credits)**

This course will introduce students to the basics of data storage and acquisition as part of a multi-step data gathering, processing, analysis and visualization effort. The logic and structure of relational databases will be reviewed, exploring the more common databases like SQL Server and Postgres, along with exploration of JSON and NoSQL based data stores. Techniques and methods for automation and scalable data processing will be introduced under the Python programming language with a focus on using Pandas and other libraries to simplify data tasks. These skills will be integrated and applied by the student through the use of prepared data sources, along with use of APIs and web scraping technique to acquire data through internet sources.

**LIS 4320 Outreach (3 Credits)**

Outreach as a library service is evolving at a rapid pace. This course will examine the history, current practice, and future promise of outreach across all kind of library organizational settings. Topics addressed in this course will include competencies for outreach librarianship; practices in outreach services; definition and scope; planning, designing and budgeting for services; environmental scanning, key performance indicators, and barriers; developing and maintaining partnerships.

**LIS 4321 Collection Management (3 Credits)**

Topics addressed in this course include collection development and access policies, selection methods and practices, collection assessment, preservation and conservation, de-selection, treatment of rare material, manuscripts and archives, U.S. government publications, non-book and digital formats management, juvenile, and other special materials.

**LIS 4330 Information Literacy Instruction (3 Credits)**

This course provides an introduction to the principles of library instruction and information literacy including a historical overview of their place within the profession. Emphasis is on instruction within an academic setting, but students will learn important educational theories that can be applied to a variety of settings. ACRL and AASL standards will be examined as well as types of instruction, instructional design, collaboration with faculty, various competencies, assessment, and lifelong learning. The class has a strong emphasis on public speaking, communication skills, and the practical application of educational theory.

**LIS 4355 The Reading Experience in LIS (3 Credits)**

Working with readers has always been a cornerstone of library practice. Traditionally referred to as readers' advisory, reading work has expanded beyond book displays, individual requests for a good read, and book clubs. It has become a foundation of extensive library programming, meaningful leisure, and personal enjoyment, and an instrument of building healthy and engaged communities; it has turned from monolingual to multilingual; and it has claimed its place in the virtual library environment. No longer limited to public libraries, reading work comprises a growing area of interest in academic and special libraries, book publishing, and book trade. This course will introduce students to the selected theories of reading behaviors; practical skills of engaging readers, developing reader services, programming, and advocacy; the major genres and sub-genres of fiction and nonfiction materials; a wide array of print and electronic tools facilitating this practice; electronic reading and online reading communities; and foundations of bibliotherapy. This course is focused on adult readers. For other audiences, see LIS 4510 Children's Materials & Services & LIS 4520 Young Adult Materials & Services.

**LIS 4370 Database Searching (2 Credits)**

Nearly all historic, traditional search and retrieval tools such as library catalogs, indexes, microform guides, and archival findings aids have migrated to web-based systems. This course explores the complexities of searching for materials in an online environment. Topics to be covered include database and field structures; controlled vocabularies and indexing schema; search syntaxes, reference linking; data exploring and manipulation; non-textual database searching including numerical, image, and multimedia data; metasearch and web-scale discovery technologies.

**LIS 4404 Metadata Architectures (3 Credits)**

Provides an overview of the principles and theories of metadata development in the digital environment. Focuses on the design and application of metadata schemas for distinct domains and information communities, issues in metadata interoperability, vocabulary control, quality control and evaluation. Examines international standards, activities and projects. Prerequisite: LIS 4010.

**LIS 4510 Children's Materials and Services (3 Credits)**

This course is designed to prepare librarians to work with children (ages birth to 12 years) in school and public libraries. Topics covered include children's development, reading interests and needs, materials selection, collection development (including print and non-print materials), discussions of specific genres, reading motivation skills, designing a children's area, and developing various programming ideas. Students read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks and stories, become familiar with review sources, and design a one-year plan for youth services in a school or public library.

**LIS 4520 Young Adult Materials & Services (3 Credits)**

This course prepares librarians to work with young adults (ages 12-18) in school and public libraries. Topics covered include young adult development, reading interests and needs, materials selection, collection development (including print and non-print materials), and discussions of specific genres, reading motivation skills, designing a YA area, programming, and intellectual freedom issues. Participants will read/view/listen to and evaluate a wide variety of materials for and about this age group, prepare and present booktalks, become familiar with review sources, and design a one-year plan for a YA department in a small school or public library.

**LIS 4535 School Libraries (2 Credits)**

This course is a study of school libraries and the characteristics that make them different from other types of libraries. There is an emphasis on information literacy and educational technology standards as they apply to school libraries, the collaborative instructional process, and standards-based instruction including summative and formative assessment revision techniques. Collaborative planning and curriculum development through the school library program is addressed, as well as an understanding of networks and instructional delivery systems. Various strategies to improve students' reading will be addressed, as well as a variety of methods for promoting children's and teen literature through collaboration with classroom teachers. Administration of the school library is addressed in a review of mission statements, goals and objectives, strategic planning, policies and procedures, and communication with school administration. The discussions will create an awareness of the importance of leadership and professionalism through educational and professional organizations, lifelong learning, educational research, and mentoring. Most of the concepts in this class will have been introduced in other classes. This class will specifically tie the concepts to the school library setting.

**LIS 4610 Career Development (3 Credits)**

This course addresses issues in career planning and professional development. Key skills that graduate professional students build are: using self-assessment and reflection to understand existing skills and expertise; identifying the expectations of the LAIS profession; acquiring skills related to finding a professional position; and, developing a career plan.

**LIS 4700 Topics in LIS (1-5 Credits)**

This flexible library and information science course will provide students with the opportunity to explore issues of current importance in the field. Topics and credit hours will vary and will address subjects such as emerging technologies, new methodologies, specific reader services, standards and practices, and social and economic trends in the profession. Prerequisite courses may be recommended or required as determined by the content of the specified course.

**LIS 4701 Reference Topics (1 Credit)**

This course provides the student with an opportunity to explore information resources in specific subject materials. Lecture, readings, class discussions, and exercises will address all formats of materials including print, electronic, and web resources.

**LIS 4702 Type of Library: Topics (1-3 Credits)**

This course is a study of specific types of libraries, such as public libraries, academic libraries, and special libraries, and the characteristics that make them different from other types of libraries. Specific topics covered will depend on the type of library, but may include collections, management, budgets and funding, as well as professional competencies.

**LIS 4800 Introduction to Archives (3 Credits)**

This course provides an introduction to the objectives and methods of the archival and records management professions including an overview of terminology, issues, and common practices. The systematic control of records throughout their life cycle from creation through processing, distribution, organization, retrieval and archival disposition will be covered. Prerequisites: LIS 4000 and LIS 4010; or instructor permission.

**LIS 4805 Records Management (3 Credits)**

This course covers the establishment of information maintenance plans, evaluations and audits of records and information management Programs, the records and information survey, retention policies and legal requirements, and techniques for integrating automation to records and information management.

**LIS 4806 Advanced Archives (3 Credits)**

In this course, students will be given the opportunity to put into practice basic archival principles and functions. Students will perform the actions of appraisal, accessioning, arrangement, description, and access solution review for both analog and digital archival collections. Additionally, students will be given the task of providing solutions for new paradigms in archival processing such as creating a web archive, processing email collections, and capturing social media content. The course will be a combination of lecture, demonstration, lab time, discussion, and projects.

**LIS 4810 Digital Libraries (3 Credits)**

This course provides a theoretical foundation for the study of digital libraries and discusses the technological, organizational, social, and legal issues associated with the development and use of digital libraries. Through this course students develop an understanding of digital library components and explore theoretical and practical approaches to constructing, maintaining, and evaluating digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries. Topics examined include digital library definitions, design and architecture of digital libraries, information access in the digital library environment, digital library users and user services, data repositories, digital curation, digital preservation, digital library evaluation, and digital librarianship.

**LIS 4820 Digitization (3 Credits)**

The course offers an introduction to issues and trends in planning, developing and managing digitization projects at libraries, archives, and museums. The focus of the course is on the conversion process of analog materials into the digital format, online delivery, and preservation of master files. The course discusses collection development policy for digital projects, copyright, digital imaging technology, digitization standards and best practices for text, images, audio, and video, metadata for cultural heritage collections, delivery platforms, preservation, project management, sustainability, documentation, promotion, and evaluation of digital projects.

**LIS 4850 Digital Preservation (3 Credits)**

Students will learn the principles and practices of preserving access to information encoded in digital form. They will learn how to assess digital preservation needs within an institution, write digital preservation policies, and how to collect and present data to make a case for acquiring funds for digital preservation activities. Students will learn the basics of digital information encoding as it applies to the technological aspects of digital preservation, and will learn about current tools and practices used to preserve access to digitally encoded information over time. The course will be a combination of lecture, discussion, and problem solving. It requires participants to conduct independent research and writing. Critical reading of course materials is essential to stimulate active participation in class discussions.

**LIS 4901 Capstone Course (3 Credits)**

Students in this course will design and complete a project to demonstrate the ability to integrate and synthesize their master's course work and apply their knowledge to a topic. The class meets with an instructor regularly over the nine-week summer quarter. The instructor monitors and guides the students to ensure that they complete the phases of the project in accordance with the proposed timeline and goals. Evaluation will be based on individual performance, with respect to the quality and professionalism of the research, the management of the project, and analytical and writing skills. Prerequisite: Minimum of 45 quarter hours of graduate LIS course work completed, including all core courses, a proposal approved by the academic advisor and faculty permission.

**LIS 4902 Internship (1-4 Credits)**

This course will offer up to 4 credits for an internship position in libraries and archives. Students are encouraged to gain practical experience.

**LIS 4910 Culminating Internship (3 Credits)**

This course is designed to supplement the classroom experience by giving students practical experience working in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include fields of medicine, law, art, public, and academic libraries. It is the student's responsibility to select a practicum site and a field supervisor, who must be approved by LIS faculty. Seventy-five hours of service over a 10-week quarter are required. The student, faculty, and field supervisor will determine specific requirements for the final paper or report. Students must notify the LIS academic advisor one quarter before enrolling in Culminating Internship. Prerequisites: Completion of a minimum of 38 quarter hours of graduate LIS coursework, including all core courses.

**LIS 4911 Elementary School Culminating Internship (2 Credits)**

This course is designed to provide elementary school practical experience for teacher-librarians by working a minimum of 80 hours in an elementary school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4912 Secondary School Culminating Internship (2 Credits)**

This course is designed to provide secondary school practical experience for teacher-librarians by working a minimum of 80 hours in middle or high school library. Prerequisite: Students must have completed most of the required coursework for the degree before enrolling in the Practicum.

**LIS 4920 Service Learning in LIS (1-4 Credits)**

This course is designed to supplement the classroom experience by giving students an opportunity to participate in a service learning project. Students will propose an independent study component highlighting the learning aspects of the project. The experience should provide practical work in a library or information agency. Various options are available to students depending on their areas of interest and specialization. Opportunities for experience include many areas related to the information needs of an underserved population. It is the students responsibility to select a site and a field supervisor. The student, faculty coordinator, and field supervisor will work together to establish the goals and objectives of the experience. A minimum of 40 hours of service is required for two quarter hours of credit.

**LIS 4991 MA Independent Study (1-10 Credits)**

Independent study projects allow students more in-depth investigation of the many facets of library and information science. Students must work with an approved faculty advisor and submit a proposal outlining the objectives, scope, outcomes, and evaluation criteria. The faculty advisor and the department director must approve proposals. Prerequisites: Completion of a minimum of 30 quarter hours of graduate LIS coursework, including all core courses and a minimum GPA of 3.0.

**LIS 4995 Independent Research (1-10 Credits)**

## Management (MGMT)

**MGMT 4201 Fundamentals of Managing and Leading (4 Credits)**

Fundamentals of Managing and Leading is a graduate course that provides students with an introduction to essential management and leadership concepts and also their application. The course is organized around the classic managerial functions of planning, organizing, leading and controlling. In addition, the course surveys entrepreneurship, corporate strategy, and emerging topics in management and leadership.

**MGMT 4202 Leading Self (4 Credits)**

The purpose of this course is to provide insight into why and how sustainable desired change occurs at the level of individual human/social interaction. This course will focus on providing students the critical skills to "lead the self" towards personal/professional goals as the context for studying intentional change. Students will revisit assumptions held about themselves as they develop intentional strategic approaches to identify career opportunities in their selected fields and lead the self towards the accomplishment of professional objectives.

**MGMT 4203 Leading Teams (4 Credits)**

"Leading teams" is a graduate course to prepare students to provide formal and informal leadership to a team. Students will learn about the fundamental design principles of high-performing teams as well as common pitfalls that teams are subject to. Students will also learn about how to sustain team performance through effective information-sharing, decision-making, and conflict management. Students will also cover current topics in teams including virtual teams, team creativity and team-based innovation. This course is designed to stimulate student learning by letting students integrate abstract knowledge through concrete firsthand experiences.

**MGMT 4204 Leading Organizations (4 Credits)**

In this experiential challenge-driven course, students will leverage their skills and further build upon their experience by analyzing a company, including the firm's mission, vision, and values, business model and financial health of the organization via the Spring Challenge. After finalizing the scope of the spring project, students will assess the firm's strengths and weaknesses using a series of tools and frameworks as well as identifying opportunities and threats in their respective industry. Synthesis in the course takes place when the student is able to provide strategic recommendations that generate added value and competitive advantage for the firm. Learning is facilitated through a work-shop atmosphere that uses case studies of industry leaders currently in the news that can then be applied to the project subject company.

**MGMT 4240 Global Business (2-4 Credits)**

The Global Business course and ensuing international experience are designed to expose students to the challenges, opportunities and risks of doing business globally. How do you make well-informed decisions in a global environment, taking into consideration the economic, political, environmental, cultural and historical context of a country or region? Conducting business outside the United States involves a unique set of challenges. Diverse cultures, laws, languages, and currencies add to the complexity of putting together and managing international business ventures. As a part of the international trip, students will meet with business executives and organizational leaders across a variety of industries to gain a broad understanding of the business environment of the countries being visited. In addition to completing secondary research beforehand, students will also be responsible for conducting primary research by setting up small team meetings in-country to develop a hands-on understanding of the business environment on the ground. The core end deliverable is a feasibility study. Before registering for MGMT 4240 - Global Business, students must have a degree review with Academic Advisor or Program Director.

**MGMT 4280 Business Design (4 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovation(s) to the business model. That innovation(s) is discovered through an investigation of the existing business models and the competitive landscape including: suppliers, customers, competitors, substitutes and barriers of entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of strategies in: marketing, sales, operations, human capital, social responsibility, financing, corporate governance and technology. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of business planning. The result is a written business plan and presentation to funding sources reflecting a sustainable competitive advantage and creation of a defensible market.

**MGMT 4301 Organizational Behavior (4 Credits)**

This course focuses on psychosocial and behavioral issues in management and leadership to better understand how to drive performance and well-being. The course is founded upon an interdisciplinary approach, with major inputs coming from social psychology, administrative science, engineering, medicine, sociology, and philosophy. The course will center around behavioral analysis and organizational concepts. Students will gain a solid understanding of the latest in organizational psychology from a declarative knowledge standpoint, then put this knowledge into use for procedural knowledge.

**MGMT 4302 Leading Talent (2 Credits)**

A management course for graduate students grounded in a strong foundation of real experiences managing and leading Human Resource organizations. This course is designed to unify strategy, human resource strategy and principles of management in a highly interactive format employing multiple learning methods.

**MGMT 4303 Negotiating with Power (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life. Once we have a basic understanding of power and political behavior, we will explore the relationship between power and effective negotiation. Yet, most of us know very little about why we are sometimes successful and other times not, and even fewer of us know what it takes to be consistently effective in negotiations. This course will broaden your understanding of how to effectively negotiate in a variety of contexts by engaging in simulated negotiations during class.

**MGMT 4304 Project Management for Leaders (4 Credits)**

This course will introduce the student to the key elements of a successful project delivery system. The project delivery system consists of five components: training, tools, core skills, company support, and a project delivery process. The process is the means by which projects are consistently and efficiently planned, executed, and completed to the satisfaction of clients. The system is aligned with the principles of a total quality improvement program, namely client focus, project manager commitment, evaluation and measurement, corporate support, and continuous improvement.



**MGMT 4305 Business Model Design and Innovation (2 Credits)**

Each student learns an organized approach to rapid design of a business with a sustainable competitive advantage based upon innovations(s) to the business model. Innovation(s) is discovered through an investigation of the existing business models and the industry landscape including: customers, competitors, substitutes, suppliers, and barriers to entry. Specific opportunities are identified through investigation of the following: industry, market, and competition. Opportunities to create competitive advantages are investigated through the design of financial, marketing, sales, operation, talent, technology, and social responsibility strategies. The course offers a workshop atmosphere in which students are expected to apply and discuss the various aspects of a Business Model and a Business Plan. The result is a written business plan and presentation to a potential funding panel.

**MGMT 4306 Virtual Business Management Simulation (2 Credits)**

The focus of this course is on gaining new venture experience. Through an online/virtual computer simulation, students will be placed into a very realistic international business setting, where they will start up and run a company through multiple rounds of decision-making. The online simulation allows students to build entrepreneurial firms, experiment with strategies, and compete with other student teams in a virtual business world. Designed to mimic the competitive, ever changing marketplace, the simulation lets students gain experience in market analysis, strategy formulation, and the management of a new venture.

**MGMT 4330 Financials for Leaders (4 Credits)**

This course is intended to help students develop a financial decision-making framework that can be used to assess and understand how financial decisions positively and negatively affect their company's short-and long-term well-being. Its emphasis is to introduce students to various tools and techniques used in financial management and to demonstrate how they are applied to the managerial decision-making process. This will be accomplished through a combination of class discussions and case study analyses. Topics include decision making, financial statements, ratio analysis, and return-on-investment.

**MGMT 4340 Strategic Human Resource Mgmt (4 Credits)**

This course focuses on the effective management of human resources in order to create sustained competitive advantage. The course covers the major policy areas of employee influence mechanisms, staffing, training and development, performance appraisal, reward systems, and work design so that students are better prepared to provide direction to the creation and implementation of effective management systems. Prerequisite: MGMT 3900 or permission of instructor.

**MGMT 4345 Performance & Rewards System (4 Credits)**

Measuring and improving human performance, techniques of individual objective settings including MBO, appraisal and feedback systems, creating and managing compensation programs, job design, analysis and redesign of reward systems in various organizational contexts. Prerequisite: MBA 4121 or equivalent.

**MGMT 4350 Business Summit Series: Current Business Issues and Topics (4 Credits)**

The Business Summit Series is an elective course that provides students with insights into a variety of contemporary business issues and topics with a practical approach to developing business leadership skills and competencies. Before the course commences, students are invited to provide input and help faculty select the topics that are covered in the series. The faculty will develop modules, with each module covering a discrete business topic a workshop format. The workshops are taught in four-hour segments, with some workshops covering more than four hours, depending on content and learning outcomes. Workshops span practical topics that are not covered in-depth during the core PMBA curriculum, and they also include emerging business subjects. Topics include: Go-To-Market Strategy, Business Development Strategies, Mastering Sales Techniques, Business Consulting Skills, Becoming a Manager, Organizational Change Leadership, Franchise Business Model, and Colorado's Marijuana Industry. Other emerging business topics may include the Colorado small business market and new industry segments. Industry leaders may present to the class as subject matter experts.

**MGMT 4400 Ethical Leadership (4 Credits)**

Consideration of ethics in business and organizations is relevant for being an effective and successful manager and leader. The course is designed to strengthen capacities in terms of ethical awareness, analysis, and application. An important learning outcome of the course is to facilitate the growth of students in terms of making practically wise and ethically sound decisions in their future careers. Decisions include fulfilling responsibilities to create and sustain ethical climates and cultures for teams, business units, and organizations. This course introduces students to fundamental ethical concepts and ethical decision making frameworks. Students will apply these frameworks to cases and issues relevant to one's role as a future manager and leader. Students will also be introduced current research in moral psychology and behavioral ethics, and students will apply this knowledge in assessing a current case related to business and management ethics. The course will cover current issues such as sexual harassment, privacy in the workplace, and whistleblowing. Students will develop a personalized values-based leadership plan.

**MGMT 4401 Global Leadership I (2 Credits)**

This course is the first of two in the global leadership sequence. As a part of the sequence, there is a mandatory international travel component that will occur over the break between the winter and spring quarters. The operation of a far-flung global enterprise (large or small) imposes special demands upon its leaders. This course explores, through a variety of leadership perspectives, actions and strategies that can be employed to succeed in a global firm. These perspectives include: (1) the headquarters and chief executive officer; (2) global functional disciplines (with special emphasis on global human resource management); (3) the country manager; (4) the global product/service manager; and (5) the host country. Throughout the course, students will systematically examine the cross-cultural, operational and ethical complexities of leading and managing a truly "global" company.

**MGMT 4402 Global Leadership II (1 Credit)**

The centerpiece of the Global Leadership course series is the Global Leadership Experience (GLX) taking place in between Winter and Spring quarters. GLX involves travel to an overseas location where students have the opportunity to interact with business, government, academic and/or NGO players while exploring global leadership challenges and engaging in research to support their field project. Although locations may differ, each GLX is designed to offer students a deep cross-cultural experience and an opportunity to examine first-hand, global business activity in field locations. Global Leadership II offers students space to process and reflect on what they have learned during their Global Leadership Experience. Students will engage in collective debriefings on their experience using insights gained to develop a personal viewpoint on the future of globalization and implications of their experience for their careers. Students will also be challenged to apply learnings from Global Leadership I as they complete work on their team projects and present findings to their colleagues and an expert panel.

**MGMT 4403 Business and Society (2 Credits)**

This course examines the role of business in society and explores important issues in the relationships between business, government, and society. These issues are approached from a stakeholder perspective, integrating business strategy with law, ethics, and social responsibility. The obligations of business to its multiple stakeholders are established and applied through analysis of companies, cases, and current events.

**MGMT 4405 Strategic Execution and Summit Team Competition and Assessment (3 Credits)**

Strategic Execution is a Challenge Driven Educational (CDE) course that builds off several previous MS Management courses. Students will leverage the contents from accounting, finance, management, marketing, strategy, and business analytics to engage with corporate partners to examine real-world problems. This course provides you with the opportunity to apply what you have learned so far in the MSM program with a live client. You will work on a project focused on business and management. Scoping the project will be a key learning outcome.

**MGMT 4410 Qualitative Research Methods (2 Credits)**

This course provides students with an overview of and experience with qualitative methods. You are introduced to a wide variety of qualitative methods, including ethnography, observation, interviewing, grounded theory, discourse analysis, deconstruction, historical methods, and action research. The course is roughly divided into two major sections. The first half of the course introduces you to the epistemological foundations of qualitative research and emphasizes design and data collection. The second half of the course introduces a variety of techniques for coding and analyzing qualitative data and provides exposure to many exemplars of qualitative reports/studies. We will examine conventions for ensuring that qualitative work is rigorous and appropriate for action. Throughout the course you will be given opportunities to try on various methods and gain some hands-on experience in several areas.

**MGMT 4425 Leading People and Organizations (2 Credits)**

We live in a VUCA (Volatile, Uncertain, Complex and Ambiguous) world. Effective leaders are skilled in navigating the challenges presented by our VUCA world – especially when it comes to leading and managing people and organizations. This course focuses on the effective leadership and management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. People are an organization's resources who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. Effective and ethical leaders build and sustain employees' knowledge, skills, commitment, and creativity to build collaborative cultures that foster high performance, reap the benefits of a diverse workforce, and create sustained competitive advantage. In this course, we approach business from a general management perspective, integrating concepts from organizational behavior, organization theory, human resource management, strategy, political science, and cultural anthropology. Course topics include: • Organizational structure and systems. • Selection and hiring, onboarding, motivation, feedback and coaching, and employee engagement. • Organizational politics, power dynamics, and conflict. • Organizational culture.

**MGMT 4450 Power and Influence (4 Credits)**

This course presents conceptual models, tactical approaches, and self-assessment tools to help you understand political dynamics as they unfold around you, and to develop your own influence style and negotiation skill. By focusing on specific expressions of power and influence, this course gives you the opportunity to observe its effective—and ineffective—use in different contexts and stages of a person's career. This course will challenge you to define for yourself what will constitute the effective exercise of power and influence in your life.

**MGMT 4501 Springboard Tools I (1 Credit)**

PowerPoint, Microsoft Word, Adobe, Excel, Outlook... we could hardly imagine doing business in today's world without them. CRM software will soon be regarded in the same essential way. As technology fundamentally shifts the focus of business to a completely customer-centered environment, the pervasiveness of CRM tools will only grow. Though many of these tools exist, Salesforce is one of, if not the most, prevalent CRM tools available in today's market. Used by companies of all sizes and industries, Salesforce provides a suite of products that allow organizations to place their customers at the heart of their businesses, leveraging customer data to gain valuable insights, and provide the customer with a wholistic and seamless experience and interaction with the company's brand. Salesforce's CRM software provides products for the full spectrum of customer interactions, from sales to marketing, commerce to customer service. There are several paths to developing Salesforce proficiency, ranging from a business (end) user of the product, to an administrator (someone who customizes the tool to meet business requirements), to a consultant (someone who implements Salesforce rollouts at organizations), to a marketer (an expert in Salesforce's marketing tools), and beyond.

**MGMT 4502 Springboard Tools II (1 Credit)**

Your journey to securing a career upon graduation starts with the first day of classes and continues throughout your program. The Springboard Tools courses are designed to prepare students to be career-ready upon graduation. Students will learn various tools used in business today, such as Salesforce, Python, and more as determined by the business community. In addition to understanding the tool and its application, students will be required to incorporate problem-solving techniques when using a particular tool.

**MGMT 4525 Facility Management (4 Credits)**

What is a Public Assembly Facility? Public assembly facilities such as arenas, stadiums, convention centers, and theatres evolved out of the need by social communities to build permanent structures for public assembly, for political and commercial activities, religion, sports, spectacles, artistic expression and for commercial and educational assemblies. This course examines the specific areas of responsibility that one must acknowledge and understand to operate a successful venue of this type. We discuss the core competencies required and the unique areas of concentration that separate a public assembly facility from other venue types. Students realize the significant impact and benefit that facilities like these have on the social, educational and economic environment of communities.

**MGMT 4530 Technologies for Sport & Entertainment Management (2 Credits)**

This is a specialized course for the MBA student interested in expanding their knowledge of the sports industry as a business and as a world economic force. It provides students with a framework for understanding the scope of the sports business across various venues, as it relates to information technology. Management Sport Technology focuses on understanding the practical uses of computer applications as a tool in sport management activities. Emphasis is placed on demonstrated proficiency in project management, spreadsheet management, database management, and Web page development.

**MGMT 4535 Managing Sponsorships for Sport & Entertainment Events (2 Credits)**

The purpose of this course is to give students an understanding of sports sponsorship from the perspective of the corporate sponsor and the sports entity. The course identifies and describes the several media distribution channels that are used in corporate sports sponsorship. In addition, students learn how to use sports media distribution properties to create an effective sports marketing plan for corporate sponsors. Students put together a corporate sports marketing plan with a sample sports team.

**MGMT 4540 Advanced Seminar in Sports and Entertainment Management (4 Credits)**

The purpose of this seminar is to consider current topics in sport and entertainment management. Topics vary by quarter depending on timeliness of topics and interest of students. Potential topics may include public policy questions; ethical issues; current economic impacts and analysis; sport and entertainment management factors and how the various segments (professional, amateur, collegiate, high school, recreational and others) relate; environmental impacts; global issues and other issues that impact the current and future fields of sport and entertainment management.

**MGMT 4545 Leadership, Team, and Career Development (2 Credits)**

Daniels MBA students are preparing for leadership roles-as entrepreneurs, in corporations, and in not-for-profit organizations. In this course we will look at leadership from a variety of perspectives. Once we have reviewed what the experts have to say about leadership, we will turn our focus to helping you develop your personal theory of leadership. You will answer on important questions: How will I lead? Armed with this knowledge, you will be better equipped to handle leadership challenges as you go forward in life.

**MGMT 4555 Interdisciplinary Projects for National Park Service (4 Credits)**

A practical application of key business and managerial knowledge, skills, and competencies designed to integrate graduate program elements and provide students with a unique opportunity to work on value-add projects with key managers from the National Park Service. This is an experiential course for integrating and applying multi-disciplined learning outcomes and experiences to real-world challenges, problems, and dilemmas, resulting in solutions for the National Parks Service.

**MGMT 4560 Leadership of the Future (4 Credits)**

In nearly every aspect of life - science, business, pop culture, environment, technology, global politics - we are inundated with data about how much and how fast the world is changing. How will these major shifts impact what we think of as leadership, and how can one develop to be prepared to lead in a fast-moving, volatile, and complex world? Leadership of the Future is a course that takes a deep look at how we've thought about what "leadership" is in the past from a business perspective, and considers what the future will require of leaders as they seek to effectively lead and make a difference in a complex world. The course is founded upon an interdisciplinary approach, drawing from a variety of disciplines including psychology, administrative science, literature, medicine, and philosophy. The course will center around behavioral analysis and active reflective practice: together we will think deeply about leadership as a behavior within a particular context, and as a practice to cultivate. Students will articulate a set of leadership development goals for themselves and engage experientially in service of self-observation, personal growth, and learning. Cross-listed with MGMT 3560.

**MGMT 4620 Organizational Dynamics (4 Credits)**

In this course, you will: (1) understand and develop a set of management and leadership skills critical for effectiveness in high performance work environments; (2) develop the ability to analyze organizations and environments from multiple perspectives; (3) explore policies and practices for facilitating organizational change; (4) become a valued and effective member of a work team; and (5) learn how to incorporate effective communication, critical thinking, creative problem solving, and technology, into organizational behaviors and processes.

**MGMT 4625 Leading People & Organizations (4 Credits)**

This course focuses on the effective management of people, every organization's most critical resource. Employees' knowledge, skills, commitment, creativity, and effort are the basis for sustained competitive advantage. It is people who deal directly with customers, have creative ideas for new products or for process improvements, who devise marketing strategy or take technologies to the next level. In this course, we approach the people side of business from a general management perspective, integrating concepts from organizational behavior, human resource management, strategy, and organizational design. Course topics include motivation, reward systems, engagement; feedback; processes by which work is done and decisions are made, including attention to teams, power dynamics, conflict, and negotiations; the structure of the organization and its systems, including job and organizational design and systems and policies affecting human capital; the organization's culture and history; and the external environment within which the organization operates, including legal, regulatory, demographic, economic and national cultural factors.

**MGMT 4630 Strategic Human Resources Management (4 Credits)**

This course advances the argument that effective human resource policies will create sustained competitive advantage. To that end, this course will address the effective management of human resources in various policy areas: staffing, diversity, training and development, voice and influence, performance appraisal, and reward systems. Rather than taking a traditional, staff personnel perspective, we will discuss human resource management from the strategic perspective of a general manager. Prerequisite: MGMT 4620.

**MGMT 4650 Introduction to Management Consulting (4 Credits)**

This course is designed to provide a broad overview of the management consulting profession, including its industry and competitive dynamics, major practice areas, approaches to implementation, management of consulting firms and the future of consulting. In addition, emphasis is given to the practice of consulting through the development of certain high impact skills in evaluation, proposal writing, data gathering and client presentations. The course is relevant to those who: 1) are specifically interested in consulting careers, 2) have job interests that involve staff positions in corporations, 3) want to become line managers who might one day use consultants, 4) wish to develop general consulting skills and familiarity with the consulting industry. The learning process in class will consist of lectures, cases, readings, exercises and guest speakers. This wide variety of learning methods is intended to convey both the necessary knowledge and practical skills necessary for building a sound foundation for becoming a professional consultant. It is essential that everyone comes well-prepared to class, as the learning process depends heavily upon participation.

**MGMT 4690 Strategic Management (4 Credits)**

Management 4690 focuses on the strategic management of an organization as a whole. This course will introduce students to key decisions that top executives have to make when developing and implementing strategies, methodologies for informing those decisions, and how to interpret information from those approaches to guide strategic decision-making. Overall, from the perspective of leading an organization, students will learn how strategic decisions impact a firm's competitive advantage and success.

**MGMT 4700 Topics in Management (1-4 Credits)****MGMT 4710 Sustaining Family Enterprises (4 Credits)**

Family enterprises have a tremendous impact on our local, national and global economies. Today, the definition of the family enterprise extends beyond just the business entity. It includes family offices, family "banks," family councils, trusts, and family foundations, just to name a few. Further, what happens in, and how decisions are made by, family enterprise affects not only the active family members but other key stakeholders such as inactive family members, in-laws, non-family managers and employees, professional advisors, customers, suppliers and competitors. This course gives students insight into the universe of possibilities that families, enterprises and their advisors face when engaged in systemic transition planning. This highly interdisciplinary course is appropriate for anyone who intends to work in or with family enterprises. This includes family members, accountants, attorneys, estate planners, financial or wealth managers, family office professionals, insurance consultants, business advisors, management consultants, organizational and leadership development experts, international business professionals, psychologists, social workers, and family therapists.

**MGMT 4720 Sustaining Family Enterprise (4 Credits)**

This course is intended to provide students with greater insight into the world of family enterprise. It will cover definitions, concepts, frameworks, and models to help students develop the system perspective of family, business, ownership, governance, and wealth issues. This course is applicable to those working in or governing their family enterprise (family businesses, family offices, real estate management firms, investment entities, boards, family councils, etc.), those students in or seeking careers as professional service advisors to family enterprise (accountants, estate planners, lawyers, wealth planners, psychologists, family therapists, board members, etc.), and those students with a global interest in how family enterprise affects, and is affected by, the global economy.

**MGMT 4740 Global Business I (2 Credits)**

Almost all business is impacted by global trends. This course will help students develop a global mindset and understand challenges and opportunities arising from doing business across national boundaries and cultures. Addressing such issues as diverse cultures, laws, languages, currencies and economic contexts, the course will help students make well-informed decisions giving due consideration to the local and global context in which a given business operates. This course must be taken prior to MGMT 4745 and both courses are to be taken as a sequential series.

**MGMT 4745 Global Business II (2 Credits)**

Working across national boundaries and cultures demands a new approach to business management. This course will help students assess the local environment of the country in which they intend to do business; introduces students to global aspects of marketing, finance, and management; and examines examples of opportunities associated with doing business in so-called "base of the pyramid" markets. This course must be taken after MGMT 4740 and is the second in the series.

**MGMT 4790 Managing Strategic Alliances (4 Credits)**

The purpose of this course is to examine and expand upon the current understanding of the challenges of developing and managing strategic alliances. Reflecting the breadth of the novel features of the structure, the course draws from both strategic management and organizational behavioral disciplines. To order the discussion, we take a process view in addressing why and then how to use a strategic alliance. We initially focus on when to use an alliance. We then turn to the formation of an alliance - examining how to select a partner, which structure to choose and how to negotiate. Following, we discuss post-formation issues of partner relationships, management of the alliance, performance evaluation and alliance termination. We conclude the course with sessions devoted towards managing a portfolio of alliances and network management in general.

**MGMT 4855 Executive Education – Accelerated Leadership Experience (4 Credits)**

Delivering best practices and highly applicable team building skills, the Accelerated Leadership Experience (ALX) from Daniels Executive Education is designed for managers to act as a catalyst for transformation. The result? Successful and fulfilled leaders. ALX includes both classroom and experiential activities and covers topics such as emotional intelligence, communication, coaching, feedback, wellness, stress management, energy management, team effectiveness, people development, diversity and inclusion. The support of ALX's innovative leadership curriculum, experienced faculty, and a cohort of professionals who are at similar points in their careers will help you develop the tools and skills needed to succeed in our increasingly complex world. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4875 Executive Education – Denver Leadership Experience (4 Credits)**

The Denver Leadership Experience (DLX) from Daniels' Executive Education is a transformational workshop designed to challenge you to think and perform differently in order to reach your leadership potential. This award-winning program delivers timely, relevant, and innovative leadership development essentials for our ever-changing, increasingly complex business world. Employee well-being and mental health are more important than ever, therefore this program has deepened the focus on wellness, mindfulness, and stress management; habits which great leaders implement but tend to deprioritize. In addition to our robust leadership content and faculty expertise, you'll be surrounded by a group of professionals who will bring their own experiences and input which adds value to the conversation and deepens the impact of DLX. \*This short-form workshop does not follow the traditional quarter schedule. Please check [daniels.du.edu/executive-education](http://daniels.du.edu/executive-education) for class dates and formats.

**MGMT 4980 Graduate Internship in Mgmt (0-10 Credits)**

Hours and times arranged by student.

**MGMT 4991 Independent Study (1-10 Credits)**

Individual research and report. Hours and times arranged by student.

**MGMT 4995 Independent Research (1-10 Credits)****MGMT 6300 Seminar in Leadership Strategy Research (4 Credits)**

The field of strategy is broad and covers a diverse set of 'macro' organizational theories and topics. In this course, you will have a solid overview of research in the field of strategy. This course will enable you to develop a conceptual view of the field and its theoretical roots, topics, and branches and begin to apply strategic management theories to address original research questions and to solve problems within your own organizations. This will require you to critique extant knowledge and to identify what is missing and what is needed to advance understanding. Finally, this course will provide a beginning point for your knowledge of strategy theories that can guide future pursuits. That is, it is not possible to cover the immense strategy literature in one semester but this course should provide you with the knowledge needed to explore the field of strategy on your own as you move forward.

**MGMT 6301 Research Seminar in Organizational Ethics (4 Credits)**

The seminar focuses an exploration of the role of ethics from the lens of a leader. In this area, the course examines a range of ethical and social performance issues and challenges that leaders must confront. Our goal is to broaden student understanding of the different theoretical arguments and tensions in this area, with a focus on issues faced by modern day organizations.

**MGMT 6302 Research Seminar in Leadership: An Organizational Perspective (4 Credits)**

This seminar will focus on understanding the major theoretical streams in the leadership literature with a focus on leadership within organizations. Emphasis will be placed on comparing historical trends such as trait, behavioral, contingency, and transformational/charismatic theories of leadership and exploring contemporary approaches such as servant leadership, authentic leadership, positive leadership, and shared leadership.

## Marketing (MKTG)

**MKTG 4000 Foundations of Marketing (0 Credits)**

The Master of Science of Marketing program is a deep dive into marketing knowledge and skills. This course onboards students into the program by outlining the program structure, professional leadership and development series, and the faculty and courses that provide a core foundation of marketing. It also provides an overview of six marketing pathways for students to consider as they plan for and navigate their careers as well as the resources and people to support their transformative educational journeys.

**MKTG 4100 Marketing Concepts (4 Credits)**

This course focuses on formulating and implementing marketing management strategies and tactics for providing customer value. The focus of this course is on marketing strategy – constructing an environmental scan, segmenting the market properly and targeting the appropriate markets. Once strategy has been set, brand management is considered along with using marketing tactics as levers to bring value to the customer. The course provides you with a lens through which you may view the world as a marketer, relating marketing principles to consumer and business actions. There is no degree restriction for this course for the graduate students.

**MKTG 4150 Marketing and Product Strategy (includes Entrepreneurship Challenge) (4 Credits)**

You'll be creating a business plan for the Entrepreneurship Challenge and one of the most essential pieces of that plan is the go-to-market strategy, which will be your final deliverable. For the Entrepreneurship Challenge we will be using design thinking to solve a problem that we can create a business around. Design thinking is an amazing, intuitive way to develop opportunities. We will be covering marketing essentials that enable you to create a compelling go-to-market strategy for your startup. We'll cover research, promotions, product, pricing and more!.

**MKTG 4220 Customer Experience Management (4 Credits)**

Customer Experience (CX) is a customer's brand perception throughout all aspects of the buying journey. As companies integrate with digital platforms, customers are now demanding to connect with brands before purchasing and beyond the features and benefits of a product or service. Marketers are utilizing customer insights, digital preferences, Open AI, and analytics to execute and deliver an outstanding end-to-end customer experience and build brand loyalty. This is a client-project-based course that explores the 5-component framework of customer experience (CX) strategy and includes digital user experience (UX), brand experience (BX), and stakeholder experience (SX) to understand how marketing efforts can drive brand loyalty. Through industry-relevant concepts such as customer journey mapping, CX ecosystem, ESG standards, voice of the customer (VoC), and other stakeholders' experiences, students will gain a tactical understanding and execution of customer experience management plans. This is an eight-week course and includes two-day experiential learning opportunity at our Kennedy Mountain Campus (KMC). There will be a course fee for use of KMC, which is \$75.00 per student. Student must attend the weekend retreat.

**MKTG 4380 Supply Chain Management (4 Credits)**

Supply chains are everywhere, from the local store to a large multinational electronics manufacturer operating halfway across the world. From cradle to grave, it is the supply chain management system that links all of the numerous stakeholders into one strategic plan for us as customers in markets. These systems link processes such as product design, sourcing, supply chain planning, manufacturing, fulfillment, and reuse. In today's fast paced markets driven by globalization and technology, knowledgeable professionals in supply chain management are increasingly important for companies to achieve their business objectives. Some of the most successful manufacturers (e.g., Apple and Samsung) and retailers (e.g., Wal-Mart and Amazon) are winning as a result of their supply chain strategies. Especially as markets change rapidly, supply chain management professionals will be integral to a company's success. The purpose of this course is to provide a student with a baseline of knowledge, skills, and abilities to succeed in the various functions of supply chain management at a managerial level of an organization. Prerequisites: MKTG 4360 and MKTG 4370, or instructor permission. Cross-list with TRAN 4100.

**MKTG 4400 Social Awareness and Ethics (2 Credits)**

Social awareness & ethics uses a fresh integrated approach to applying the basic fundamentals of marketing to complex and evolving scenarios involving social change and insight, cultural trends and topics, and tricky, often emotional, ethical situations. This course also helps students learn skills in a safe environment and leverage their experience and knowledge to investigate business situations and opportunities in a thoughtful and sophisticated manner. This course develops a student's ability to make sound business planning decisions using real information from the external environment. This course will combine business ethics' overarching intent to protect employees, the environment, and their customers with marketing ethics' principles of honesty, fairness, responsibility, and respect. As part of this, students will learn about and apply Daniels Fund Initiate Principles: [http://www.danielsfund.org/\\_Assets/files/Ethics%20Initiative%20Principles.pdf](http://www.danielsfund.org/_Assets/files/Ethics%20Initiative%20Principles.pdf) Prerequisites: MKTG 4000.

**MKTG 4501 Client Lab I (1 Credit)**

MKTG 4501 is a requirement to be taken concurrently with a distinct marketing class over the duration of your program. In this course, you will be working with a business client to identify and solve a client problem in the area of focus for the companion course. By taking this course and solving three different types of client problems, over the duration of your program, you will have the chance to sharpen your problem identification abilities and to work with marketing professionals, demonstrating your marketing ability.

**MKTG 4510 Consumer Behavior (4 Credits)**

What makes consumers tick? This course draws on a variety of sources, including concepts and models from psychology, sociology, anthropology, and economics, to offer helpful frameworks for understanding the underlying drivers of consumer behavior. This course places a special emphasis on the cultural contexts that influence consumers. Students will learn and apply qualitative and experimental research methods used to study consumers to derive key insights for making marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4515 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Prerequisites: MKTG 4510.

**MKTG 4520 Marketing Analytics (4 Credits)**

There's no escape; even marketing managers need to understand financials. This course is designed to introduce MS Marketing students to the principles of financial decision-making and the use of marketing metrics, including customer lifetime value (CLV) and media mix modeling. Students learn how to compute marketing ROI and how to make marketing decisions that enhance the bottom line. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4530 Marketing Research (4 Credits)**

Understanding consumers requires careful observation and thoughtful questions. Marketing research represents a methodology for getting the answers needed to be successful in business. This course introduces students to a broad array of marketing research tools relying on primary and secondary data, including interviews, focus groups, ethnographic studies, survey research, and experiments. Students will learn how and when to apply these tools, as well as how to interpret the results to make sound marketing decisions. Prerequisite: MKTG 4000, MKTG 4100, or instructor permission.

**MKTG 4540 Product and Service Innovation (4 Credits)**

Developing and introducing new products and services are the lifeblood for companies and a primary responsibility of product management. This course is focused on the most current innovations in materials, hardware, CPG, and software. This is a travel course and students will be required to travel to the Consumer Electronics Show in addition to attending class on campus. We'll be using Google Ventures rapid sprint framework to develop/test new product ideas. At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4550 Marketing Planning (4 Credits)**

It has been said that "planning without action is futile, and action without planning is fatal." The objective of this course is to enable students to utilize a rigorous planning process to develop action-oriented marketing programs. This activity involves an integrated application of concepts and theories characterized by the logical use of facts -- leading to alternatives -- leading to actions. By the end of the course students should be able to develop effective marketing programs, and to understand the strength and limitations of the principal planning tools a marketing manager has at his/her disposal. The skills developed in this class are particularly important because many organizations now use the marketing plan as the basis for developing the business plan. In fact, marketing-developed plans often must precede the subsequent decisions in planning production, finance, and other corporate activities. Each student will apply the planning process, develop an action plan, and identify specific marketing outcomes for an existing or prospective enterprise. The course utilizes current practices, contemporary exemplars, and rigorous communication/presentation platforms.

**MKTG 4560 Pricing Strategy (4 Credits)**

This course provides an overview of all aspects of Pricing, a key driver of growth and profitability. As one of the 4 "Ps" of Marketing, attention and interest in Pricing is growing. This is not surprising, given that Price is the one "P" that drives the topline, with a direct impact on revenue growth, customer growth, market share, and profitability. This Pricing survey course examines established and emerging pricing strategies and principles. In addition, students learn some basic analytical tools that can be applied to pricing strategy decisions and explore approaches to optimize the impact of pricing strategies and tactics, including segmentation, addressing the competition, and communicating value. Prerequisites: MKTG 4510, MKTG 4520, and MKTG 4530 or instructor permission.

**MKTG 4570 Digital Strategies (4 Credits)**

We're 20 years into the digital marketing revolution and the ecosystem continues to evolve. From the birth of the Internet and email to the recent addition of messaging apps and the Internet of Things: It's a fantastic time to be a marketer. In this class, we will take what you learned in consumer behavior and extend it in the social/mobile/search realm. We'll utilize lessons learned from cognitive neuroscience combined with qualitative/quantitative data to create one-to-one marketing experiences for B2B/B2C consumers. Prerequisites: MKTG 4510 or instructor permission.

**MKTG 4580 Insights to Innovation (4 Credits)**

Consumer insights are a driving force behind innovation for industries, organizations, and products. To remain relevant in the marketplace, companies must innovate. Creating new products, services, or processes requires the contributions of multiple stakeholders, including the voice of the customer. Students will gather secondary and primary data and apply it to design processes and models to optimize value creation and drive innovation. Students will learn how consumer insights can enable the development and enhancement of compelling value propositions. Through a thoughtful design process, students will develop a new product, brand the product, and determine a go-to-market strategy. The learning outcomes include how to apply the design-thinking framework, identify human-centered insights, and collaborate to innovate and create delightful customer experiences. Prerequisite: MKTG 4100.

**MKTG 4605 Current Marketing Perspectives (4 Credits)**

Like most disciplines, marketing is evolving constantly. One can learn about marketing and its classic terms and notions by reading a textbook. But to familiarize oneself with the current pressing issues, emerging ideas, and innovative applications, one must consult both industry practitioners and academic gurus. In this course, students and faculty will meet and interview several top business executives in the Denver area as well as visit their facilities. Such interaction with the managers and faculty will help the students understand the interface of theory and application. In addition, by identifying the current issues in marketing and learning how to develop strategies to handle them, students add to their preparation for the job market.

**MKTG 4612 Customer Experience Management (1 Credit)**

Sprint Course at the Kennedy Mountain Campus Navigating Excellence: The Power of Customer Experience Join our transformative Customer Experience Management (CX) short program (Sprint/Immersion) and expand your student 4D experience! This course is led by seasoned CX consulting professionals to bring real-world applications to an "outdoor" classroom. This dynamic program equips you with essential skills to begin to build a CX management program. Dive into CX competency framework, design thinking, data insights, and strategy. Immerse yourself at the University of Denver's Kennedy Mountain Campus, surrounded by breathtaking vistas and while discussing pressing business challenges. Through industry relevant concepts such as customer journey mapping, CX ecosystem, stakeholder engagement, voice of the customer (VoC) students will gain tactical understanding and execution of customer experience management planning. Elevate your student journey through the power of customer experience.

**MKTG 4630 International Marketing (4 Credits)**

The shrinking planet and constant pressure to maintain a firm's growth mean that global marketing continues to grow in importance. This course introduces the various economic, social, cultural, political, and legal dimensions of international marketing from conceptual, methodological and application perspectives, and emphasizes how these factors should affect, and can be integrated into, marketing programs and strategies. This course provides students with methods for analyzing world markets and their respective consumers and environments, and to equip students with the skills in developing and implementing marketing strategies and decision making in international contexts. It includes a combination of lectures and discussions, case analyses of real global marketing issues, videos and readings from the business press, country snapshots, and a group research project in which student teams launch a discrete product in a foreign country of their choice. Prerequisites: MKTG 4100.

**MKTG 4635 International Consumer Behavior (4 Credits)**

The focus of this course is to introduce the complex role that consumer behavior and consumption plays within an international context. Knowledge of customers is one of the cornerstones for developing sound business strategies, and there is a need to better understand the diverse aspects of consumer behavior that marketers must cater to in the global marketplace. As the study of consumer behavior draws upon marketing, psychology, economics, anthropology, and other disciplines, the added complexity of understanding it beyond ones' home market results in additional challenges and opportunities. Consumer behavior attempts to understand the consumption activities of individuals as opposed to markets, and as this course will demonstrate, consumption activities are not universal. The course will focus on both consumer behavior theory, as well as the integration of regional, global, and cultural variables that marketers must account for in developing marketing programs in strategies. Topics such as global consumer culture, values and consumption, international consumer attributes, international social and mental processes, will be used to help comprehend and explain the convergence and divergence of consumer behavior in the global marketplace. The goal of this course is to provide a more concrete understanding of how marketers account for similarities and differences in the development and implementation of marketing practices, in the field of advertising, product and service development and usage, retailing, and communications. Cross-listed with MKTG 3635. Prerequisite: MKTG 4510 or instructor permission.

**MKTG 4655 Leading the Sales Organization: Structure, Strategy, and Management (4 Credits)**

Sales force design, strategy, and management provides both a strategic as well as a tactical perspective on the sales function. The course is suitable for anyone who will at some point in their career have a managerial position in an organization where salespeople are an integral part of the marketing mix. Topics discussed in class cover various elements of sales force design, strategy, and management including the role of salespeople in company's go-to-market strategy, design of sales organization structure, different sales role structures (inside vs. field etc.), territory management and quota (goal) setting, incentive and compensation design, and hiring and training strategies.

**MKTG 4660 Sports & Entertainment Marketing (4 Credits)**

There are few products for which consumers are more passionate than their sports and entertainment expenditures, so this topic is always an exciting one in marketing. This course provides an in-depth look at the processes and practices of marketing sports, concerts, film and other entertainment. The course emphasizes the practical use of advertising, promotion and public relations in creating athlete or entertainer images, providing a quality fan experience, promoting sponsorships or driving event ticket sales. Participation in a current sports marketing project provides context for graduate students to apply theory to practice. Cross listed with MKTG 3660. Prerequisites: MKTG 4100.

**MKTG 4670 Competitive Strategies (4 Credits)**

This course will examine what is happening in the world of corporate marketing today. Which companies' marketing strategies are working and why? Which are not working and why? Who is winning in the competitive marketplace and who is losing? How do you know? What is the connection between a company's marketing strategy and its financial strategy? Prerequisites: MKTG 4100.

**MKTG 4675 Marketing for Social Impact (4 Credits)**

The integration of Impact + Profit is one of the biggest trends in the startup world—influencing socially-responsible products and driving cause-related branding, customer choice, and loyalty. Marketing for social impact is multifaceted and requires an understanding of how Impact + Profit is essential to social enterprises, B Corps, and nonprofits. Through this course students will develop themselves as purpose-driven professionals knowledgeable in the latest trends of story-driven marketing, conscious capitalism, and social psychology. This course builds upon students' understanding of Design Thinking to think strategically about value creation as it relates to Impact + Profit. Upon completion of the course, students will understand the relationship between business and social good, as well as acquire the necessary knowledge and skills to design a marketing campaign specific to a social enterprise, B Corp or nonprofit. Applicable to all facets of the business and nonprofit world, this advanced elective is open to all MBA students and provides skills and knowledge to help you be indispensable to your company or organization. Prerequisites: MKTG 4100 and any additional 4000-level MKTG course.

**MKTG 4705 Topics in Marketing (1-4 Credits)**

TOPIC CHANGES EACH TERM.

**MKTG 4800 Global Integrated Marketing Communication (4 Credits)**

The Global IMC class is for graduates who have worked in marketing communications or have taken marketing communications classes and want to gain an understanding of how use this knowledge in the global marketplace. It helps students to understand similarities and differences between markets and how to most effectively approach them. What are the IMC tools that work best and how do you use them with cultural sensitivity? The class features a number of guest speakers and at least one off-site agency visit. The finale to this high-intensity class will have competing teams creating a global campaign. Prerequisites: MKTG 4810 or instructor permission.



**MKTG 4805 Foundations of Digital Marketing (4 Credits)**

According to LinkedIn, the "Digital Marketing Specialist" role is among the top 10 most in-demand jobs in the USA. Knowing how to utilize digital marketing tools as part of a business strategy is critical in today's marketplace. This course provides the knowledge and skills necessary to plan and implement a digital marketing strategy, create and manage digital marketing campaigns, and select and utilize the most effective tools and technologies to achieve the business's objectives. This is a hands-on course where students will learn how to successfully integrate online tools, including user experience (UX), search engine optimization, pay-per-click advertising, email marketing, content marketing, reputation management, social media, and AI (e.g., ChatGPT.com / WriteSonic.com), within the overall marketing mix. Through simulations, certifications, and in-class assignments, students will acquire the fundamental digital experience that is a "must-have" for a marketing career in today's workplace. Cross listed with MKTG 3480.

**MKTG 4810 Integrated Marketing Communication (4 Credits)**

Integrated Marketing Communication (IMC), sometimes referred to as marketing campaigns, is a critical component of a marketing strategy and is vital for the success of any business. Organizational, technological, and societal trends over the past few years have presented marketers with a challenge: determining which marketing channels are needed to gain traction, engage customers, and drive economic growth. It's essential to integrate all marketing activities into one master short-term campaign plan. This client-project-based course is designed with the notion that marketing communications encompass much more than traditional advertising or social media, focusing on a multi-channel and integrated approach. Some of the concepts covered include consumer insights, branding, market segmentation, targeting, and positioning. The course provides a foundation in the development and execution of campaign strategies using digital tools, including AI, and promotional strategies through data-driven decision-making. Prerequisites: MKTG 4100 & MKTG 4510 or instructor permission.

**MKTG 4815 Social Media Marketing (4 Credits)**

(4 credit hours) Social Media Marketing is used by marketers to increase brand awareness, identify key audiences, generate leads, and build meaningful relationships with customers. Social media allows businesses to gain a competitive advantage through the creation and distribution of valuable, relevant, and consistent content to attract and retain clearly defined audiences. Marketing professionals entering the workforce today need to be equipped with how to utilize new and constantly updated social media marketing strategies for businesses. By the end of the course, students will know how to implement a successful content strategy for multiple platforms including but not limited to Facebook, Instagram, Twitter, Snapchat, Pinterest, LinkedIn, and YouTube. We will be working with real-world clients and scenarios to help them drive marketing ROI! Cross-listed with MKTG 3490. Prerequisites: MKTG 4100.

**MKTG 4820 Brand Management (4 Credits)**

Designing a compelling brand is the foundation of marketing. Explore the intricacies of developing a brand strategy to drive growth and ensure consistent brand messaging across the company and product/service lifecycle. Through this client-based course, explore how organizations create a compelling corporate image that inspires trust, builds a sense of community, differentiates, and fosters loyalty to generate brand value. As the digital landscape propels and empowers consumers, discover how brands are co-creating with customers to increase inclusiveness while reducing risk. Learn the concepts and models from brand authorities, then apply this knowledge to real-world business challenges. The learning outcomes are to create a goal-driven brand plan, harness tactics to cultivate brand loyalty, foster brand experiences, and ultimately build sustainable brand equity while measuring success. Prerequisite: MKTG 4100. Concurrent enrollment with MKTG 4100 allowed.

**MKTG 4825 Mobile Marketing (4 Credits)**

(4 credit hours) Smartphones are the device for today's consumer. Mobile usage easily eclipses all other digital venues, and you will be learning how to harness this ever-evolving field. Knowledge of mobile search, mobile applications, mobile advertising, and location-based services are essential for today's business leaders. This course covers how mobile marketing is defining business today, including strategy, tracking ROI, advertising, mobile websites, mobile apps, text messaging, QR codes, and the laws and ethics of mobile marketing. Students will use the design thinking process to design a mobile app and create a prototype of the app to solve their target market's problem. At the end of the course, students will deliver a prototype of the mobile app and a mobile marketing plan to promote their mobile tactics. Cross-listed with MKTG3475. Prerequisite: MKTG 4100.

**MKTG 4835 Search Engine Marketing: Google Analytics & Google Ads (4 Credits)**

(4 credit hours) Search marketing is the cornerstone of many digital marketing campaigns. An understanding of consumers' search behavior provides deep insight into how people make purchasing decisions and form brand affinities. This course examines the strategic use of search engine optimization in marketing to build profitable customer relationships. Topics in the course will include consumer search behavior, search engines and algorithms, website user-experience, on- and off-page SEO, and strategies for conducting SEO campaigns for traditional and niche search engines. The course is designed to teach the fundamentals of SEO through experience with Google Ads and Google Analytics. By the end of this course, students obtain relevant and applicable certifications in search engine marketing. Cross listed with MKTG 3485.

**MKTG 4845 Tech in Marketing: Design Tools and Digital Foundations (4 Credits)**

"Software is eating the world." That was the quote from Marc Andreessen way back in 2011. His point was now that software had disrupted the tech industry, it was now evolving into every other industry. Agriculture. Mass transit. Construction. Everything. This prediction has become true with companies like Google and Uber. We're at a point where coding/technology are now a matter of literacy. We are going to work together as a class to make you more literate. We are going to learn how to utilize digital design tools such as Adobe Photoshop and Illustrator to create brand imagery. We'll then move on to learn HTML/CSS and APIs: the building blocks of the Internet. We'll also spend some time prototyping software such as Axure and tap into memes and Gifs. This is a tactical, hands-on class. Cross-listed with MKTG 3495.

**MKTG 4850 Integrated Marketing Communication Campaign (4 Credits)**

This course builds on all of the courses in the IMC program/concentration as well as other courses offered through the Department of Marketing. In this sense, it is a capstone course, integrating the knowledge and experience acquired through these other courses. Integration is the primary objective of this course—that is, to develop skills in integrating content from other courses into a complete IMC campaign for a brand of the student's choice. IMC Campaign is a major project course with a single significant outcome, the IMC Campaign. The project is conducted in a team environment with the guidance of the instructor. Prerequisites: MKTG 4810 or instructor permission.

**MKTG 4860 Data Science for Marketers (4 Credits)**

Data is an essential part of (digital) marketing. In fact, data enables the promise of digital marketing: real-time feedback enabling businesses, marketing campaigns to pivot and become predictive. We'll cover what it takes to become a data-driven organization and how to tell stories through data.

**MKTG 4865 SXSWi: Marketing, Technology & Innovation (4 Credits)**

This class is focused on documenting/sharing lessons learned from the SXSWi conference in Austin Texas, the premier innovation conference in the US. The course is divided into two distinct halves. First, we will research the SXSWi sessions around subject matter and speaker background as well as planning the final deliverable that summarizes the entire SXSWi event. The second half includes participation in the conference to learn the most up-to-date digital marketing techniques in social, mobile, data and usability.

**MKTG 4900 Advanced Marketing Strategy (4 Credits)**

Making sound strategic marketing decisions in the real world is complex and challenging, even for seasoned executives. Determining sound strategies is critical. Implementing them effectively and profitably is essential. How can managers increase their chances for making better strategic marketing decisions leading to more successful outcomes more often? This course applies concepts, constructs and learning acquired in prior marketing courses to complex strategic decisions. Live cases are at the heart of the course, challenging teams and individuals to make specific marketing decisions in the context of larger strategic marketing and company contexts, including accounting for top- and bottom-line impact. Prerequisites: At least eight hours of graduate level MKTG courses or with instructor permission.

**MKTG 4980 Marketing Internship (0-10 Credits)**

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are required to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. We learn by doing. That's what a marketing internship at Daniels is all about. Recent studies show that one to three internships on a resume go a long way towards landing that first job in marketing. At Daniels, we network with some of the top marketers in Denver and across the US. Our marketing students have worked at National CineMedia, Integer Advertising, Bank of America, Enterprise, Northwestern Mutual Insurance, eBags, Crispin-Porter + Bogusky, Einstein's, Johns Manville, Ski Magazine, the Pepsi Center, 15 Million Elephants, Flextronics, Merrill Lynch, Dish Network, AEG Live, Altitude Sports & Entertainment, and the list goes on. Not only will students earn school credit, they may very well land a paid internship, and eventually a full-time job.

**MKTG 4981 Marketing Leadership and Professional Development I (1 Credit)**

This course involves several executive coaching experiences. In the Fall Quarter, you will participate in a weekend leadership experience, where you develop self-awareness of your style as a member and leader of a team. This experience will help build relationships with others in the program and with program faculty, setting you up for successful team experiences in the year ahead. Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4982 Marketing Leadership and Professional Development II (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4983 Marketing Leadership and Professional Development III (1 Credit)**

Throughout the quarter, you will participate in other professional development experiences designed to improve your self-presentation skills, networking skills, and awareness of emerging marketing technologies. The exact content of the course will vary by quarter.

**MKTG 4991 Independent Study (1-10 Credits)**

Hours and times arranged by student.

**MKTG 4999 Marketing Assessment (0 Credits)**

This course, taken at the end of the MS Marketing program, is designed to assess what students know and can do as a result of being in the program, as well as to capture student feedback about the overall program. The assessments provide input to the Marketing faculty to enable continuous improvement in the program.

**MKTG 6300 Seminar in Marketing (4 Credits)**

This doctoral seminar focuses on research in marketing. This course will expose students to cutting-edge research in marketing in order to help them define and advance their research interests. This course will also offer in-depth discussions on some important topics in marketing and tools and methodologies required for conducting research in those areas.

## Materials Science (MTSC)

### MTSC 4010 Mechanical Behavior of Materials (4 Credits)

Effects of microstructure on mechanical behavior of material; emphasis on recent developments in materials science, fracture, fatigue, creep, wear, corrosion, stress rupture, deformation and residual stress. Cross listed with MTSC 3010.

### MTSC 4020 Composite Materials I (4 Credits)

An introduction to composite materials. Properties of fibers and matrices, fiber architecture, elastic properties of laminae and laminates, interface in composites. Cross listed with MTSC 3020.

### MTSC 4215 Composite Materials II (4 Credits)

A continuation of MTSC 4210: Strength and toughness of composites, thermal behavior, fabrication methods, examples of applications. Prerequisite: MTSC 4210.

### MTSC 4450 Fracture Mechanics (4 Credits)

Topics include stress field at a crack tip, linear elastic fracture mechanics, energy release rate, stress intensity factors, plastic zones, plane stress, plane strain, fracture toughness, Airy stress functions, elastic-plastic fracture mechanics, J integral, crack tip opening displacements, experimental testing, fatigue, life prediction, crack closure, weight functions, failure analysis. Cross listed with MTSC 3450.

### MTSC 4800 Advanced Topics (MTSC) (1-5 Credits)

Selected topics (depending on student and faculty interest): fracture mechanics, fatigue, nonlinear constitutive models, dynamic behavior of materials, corrosion resistant design, thermodynamics of solids II.

### MTSC 4991 Independent Study (1-10 Credits)

### MTSC 4995 Independent Research (1-16 Credits)

### MTSC 5995 Independent Research (1-16 Credits)

## Mathematics (MATH)

### MATH 3000 The Real World Seminar (1 Credit)

Lectures by alumni and others on surviving culture shock when leaving the University and entering the job world. Open to all students regardless of major. Cross listed with COMP 3000.

### MATH 3040 Lattices and Order (4 Credits)

Ordered sets, lattices as relational and as algebraic structures, ideals and filters, complete lattices, distributive and modular lattices, Boolean algebras, duality for finite distributive lattices. Prerequisite: MATH 2200.

### MATH 3050 Set Theory (4 Credits)

Zermelo-Fraenkel axioms, axiom of choice, Zorn's Lemma, ordinals, cardinals, cardinal arithmetic. Prerequisite: MATH 2200.

### MATH 3060 Mathematical Logic (4 Credits)

Classical propositional calculus (deductive systems and truth-table semantics), first-order logic (axiomatization and completeness), elements of recursion theory, introduction to nonclassical logics. Prerequisite: MATH 2200.

### MATH 3090 Mathematical Probability (4 Credits)

Limit theorems for independent random variables, multivariate distributions, generating functions. Prerequisites: MATH 2080 and MATH 3080.

### MATH 3151 Advanced Linear Algebra (4 Credits)

Vector spaces, linear mappings, matrices, inner product spaces, eigenvalues and eigenvectors. Prerequisite: MATH 2060 and MATH 2200.

### MATH 3161 Introduction to Real Analysis (4 Credits)

A theoretical introduction to the structure of real numbers, to convergence of sequences and series, and to the topology of the real line, including limits and continuity. Prerequisites: MATH 2080 and MATH 2200.

### MATH 3162 Introduction to Real Analysis II (4 Credits)

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisite: MATH 3161.

### MATH 3166 Group Theory (4 Credits)

Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 4166. Prerequisite: MATH 3170.

### MATH 3170 Introduction to Abstract Algebra (4 Credits)

Examples of groups, permutations, subgroups, cosets, Lagrange theorem, normal subgroups, factor groups, homomorphisms, isomorphisms, rings, integral domains, quaternions, rings of polynomials, Euclid algorithm, ideals, factor rings, maximal ideals, principal ideals, fields, construction of finite fields. Prerequisite: MATH 2060 and MATH 2200.

### MATH 3260 Metric Spaces (4 Credits)

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 4260. Prerequisite: MATH 3161 or equivalent.

**MATH 3311 Linear Programming (4 Credits)**

Linear optimization models, simplex algorithm, sensitivity analysis and duality, network models, dynamic programming, applications to physical, social and management sciences. Prerequisite: MATH 2060.

**MATH 3312 Markov Chains (4 Credits)**

Discrete-time and continuous Markov Chains, ergodic theorems, random processes, elementary queueing theory, applications. Prerequisite: MATH 2060 and MATH 3080.

**MATH 3351 Introduction to Dynamical Systems (4 Credits)**

Dynamical systems (one-parameter families such as circle rotations/tent maps, shift spaces); global properties (transitivity/mixing/sensitivity); behavior of trajectories (chaos, long-term averages, periodicity). Prerequisite: MATH 3161.

**MATH 3400 Introduction to Geometry (4 Credits)**

Specific geometrical systems including finite, Euclidean, non-Euclidean and projective geometries. Prerequisite: MATH 2200.

**MATH 3451 Chaos, Dynamics & Fractals (4 Credits)**

Introduction to one-dimensional dynamical systems, fractals; fixed and periodic points; sources and sinks; period doubling and tangent node bifurcations; chaotic dynamical systems; Sarkovskii's Theorem. Prerequisite: MATH 3161.

**MATH 3550 Introduction to Theory of Numbers (4 Credits)**

Concepts of nonanalytic number theory and its history; prime numbers, divisibility, continued fractions, modular arithmetic, Diophantine equations and unsolved conjectures. Prerequisites: MATH 2200.

**MATH 3651 Ordinary Differential Equations (4 Credits)**

Modeling of phenomena by ordinary differential equations; techniques of analysis and solution of such equations; oscillation theory and boundary value problems, power series methods, special functions, Laplace transforms and difference equations. Prerequisites: MATH 2060 and MATH 2070.

**MATH 3661 Partial Differential Equations (4 Credits)**

First and second order linear equations, Fourier series, the wave equation, the Cauchy problem, the heat equation, maximum principles, Laplace's equation, Green's functions. Prerequisites: MATH 2070 and MATH 2080.

**MATH 3701 Combinatorics (4 Credits)**

The principle of inclusion and exclusion, elementary counting techniques, systems of distinct representatives, partitions, recursion and generating functions, Latin squares, designs and projective planes. Prerequisite: MATH 2200.

**MATH 3705 Topics in Mathematics (4 Credits)**

Varying selected advanced topics in mathematics, depending on student demand and instructor interest.

**MATH 3710 Graph Theory (4 Credits)**

Paths, cycles, trees, Euler tours and Hamilton cycles, bipartite graphs, matchings, basic connectivity theorems, planar graphs, Kuratowski's theorem, chromatic number,  $n$ -color theorems, introduction to Ramsey theory. Prerequisite: MATH 2200.

**MATH 3720 Coding Theory (4 Credits)**

Goals of coding theory and information theory, instantaneous and Huffman codes, Shannon theorems, block and linear codes, generating and parity-check matrices, Hamming codes, perfect codes, binary Golay code, Reed-Muller codes, cyclic codes, BCH codes, Reed-Solomon codes, ideas of convolutional and turbo codes. Prerequisite: MATH 3170.

**MATH 3851 Functions Complex Variable (4 Credits)**

Complex numbers, analytic functions, complex integration, series expansions, residue theory, conformal maps, advanced topics and applications. Prerequisites: MATH 2060 and MATH 2080 and MATH 2200.

**MATH 3900 Mathematics Internship (0-1 Credits)**

Graduate students in mathematics may receive elective credit for mathematically related work performed for employers with the approval of the department. At the end of the term, a student report on the work is required, and a recommendation will be required from the employer before a grade is assigned.

**MATH 3988 Study Abroad Resident Credit (0-18 Credits)****MATH 3991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in regular course schedule for that particular year.

**MATH 4050 Combinatorial Set Theory (4 Credits)**

Beginning with a quick review of ZFC, the standard axioms of set theory, the course covers advanced ordinal and cardinal arithmetic and infinitary combinatorics, including Ramsey theory. Additional axioms such as the Continuum Hypothesis, Martin's Axiom, and combinatorial principles such as Diamond and their consequences for mathematics are studied. Prerequisite: MATH 3050.

**MATH 4060 Descriptive Set Theory (4 Credits)**

Descriptive Set Theory is one of the main branches of modern set theory. Set theory provides techniques for the precise study of real analysis. This course covers trees as tools for analyzing sets of real numbers, Polish spaces, the Borel hierarchy, Baire-measurability, extensions of continuous functions, separation theorems, and more. Prerequisite: MATH 3050.

**MATH 4070 Proof Theory (4 Credits)**

Hilbert-style systems, Natural deduction, (simply typed) lambda calculus, combinatory logic, the Curry-Howard correspondence, normalization, cartesian closed categories, Sequent calculi, cut elimination and applications, structural rules; logical systems: classical, intuitionistic, relevance, linear; algebraic semantics. Recommended prerequisite: MATH 2200.

**MATH 4080 Algebraic Logic (4 Credits)**

Elements of universal algebra, lattice theory and first-order logic; elements of abstract algebraic logic (deductive systems, algebraization, deduction filters, deduction theorems, matrix semantics); sequent calculi for substructural logics, residuated lattices, structure theory for congruences and deductive filters; subvariety lattices (atomic varieties, axiomatizations of joins, translations); algebraic cut elimination; (un)decidability and finite model property. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4110 Topology (4 Credits)**

Point set topology including topological spaces, connectedness, compactness and separate axioms; preparation for advanced courses in analysis. Prerequisite: MATH 3161. Cross listed with MATH 3110.

**MATH 4120 Algebraic Topology (4 Credits)**

Fundamental groups, simplicial homology, Euler characteristic classification of surfaces, manifolds. Prerequisites: MATH 3170 and MATH 3110/4110.

**MATH 4162 Rings and Modules (4 Credits)**

Ideals, left and right R-modules, simple modules, totally decomposable modules, Wedderburn-Artin theorems, Artinian and Noetherian rings and modules, Hopkins theorem, Hilbert basis theorem, free modules, projective and injective modules, Kaplanski theorem. Prerequisites: MATH 3176 or MATH 4176.

**MATH 4163 Universal Algebra (4 Credits)**

Universal algebras, congruences, lattices, distributive lattices, modular lattices, Boolean algebras, subdirectly irreducible algebras, Mal'cev theorems, varieties, Birkhoff theorem. Prerequisites: MATH 3170 and either MATH 3040 or MATH 3060.

**MATH 4164 Galois Theory (4 Credits)**

The fundamental theorem of algebra, field extensions, ruler and compass constructions, normal and separable extensions, field automorphisms, Galois correspondence, solvability and simplicity, calculating Galois groups. Prerequisite: MATH 3176/MATH 4176 and MATH 3166/MATH 4166.

**MATH 4165 Introduction to Real Analysis II (4 Credits)**

A rigorous introduction to the analysis of functions of a real variable, including differentiation, Riemann integration, and the notions of pointwise and uniform convergence for sequences of functions. Prerequisites: MATH 3161.

**MATH 4166 Group Theory (4 Credits)**

Groups and homomorphisms, isomorphism theorems, symmetric groups and G-sets, the Sylow theorems, normal series, fundamental theorem of finitely generated abelian groups. Cross listed with MATH 3166. Prerequisite: MATH 3170.

**MATH 4168 Lie Groups and Lie Algebras (4 Credits)**

Lie groups and Lie algebras, fundamental theorems of Lie, general structure theory; compact, nilpotent, solvable, semisimple Lie groups; classification of semisimple Lie algebras; representation theory of compact and semisimple Lie algebras and Lie groups. Additional topics as time permits: universal enveloping algebras, symmetric spaces. Prerequisites: MATH 3161 and MATH 3170.

**MATH 4176 Rings and Fields (4 Credits)**

Rings, domains, fields; ideals, quotient rings, polynomials; PIDs, UFDs, Euclidean domains; maximal and prime ideals, chain conditions; extensions of fields, splitting fields, algebraic and transcendental extensions; brief introduction to Galois theory. Cross listed with MATH 3176. Prerequisite: MATH 3170 or equivalent.

**MATH 4181 Loop Theory (4 Credits)**

Quasigroups, loops, latin squares, 3-nets, isotopy, multiplication groups, inner mapping groups, nuclei, commutant, center, associator subloop, inverse properties, power-associative loops, Bruck loops, Bol loops, Moufang loops, octonions. Prerequisites: MATH 3166 or MATH 4166.

**MATH 4260 Metric Spaces (4 Credits)**

Metric spaces and continuous functions; completeness and compactness; examples including norm spaces; pointwise and uniform convergence; Baire Category Theorem. Cross listed with MATH 3260. Prerequisite: MATH 3161 or equivalent.

**MATH 4270 Hilbert Spaces (4 Credits)**

Schwarz and triangle inequalities, Riesz lemma, subspaces and orthogonal projections, orthonormal bases, spectrum of bounded linear operators, compact, self-adjoint, normal and unitary operators, spectral theorem and, if time permits, unbounded operators. Also, if time permits, applications to partial differential equations, physics and engineering. Prerequisites: MATH 3260 or MATH 4260 or MATH 3110 or MATH 4110.

**MATH 4280 Measure Theory and Applications (4 Credits)**

Definition of Measure spaces; Lebesgue measure; limit theorems; Raydon-Nikodym Theorem; introduction to  $L_p$  spaces. Prerequisite: (MATH 3260 with a minimum grade of D- or MATH 4260 with a minimum grade of C-) or (MATH 3110 with a minimum grade of D- or MATH 4110 with a minimum grade of C-).

**MATH 4290 Dynamical Systems (4 Credits)**

Topological and measure theoretic dynamical systems; properties and invariants of systems; symbolic dynamics; Ergodic Theorems; applications. Prerequisites: MATH 3110/4110 or MATH 3260/4260.

**MATH 4300 Graduate Seminar (1-4 Credits)**

Students research a topic of their choosing with the aid of a faculty member, and then prepare and present a formal lecture on the subject.

Prerequisite: graduate standing or consent of the instructor.

**MATH 4400 Differential Geometry (4 Credits)**

Planar and spatial curves, global properties of curves, surfaces in three dimensions, the first fundamental form, curvature of surfaces, Gaussian curvatures, geodesics, Theorema Egregium, hyperbolic geometry. Prerequisites: MATH 3170 and either MATH 3110/4110 or MATH 3260/4260.

**MATH 4501 Functional Analysis (4 Credits)**

Advanced topics in structure of linear spaces; Banach spaces; Hahn-Banach Theorem and Duality; Uniform Boundedness Theorem; Open Mapping and Closed Graph Theorems; Stone-Weierstrass Theorem; Topics in Hilbert Spaces. Prerequisite: MATH 4280.

**MATH 4700 Special Topics in Mathematics (1-4 Credits)****MATH 4701 Combinatorial Algorithms (4 Credits)**

Basic enumeration techniques; representations of combinatorial objects; algorithms for searching, sorting, generating combinatorial objects, graph algorithms. Prerequisites: MATH 3701 or MATH 3710.

**MATH 4705 Special Topics Applied Math (1-5 Credits)**

Varying selected advanced topics in mathematics, depending on student demand. Possible alternatives include of variations, partial differential equations, algebraic topology, differential manifolds, special functions.

**MATH 4991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in course schedule for that particular year.

**MATH 4995 Independent Research (1-10 Credits)**

Research projects undertaken in conjunction with a faculty member.

**MATH 5000 Doctoral Seminar (3 Credits)**

Techniques, methods used in mathematical, computing research. Includes proofs, bibliographic searching, writing styles, what constitutes an acceptable dissertation.

**MATH 5991 Independent Study (1-10 Credits)**

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

**MATH 5995 Independent Research (1-10 Credits)**

Research leading to a dissertation.

## **MBA - General (MBA)**

**MBA 4110 Entrepreneurship Challenge (2 Credits)**

Want to start a business? Have a great idea? How do you get started? Using Design Thinking and Lean Startup practices we will explore what you can do on Day 1 and beyond. You will build your toolkit for how to make sure you are solving the right problem, create a variety of potential solutions, and then test and validate such ideas. At the conclusion teams will pitch a validated problem and feasible business opportunity. During the quarter, you will form teams around solving a specific problem, conduct ethnographic research regarding that problem, clearly define the target customer's point of view, generate several potential solutions, and then continuously test and iterate on an effective solution. Teams will also be required to determine if these solutions will produce a worthwhile business based on customer desirability and developmental feasibility.

**MBA 4120 Strategic Leadership (2 Credits)**

Strategic Leadership is a course that introduces the student to the theory of strategic analysis, strategy development and execution. Students will develop the ability to think strategically by examining a firm's mission, vision, and values, business model and financial health of the organization. After assessing the firm's strengths and weaknesses, the focus is then placed on the industry and competitive environments using a series of tools and frameworks that result in identifying opportunities and threats. Synthesis in the course takes place when the student is able to develop strategic alternatives and create a recommendation for strategy implementation that generates added value and competitive advantage for the firm. Principal Content Elements (i.e. weeks / modules): 1. Intro to Strategy Concepts; Role of Mission / Vision / Values and Governance 2. External and Internal Analysis 3. Business Strategies and Generic Competitive Strategies; Strengthening Competitive Position 4. Competing Internationally or Globally; Strategic Alliances; Corporate Strategy 5. Ethics, Corporate Social Responsibility, Sustainability and Strategy; Strategy Execution and Leadership.

**MBA 4130 Accounting I (2 Credits)**

The purpose of this course is to provide students with an understanding of the financial statements issued by companies to external parties, such as shareholders and creditors. The course covers the fundamentals of accounting, from recording economic events in the accounting records to the preparation of the company's financial statements, as well as major transaction categories and accounting policies of business firms and their financial statement implications. In addition, the course introduces students to publicly-traded companies' Form 10-K annual reports.

**MBA 4140 Ethics in Practice (2 Credits)**

The fundamental purposes of the course is to 1) engage students in ongoing reflection and dialogue about their responsibilities as managers and leaders, 2) understand cognitive, behavioral, and principled approaches to ethics, and 3) advance your job prospects by focusing on ethical skills, practices, and exercises that will make you better managers and leaders. Of particular emphasis are the ethical and social responsibilities of managers and leaders, especially as it relates to numerous stakeholders. This course focuses on a systems-oriented approach to the ethical and social relationships of business leaders and business organizations in their communities. These roles will be examined by analyzing a variety of representative issues that characterize current concerns with business ethics. The goal is to provide students with generalized understanding and skills that can be employed in dealing with other issues that may emerge in their business careers. While the core of the curriculum will strengthen foundation business and management skills and competencies, the assumption of this course is that all of these skills and competences must be grounded in a solid ethical and social commitment to values and principles. This course attempts to explore these values in various business contexts.

**MBA 4150 Marketing Strategy (2 Credits)**

Great marketers are great problem solvers. This graduate level marketing course will allow you to understand, analyze, and apply sophisticated marketing concepts to solve problems in a complex and dynamic business setting. This function can be called corporate marketing, strategic marketing, or marketing management. The curriculum will focus on formulating and implementing marketing management strategies and tactics undertaken at corporate setting or as part of a start-up environment. To get the most from this course, a student should be open-minded, engaged, and creative. Upon completion of this course, students will have useful tools and a lens through which you may view the world as a marketer.

**MBA 4160 Statistical Learning (2 Credits)**

This course will allow the student to develop an understanding of more complex concepts of probability and statistics and how they relate to managerial type problems and decision making. These will include differentiating different data types and determining their appropriate analyses (descriptive, visual, and statistical including comparing means/proportions and regression.) In addition, the student will experience performing, interpreting, and presenting these probability and statistics methodologies.

**MBA 4170 Business & Politics (2 Credits)**

Businesses, both domestic and multinational, are vital actors in a complex global political economy. This class will explore how broader political and economic institutions affect businesses and markets, but also, how the choices of firms in turn affect our global economy. This class will provide students with a deeper understanding of international political economy, international and domestic institutions, the role of businesses in global markets, and the challenges that businesses face in current and recent political climates. We will explore this by discussing the role of businesses in shaping political and economic policies, differences between developed and emerging economies, and how global crises and problems impact the choices of firms.

**MBA 4180 Business Ethics (2 Credits)**

Business Ethics is an intermediate level graduate course delivering a rigorous introduction to major ethical topics, theories, and issues relevant to the elements of the 21st century business environment. This course also focuses on ethical reasoning and strives to enhance each student's ability to integrate these perspectives into appropriate business decisions.

**MBA 4210 Social Good Challenge (2 Credits)**

The objective of this course is to enable students to develop the skills and knowledge of the consulting process as it relates to client engagement. Students will be expected to apply both their academic training and prior business experience to the class. The course requirements will consist of project activities and status reporting, assigned readings, class discussions, a midterm presentation, and a final project deliverable and presentation. This course is based upon experiential learning, where you will: 1) develop the building blocks for any consulting engagement including the industry, project management, problem solving, presentation, and teamwork through lectures, discussions, and a series of in- and out-of-class exercises. Using your Social Good Projects, we will lean heavily on real world examples. 2) Learn the key communications skills necessary for a consulting engagement, including giving and receiving feedback, influencing clients and colleagues, developing presentations, and interviewing the client. 3) Get introduced to some of the key frameworks used to solve functional area consulting problems (finance, strategy, operations and marketing) that you can use in cases and projects. Note that this is just an introduction and overview – your other courses are critical! 4) Wrap up the class with your Final Social Good Project presentation and client report.

**MBA 4220 Leading Effective Organization (2 Credits)**

This course is about leading people and organizations for high performance in changing times. The course builds on three foundational notions: 1) informal leadership is as essential to an organization as formal leadership – if not more so – and far more pervasive; 2) effective leaders – both formal and informal – know how to be good team players; and 3) most people's initial and formative leadership experiences occur while they are working in teams. In this course, you will acquire knowledge, skills and abilities for effective leadership and teamwork in organizations. You will learn about different approaches to leadership and reflect on and develop your own leadership style. You will learn about team dynamics, and how to be an effective team member. You will learn how the organizational and broader business context influence leadership and teamwork. The course also develops and reinforces your critical and analytical thinking skills. Content includes fundamental organizational behavior concepts such as motivation, power and politics, and organizational structure and culture. The global context of business is emphasized as a central factor in leading organizations. The course integrates themes of ethical business principles, sustainability, engagement, and inclusion, i.e., creating organizations that are ethical, sustainable, that attract and engage talented people, and that exemplify inclusive excellence.

**MBA 4230 Accounting II (2 Credits)**

Managing cost information is essential for the execution of a business strategy because it enables managers to understand the financial implications of their decisions. In this course, students will learn how to measure, report, interpret, and use cost information. Topics in the course include (traditional and advanced) costing system design; breakeven analysis; cost information for decision making.

**MBA 4235 Accounting III (2 Credits)**

The learning from this course will give you the ability to: A. Demonstrate your ability to analyze and critically evaluate both budgeted numbers and actual results. You will begin to learn how to plan and control business activity by constructing and reviewing master budgets. B. Compute the amount of budget variances and interpret them for performance evaluation purposes. You will learn how to prepare a budget variance analysis, including revenue and spending variances. C. Examine the effectiveness of performance metrics. You will learn how to design performance measurement systems congruent with business strategic goals. D. Demonstrate your ability to systematically and professionally analyze internal performance information. You will learn how to devise management control systems to assess the contribution of managerial decisions to the achievement of the business strategic goals.

**MBA 4250 Business and Global Values (4 Credits)**

This course examines the ethical, legal, and public policy dimensions of business in the global marketplace. Prerequisite: None.

**MBA 4265 Introduction to Analytics (2 Credits)**

Businesses make decisions and improve processes using their own and external data and a variety of modeling and analytic techniques. This course introduces students to the business data landscape, data management in organizations, the data-driven decision-making process, and the fundamental concepts behind statistical inference and analytic modeling to support decision-making.

**MBA 4280 Managerial Finance I (2 Credits)**

Mastering Managerial Financial Competencies I focuses on the fundamentals of finance, emphasizing the basic principles, theoretical concepts, and analytical methodology in managerial finance. Topics covered include, but are not limited to: - Analyze financial statements; Calculate the quantity and dollar break-even points and determine the impact of price, fixed costs and variable costs on operating profit; Define and calculate the degree of operating, financial and combined leverage explaining the risks associated with higher levels of each; - Time Value of Money; Know how to value distant and uncertain cash flows; - Understand different types of financial securities; Calculate the intrinsic value of corporate bond, preferred stock and common stock. Upon completion of this course, students should be able to understand many fundamental issues in managerial finance and be adequately prepared for further study in Mastering Managerial Financial Competencies II and other advanced finance courses.

**MBA 4285 Managerial Finance II (2 Credits)**

Managerial Finance II is the second course in the MBA finance sequence. This course focuses on the framework and tools for analyzing and making financial decisions based on principles of modern financial theory. Topics covered include, but are not limited to: - Understand what is corporate financial analysis and its importance. - Introduce classic financial models and their roles in financial decision making. - Analyze corporate financial policy in the business practices, including capital structure, investment, payout and working capital policy, and understand how firms interact with capital markets; Understand the cost of capital and optimal capital structure; Present capital budgeting techniques and how to make investment decisions under uncertainty; Develop a framework to make payout decision; Learn the key determinant of an efficient working capital management system. This course assumes that students have a good grasp of the material covered in MBA 4280 and hence the pace is fast. Upon completion of this course, students should be familiar with the analytical tools and problem-solving skills in managerial finance and be adequately prepared for making quality financial decisions.

**MBA 4290 Microeconomics (2 Credits)**

This course meshes the standard tools of microeconomic analysis with a well-rounded appreciation of the important perspectives that form the business environment in the contemporary world. The goal is to provide students with the tools from microeconomics that they need to make sound managerial decisions. The course will use case studies to develop practical insights into managing the firm's resources to achieve competitive advantage.

**MBA 4310 Experiencing Strategic Management through Corporate Challenges (2 Credits)**

Corporate Challenges is a Challenge Driven Educational (CDE) course that builds on several previous foundational and experiential courses. Students will leverage the content from accounting, finance, ethics, management, marketing, economics, globalization, strategy, business stats and analysis in order to engage with corporate partners to examine real-world problems. Students will address issues involving marketing and digital strategy, market feasibility, digital transition, e-commerce, competitive analysis, business development, go-to-market strategy, supply chain management, and innovation and product development. The course is delivered in both lecture and lab format in which students will meet one day of the week in the classroom and the other day of the week in an on-campus study room discussing their specific corporate challenge. The lecture will focus on content applicable to all corporate challenges. In order to provide the best learning experience, guest speakers will be provided periodically in lecture format. During the on-campus lab time, groups will brief the instructor on their project's progress, achievements to date, and obstacles that require assistance to overcome in order to achieve success. The remainder of the lab time must be spent in groups working on the corporate challenge project.



**MBA 4340 Sustainable Enterprises (2 Credits)**

This course provides an overview of sustainability and how it has become relevant to all corporations and their stakeholders. Sustainability is more than financial or environmental – it is a larger concept that includes the economic, social, and environmental aspects of an organization. While there has been debate about corporate responsibility to not cause social or environmental harm, sustainability has become an economic driver of financial performance with specific business risks and opportunities. Why? First, we can better measure the real costs of climate change and other negative externalities and their costs to society, communities, and corporations. Second, investors and other stakeholders are asking companies how prepared they are to manage the business risks and opportunities in their industries. Companies are being asked for data on their environmental impacts and their workforce development and inclusiveness because these affect their future business performance as business risks, revenue opportunities, and access to capital. Investors, customers, employees, suppliers, and other stakeholders are asking companies for data and reporting on their sustainability outcomes, and companies are now using that data to guide operational and strategy decisions. According to McKinsey & Co, corporations will need to focus on sustainable and inclusive growth that adapts to climate-related risks, competes effectively for limited resources, and shares costs and benefits across generations. This course highlights what all MBA students should know about sustainability as it will continue to affect all organizations - global public corporations, small private companies, large nonprofits like hospitals and universities, and government entities. This course will focus on the major issues and challenges of sustainability, the ESG framework and measurement challenges, and practical examples of how sustainability is driving operations and strategy in different industries. Of course, not all industries and corporations are in the same place along this spectrum, and stakeholders can vary in importance and relative power. But all companies should understand sustainability basics to protect and enhance their financial performance and to inform decision-making, and reduce negative externalities like poor water and air quality, greenhouse gas emissions, and social harm.

**MBA 4360 Introduction to Data Mining (2 Credits)**

Develop an understanding of more complex concepts of probability and statistics, and how they relate to managerial type problems and decision making. Develop experience performing and interpreting complex analysis methodologies. Obtain further familiarity with statistical software packages. Prerequisite: MBA 4160.

**MBA 4410 Global Challenge I (0-4 Credits)**

The Global Challenge represents the culmination of your Challenge work in the Denver MBA offering you the opportunity to apply your learning in an overseas setting. Working with a client organization, you will conduct an overseas consulting project. Beginning your work in Denver during the Fall quarter, you will work with your client to understand the scope of the project, conduct Denver-based research, plan your field research strategy, prepare for your overseas travel and prepare a pre-trip project deliverable that allows you to leverage your time in the field. During the interterm you will travel to your destination country, meeting local and global organizations, conducting research across cultures and managing your relationship with your client while in the field. Your in-country research will combine with your Denver-based research to support your final report and recommendations – to be delivered to your client in a written report and presentation - as you complete Global Challenge III in the Winter quarter. Enforced Prerequisites: MBA 4110, MBA 4210, and MBA 4310.

**MBA 4446 Advanced Sustainability (4 Credits)**

This course provides an overview of current corporate sustainability approaches and the strategies and tools that help them be effective. As businesses and corporations seek to create social and environmental impact along with shareholder value, they are developing strategic approaches to sustainability that can be measured, managed, and reported to investors, employees, and other stakeholders. Getting beyond sustainability basics to create real value and impact can build competitive advantage, attract capital investment, recruit talent and customers, and reduce negative externalities like poor water and air quality, greenhouse gas emissions, and social harm. How can organizations move beyond “check the box” sustainability to real impact and measurable value? They need to think strategically, integrate sustainable approaches into operations, create reporting structures for good data and accountability, and create a culture around steady sustainability improvement. While corporations may approach sustainability with different moral or economic motivations and rest along a spectrum of intention and commitment, the external landscape is shifting. In the business world, customers, employees, investors, and partner firms are placing more emphasis on transparency to guide their decision-making, and businesses need to communicate their sustainability efforts effectively to diverse stakeholders. In response, both large corporations and smaller ventures are designing strategic approaches for sustainable operations (including sourcing and supply chains), cost-effective measurement, and clear reporting and sharing with their many stakeholders. Students will gain an overview of the theory, practice, and challenges of corporate sustainability today, learn strategies and tools for designing effective approaches, and how corporations are measuring and managing sustainability outcomes to align with ESG and global development goals. The course will deepen students’ understanding of corporate sustainability strategy, the strengths and limitations of different frameworks to measuring outcomes, and highlight diverse career paths in sustainability and corporate social responsibility.

**MBA 4470 Introduction to International Business (2 Credits)**

International business is its own field of academic study with rich theories and frameworks. Facing a dynamic, and increasingly chaotic, external business environment, business students need to understand both the theories and how they can be applied. To that end, this course draws on the rich international business writings to better understand global business practices and to ultimately make better business decisions. Students will actively explore current international business issues, will interact with local international business leaders, and learn specific concerns facing key regions or countries globally. Prerequisite: MBA 4170.

**MBA 4490 Global Macroeconomics (2 Credits)**

Global Macroeconomics, MBA 4490, covers the theory and practice of modern macroeconomics for an open economy. It teaches students how private market forces and government policy decisions drive fluctuations in the global economy and affect the business environment. It explores issues related to inflation, interest rates, foreign exchange rates, business cycles, trade policies, and countercyclical monetary and fiscal policies. It covers current global macro issues including negative interest rates, electronic money, Brexit, trade wars, and financial crisis. Students are encouraged to investigate the potential and limitations of macroeconomic theory with real-world problems.

**MBA 4510 Global Challenge II (2 Credits)**

The Global Challenge represents the culmination of your Challenge work in the Denver MBA offering you the opportunity to apply your learning in an overseas setting. Working with a client organization, you will conduct an overseas consulting project. Beginning your work in Denver during the Fall quarter, you will work with your client to understand the scope of the project, conduct Denver-based research, plan your field research strategy, prepare for your overseas travel and prepare a pre-trip project deliverable that allows you to leverage your time in the field. During the interterm you will travel to your destination country, meeting local and global organizations, conducting research across cultures and managing your relationship with your client while in the field. In-country research will combine with your Denver-based research to support your final report and recommendations to be delivered to your client in a written report and presentation (based on client preference) as you complete Global Challenge II in the Winter quarter.

**MBA 4540 Public Policy (2 Credits)**

MBA 4540 is a cornerstone graduate course delivering a comprehensive introduction to major topics, theories and issues relevant to business in its interactions with business & society.

**MBA 4545 Business Law: Principal, Strategy & Tactics (2 Credits)**

MBA 4545 is a graduate course providing future business leaders with an overview of essential topics in business law. It introduces the ways in which legal considerations impact business strategy, inform business tactics, and affect managerial decision-making. It is designed to enhance students' ability to (1) understand the US legal system as it relates to business; (2) use legal lenses to identify significant business risks and opportunities; (3) appreciate and discharge the legal obligations of businesses, managers and workers; (4) evaluate the force and weight of legal arguments about the "gray areas" in which modern businesses often must operate; and (5) incorporate legal considerations into business strategy in order to secure value and mitigate risk.

**MBA 4550 Product Management (2 Credits)**

Ask any product manager how they got started and you'll likely hear a lot of serendipity. Product Management is a relatively new discipline that has many different career paths leading to it. Tech driven companies especially value Product Managers (PMs) who bring a combination of strong business acumen, technology and design, process and workflow efficiencies, leadership and communication skills, passion, and eventually extensive domain knowledge. A product manager is the voice for the customer and the business. Great product managers are strategic thinkers and tactical executors. This course will provide a hands-on overview and understanding of the product management role for Denver MBA graduates.

**MBA 4610 Business Law and Public Policy (4 Credits)**

The political and legal risks confronting business are among the most serious and can even affect corporate survival, as demonstrated by the scandals and crises of the past three decades. This course attempts to equip managers with the tools and perspectives to manage such enterprise risks, to prevent conflicts from escalating into crises, and to properly respond to legal challenges and political controversies when they do occur. In particular, this course provides a background and foundation in the fundamental concepts of business law and public policy. It elevates your ability to (1) analyze important legal questions and problems facing business, and (2) analyze trends and forces in public policy that affect business.

**MBA 4615 Talent Management (2 Credits)**

Managing and developing talent is one of the top 3 issues on the minds of CEOs from around the world. In fact, CEOs cite managing and developing their leadership talent as the issue that is most important to the future success of their business, yet are least capable of addressing effectively. This course will provide you with the insights, frameworks and tools to effectively manage and develop talent in your teams and organizations.

**MBA 4620 Leadership Capstone (2 Credits)**

This course is a capstone course to integrate students' learning and development across the two-years of the Denver MBA. In it, students build their personal leadership framework that incorporates the three key dimensions of community, enterprise and self (which includes knowledge, skills, and abilities acquired through the full-time MBA course of study). The course helps students identify and fine tune their unique value proposition and integrate it with their desired spheres of influence. It also allows them to identify critical gaps in all three dimensions of their personal framework. Students will take stock of their learning and development and then prepare to move forward with research, critical thinking and analysis.

**MBA 4900 MBA 4900 Topics: (4 Credits)**

MBA 4900 is a topics course. That is, you may take this course up to a maximum of four times when registering for an extension elective. The extension elective follows an immersion and is generally, though not always, held in another country. In some instances, this course may be held in the U.S. You will notice that each topic on your transcript will have a different course title. You are not allowed to repeat the same title course. This course will introduce you to the application of international business practice in an international setting while offering opportunities for acquiring hands-on cross-cultural experience to participants in the course. Assigned work and online interaction during the quarter preceding the travel course will prepare students for the experience so that time on the ground can be leveraged for maximum impact. The countries visited offer an outstanding opportunity to learn about international business issues. Students will have the opportunity to meet first hand with a variety of business and other organizations as well as conduct field research to better understand the Italian business environment and its role in the global economy.

**MBA 4970 Leadership & Development (0 Credits)**

All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4971 Leadership & Development 1 (0 Credits)**

Fall quarter, year 1 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4972 Leadership & Development 2 (0 Credits)**

Winter quarter, year 1 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4973 Leadership & Development 3 (0 Credits)**

Spring quarter, year 1 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4974 Leadership & Development 4 (0 Credits)**

Fall quarter, year 2 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4975 Leadership & Development 5 (0 Credits)**

Winter quarter, year 2 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4976 Leadership & Development XI - spring quarter - year 2 (0 Credits)**

Spring quarter, year 2 - All Denver MBA students are required to participate in leadership and development programs to satisfy their graduation requirement. Completion of the graduation requirement entails participating in the leadership retreat at The Nature Place in fall quarter of your first year, five quarterly Peak Leadership Days, and Team Launches for each of the four challenges, and team and individual coaching throughout the program and professional development workshops and opportunities. The program is for zero credits, but must be completed in order to graduate.

**MBA 4980 MBA Internship (0-10 Credits)**

Denver MBA students are required to secure and complete an internship during the summer between their first and second year. The internship is a graduation requirement, so if it is not completed during the summer, it will have to be completed at some other point during the program. This course is for zero credits unless approved otherwise. Note: If you choose to take your internship for credit, you will pay for the credits in the term in which you have your internship. Internships can provide students with "real world" experience within a business environment and prepare students for a full-time position when they graduate. Many companies now use internships as their source for full-time hires, and an internship can allow career switchers to get relevant work experience to add to their resume. For your internship to qualify, it must complement and strengthen your academic experience, provide relevant experiential learning, and help prepare you for a career in a chosen field, or allow you to explore a new industry. You can choose among the organizations that have listed their internship opportunities in Pioneer Careers or arrange for your own internship.

**MBA 4991 Independent Study (1-10 Credits)**

## Media Film Journalism Studies (MFJS)

**MFJS 4001 Producing Video for Social Media and Advocacy (4 Credits)**

This course covers the basics in video production and video storytelling for social media and is open to all graduate students at the University of Denver who are interested in YouTube and other social media video content creation for advocacy, education, and support of social movements. Students will maximize their video storytelling abilities, producing storytelling content that can be shared across multiple social media platforms using mobile phones or equivalent basic consumer equipment. Learning takes place within justice, equity, diversity, inclusion and internationalization frameworks consistent with department, College, and University expectations. The course fulfills elective requirements within MEPC and IIC graduate programs and serves as a university graduate level elective.

**MFJS 4050 Foundations of Strategic Communication (4 Credits)**

Focuses on understanding and implementing public communication campaigns. Central to the course is the exploration of the theoretical social science framework underlying communication campaigns and examination of the ways theories are used to define and explain communication problems and to plan and evaluate campaigns.

**MFJS 4055 Media and Cultural Studies (4 Credits)**

This class surveys key ideas and authors in the interdisciplinary field of cultural studies with a focus on their contributions to the study of media and communication. Some theoretical concepts to be discussed include: representation, identity, cultural production, ideology, hegemony, intersectionality, and power as these relate to the analysis of media institutions, technologies, cultures, audiences/users, texts, and artifacts. Students will develop an understanding of cultural studies as a theoretical, methodological, and political project, devoted to social critique and transformative praxis.

**MFJS 4060 Strategic Messaging (4 Credits)**

Continues the focus on learning and applying public relations techniques, emphasizing media relations and media writing. Students develop the ability to formulate and evaluate appropriate communication objectives, strategies, and tactics in response to real-world public relations problems, paying attention to ethical considerations. Students produce a portfolio of written public relations materials. Prerequisite MFJS 4050 or instructor permission.

**MFJS 4065 Public Diplomacy and Nation Branding (4 Credits)**

Drawing on research from strategic communication, cultural studies, international relations, and marketing, this interdisciplinary course examines how nation-states strive to manage their reputations and increase their influence in the context of globalization and mediatization. Students will learn about the evolution of public diplomacy and nation branding from the Cold War to present day and will discuss current developments and challenges. The course will introduce several theoretical approaches and will use a variety of case studies to help students gain insights into public diplomacy and nation branding as fields of research and of practice. Instructor approval required for all non-MEPC and IIC students.

**MFJS 4070 Seminar in Strategic Communication (4 Credits)**

Through a combination of course readings, case study analyses and guest speakers, students will observe and learn about the practice of public relations in the health and nonprofit sectors. Students will also learn about the goals, challenges and opportunities specific to these sectors. Prerequisite: MCOM/MFJS 4060 or permission of instructor.

**MFJS 4080 Global/Multicultural Campaigns (4 Credits)**

Explores aspects of international and intercultural public relations, including intercultural communications issues, international media issues, international corporate PR, cross-cultural and diversity training, international media relations, and international public relations of governments. The class focuses on relevant theories and issues, rather than on techniques.

**MFJS 4160 Media Theories (4 Credits)**

Surveys a number of theoretical approaches to the study of media and mass communication, paying attention to the historical context in which they arise. Students explore the relationships among media technologies, institutions, content, and audiences as well as their impacts on culture and society. The class prepares students to formulate theoretically grounded research questions within the field of media and mass communication.

**MFJS 4165 Global Health and Development Communication (4 Credits)**

This course will begin with an overview of health communication (which includes but is not limited to health promotion and behavior change). We will discuss individual, social, cultural & technological factors, and relevant theories and concepts in relation to international health communication and development. Students will then learn about the role of communication in international health and development and the way it is practiced in the field. We will also discuss and apply the social and cultural factors that influence the design, delivery, reception, and effectiveness of international health communication programs, the role of international health's important players big and small (e.g. WHO, UNAID, PEPFAR, Doctors without Borders, pharmaceutical companies, local village leaders, local ministries of health, husbands, mothers, etc.), and the ways in which the use of both upstream and downstream communication is imperative. We will examine case studies and the latest research for international health communication and its effectiveness while we also apply health communication theories from a variety of perspectives.

**MFJS 4175 Justice Equity Diversity and Inclusion in Health Communication (4 Credits)**

The course will begin with an overview of Health Communication in the United States and the ways in which health and illness are defined through communication, including media. We will discuss existing health disparities and social determinants of health as we examine health communication in multicultural settings in the U.S. We will further examine multicultural audiences and perspectives about health and illness, including diverse meaning systems and their influences on health attitudes and behaviors. Students will learn about cross-cultural concepts of health and disease and how those are represented in communication about health and illness. As students learn about what it means to develop culturally grounded health communication campaigns, they will examine culture centric messaging in health promotion. We will also discuss the ways in which health care systems are promoting patient-centered, culturally sensitive health care.

**MFJS 4200 Topics in Mass Communications (4 Credits)****MFJS 4222 Experimental Theory and Production (4 Credits)**

This course is an historical, critical overview of experimental film/video movements; training in experimental projection techniques; production of own experimental projects. Lab fee required. Cross listed with MFJS 3222. Prerequisite: MFJS 4470 or permission of instructor.

**MFJS 4227 Producing the Environmental Documentary (4 Credits)**

This course is designed to provide you with a basic understanding of cinematography: cameras, lenses, grip equipment, lighting, and composition. When you complete this course, the goal is for you to have an intermediate understanding of cinematography and that which motivates lighting and composition choices. Because people are the most important part of any production, emphasis will be placed on your ability to work effectively with class members. Learning to collaborate is crucial to your success in this class.

**MFJS 4229 Video Editing is for Everybody (4 Credits)**

Video has become ubiquitous. Whether on YouTube, Hulu, television or a friend's Facebook page, people are exposed to thousands of edited videos every year. From business to anthropology, chemistry to journalism, students in every discipline want to create videos to enhance class projects, aide business plans, promote good works, accompany science processes and create lasting memories. This course is designed to provide students with a basic understanding of television and film editing. When completing this course, the goal is for students to have a basic working knowledge of editing using various media elements (video, audio, photos, music, graphics), editing software and applying a mixture of editing theories and techniques (continuity and montage style editing). There are no prerequisites for this course.

**MFJS 4242 Reel Women (4 Credits)**

Reel Women explores films from the U.S., England, Senegal, India, Canada, Colombia, and Saudi Arabia that are made for, about, and/or by women with the aim of better understanding and centralizing issues pertinent to women's daily lives across the world.

**MFJS 4300 Media Law (4 Credits)**

Introduction to freedom of expression and media law. Students learn how the American legal system works and gain an understanding and appreciation of the philosophical foundations of free expression. In addition, students confront many of the issues facing professional communicators today. Topics include incitement, hate speech, student speech, copyright, defamation, and other issues crucial to mass media professionals. The course examines also explores challenges to free expression brought by new(er) communication technologies. The purpose of this class is to give students the knowledge and critical thinking skills needed to be successful in today's rapidly changing communication environment. Cross-listed with MFJS 3040.

**MFJS 4310 New Media Law & Regulation (4 Credits)**

Examination of current conflicts in mass communications law. Particular emphasis is given the legal problems of communications technologies. Topics may include libel, privacy, obscenity, news gathering, copyright, media ownership and comparative approaches to media law. The course provides insight into how the legal process works and an understanding of the principles and philosophies that underlie the restraints on new communication technologies.

**MFJS 4320 Brands and Identities (4 Credits)**

Reviews theories and cases of the role and meaning of brands in a consumer society, with a particular emphasis on understanding how brands are implicated in the construction and presentation of personal and group identities. The course combines insights from marketing, social psychology, and cultural studies to explore the importance of brands for both consumers and practitioners. Students master core branding concepts and use them to critically analyze salient social and cultural issues.

**MFJS 4504 Social Media Strategies (4 Credits)**

In this class, students get familiar with the principles of social media strategy and learn how to design messaging strategies and tactics for social media. In addition, students work with a real client on a strategic communication campaign for social media.

**MFJS 4506 Audio Documentaries (4 Credits)**

In the past decade, an explosion in the production and accessibility of audio documentary work has created an unprecedented interest and expansion of the documentary form in nearly all sectors of public life. Building on this trend, this course teaches the skills of ethnographically informed audio documentary work that can record and interpret culture and lived experience. We focus on learning the techniques of non-fiction storytelling used in established public radio programs like This American Life, Radio Lab, or Snap Judgement, as well as newer podcasts like Reply All, Invisibilia, or Embedded. The course will prepare students to tell complex stories using strong character-driven narrative. Sound documentation and representation will not be done along journalistic principles, but instead through rigorous ethnography that relies on participant-observation and immersion. Through practical application and the exploration of ethnography and documentary approaches to communication, the course explores questions that surround the interpretation and representation of socio-cultural experience via a sonic medium. To understand the basic mechanics of sound and its narrative form, participants will learn to digitally record and edit audio. Storytelling will then become more complex as students learn to conduct ethnography, interviews, and develop a script for radio. Students will ultimately analyze and create audio documentaries in an effort to understand a significant form of digital storytelling. There are three central learning objectives that will guide us through the course: (1) we will practice ethnographic and documentary methodology, (2) learn to write for radio, and (3) learn the workflow of audio editing to produce an audio documentary.

**MFJS 4560 Audience and Communication Research (4 Credits)**

This class offers an introduction to social science methods applied to communication and audience research. By the end of the course, students will be familiar with: the role and functions of communication and audience research in contemporary society; the processes and practices involved in developing and executing a research project; the basic different forms of research, both qualitative, such as interviews and focus groups and quantitative, such as surveys and experiments; how to use research skills for different career paths. Cross-listed with MFJS 3110/4560.

**MFJS 4567 Activist Media (4 Credits)**

In the mediated digital era, communication is changing fast and shifting the dynamics of real-world power, expanding spaces for journalism and activist communication aimed at working for social change and social justice. This dynamic space has enabled citizens, protesters, journalists, PR professionals, tech developers and hacktivists to harness a diverse range of media tools and platforms for activism and social change. Media has played a key role in social and political movements of the past and more recent online movements. Social media platforms have provided new tools to resist the domination and limitations of mainstream corporate media and create new media strategies and messages to promote social change. But these platforms have also created new risks and challenges for activists. In this course, we will address these issues of communication power dynamics and also media strategies and tools of social and political movements working towards social change.

**MFJS 4650 Global Media and Communication (4 Credits)**

Major theories concerning international communication flows, the impact of globalization and global media, issues of new communication technologies, the rhetoric and media framing of global politics and culture; international marketing and public relations; and national and cultural sovereignty issues related to communication.

**MFJS 4652 Feminist Media Studies (4 Credits)**

MFJS 4652 (Feminist Media Studies) explores the gendered intersections between media and society through the analytical lens of Feminist Media Studies (FMS). While aligned with the discipline Media Studies, FMS centers questions related to power and patriarchy, and aims to create space for praxis. Paying close attention to issues of intersectionality, this course surveys the historical emergence, and contributions, of feminist methodology and inquiry related to issues such as sexism within gaming, the politics of visibility in television production, the celluloid ceiling, and networked bodies. During the quarter, you will engage in multiple points of active and reflective learning that provide the space to strengthen both your understanding and application of FMS. Assignments include discussion questions, self-reflective analysis, and a final project that highlights application, creativity, and subversion. Cross listed with MFJS 3652.

**MFJS 4653 Language, Power, and Globalization (4 Credits)**

This course focuses on scholarly and political debates surrounding the social nature of language, language and (inter)national and individual identity, language policy, multilingualism and linguistic diversity, language and globalization, language and media and communication technologies, and, finally, the future of the global language landscape.

**MFJS 4654 Intercultural Communication (4 Credits)**

This course focuses on the intersections between culture & communication, including intercultural communication in interpersonal and mediated contexts at the local, national and global levels as shaped by processes of globalization. It covers major theoretical perspectives and methods, the role of power and privilege in the construction and articulation of culture and cultural identity, and intersections with race, ethnicity, gender, sexuality and class, intercultural training and the role of communication and culture in conflict and conflict resolution.

**MFJS 4655 JEDII (Justice, Equity, Diversity, Inclusion, & Internationalization) Storytelling (4 Credits)**

This course focuses on multicultural approaches to journalism and media, including representations and news coverage related to gender, race/ethnicity, class, and sexuality, disabilities, religion, and nationality, etc.. The class explores culture and intercultural communication and ways to apply these to journalistic writing as a creative process and craft. Prerequisite: Prior journalistic coursework or its equivalent (including writing experience). Cross-listed with MFJS 3655.

**MFJS 4656 Cross-Cultural Travel Seminar: Immigration, Communication, and Border Cultures (4 Credits)**

This is a one-week intensive travel course that takes place in Tucson, Arizona and south to the US-Mexican border region. The focus of this experiential learning class is to study immigration issues, border cultures, and the role of communication and media through testimonies of immigrants, and visits to key sites such as the migrant trail, immigration detention center and courts. Also included are talks by activists and officials involved in the immigration debate. Class meets for two pre-class sessions in spring quarter. Cross-listed with MFJS 3656.

**MFJS 4660 Global Edutainment & Narrative Persuasion (4 Credits)**

MFJS 4660 Global Edutainment & Narrative Persuasion serves as a gateway to explore the potential of entertainment as an educational tool that can spread awareness, change attitudes, and/or influence behaviors. In this course, students will trace the history of narrative persuasion strategy, pinpoint the modalities it has embraced (e.g., films, TV shows, music, books, and TikTok videos, etc.), highlight topical areas it has addressed, and assess its effectiveness cross-culturally. MFJS 4660 will culminate in the production of student Edutainment projects that tackle global issues of concern.

**MFJS 4912 Seminar in Media Film & Journalism Studies (1-5 Credits)****MFJS 4980 Internship (1-8 Credits)**

Arrange with internship director to complete internship with Denver-area media organization. Prerequisite: varies; consult internship director.

**MFJS 4991 Independent Study (1-10 Credits)****MFJS 4995 Thesis/Substantial Research Paper (1-8 Credits)**

## Music-Academic Classes (MUAC)

**MUAC 3002 Form and Analysis (4 Credits)**

Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

**MUAC 3006 Post-Tonal Theory: Mode/Rhythm (4 Credits)**

Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

**MUAC 3023 Rhythm & Meter in Music (4 Credits)**

Rhythm pertains to experienced or measured durations in music. Meter pertains to the cyclic organization of music's durations. A hegemonic view of meter emerged in music theory and related disciplines in the mid-20th century, one most appropriate to Western classical music and, to a lesser extent, Anglo-American popular music. This view holds that meter "in music" consists of (1) hierarchically arranged beats (2) whose durations are nominally equivalent and (3) whose onsets among coordinated musicians are nominally aligned. This course examines rhythm and meter by interrogating three components of the standard view of the topic. Looking at Western classical music, but also traditional and commercial music from Africa and the African diaspora, we will explore the nature of meter and rhythm in music where durations might not be arranged hierarchically, of equal length, or aligned.

**MUAC 3024 Introduction to Tonal Analysis (4 Credits)**

This course introduces students to various types of musical analysis for tonal music that are more advanced than what is introduced in first- and second-year music theory. Prerequisites: MUAC 2006 and MUAC 2022.

**MUAC 3025 Topics in Analysis: Brahms (4 Credits)**

This course explores a variety of analytical techniques used to understand the compositions of Brahms. We examine works by musicologists and theorists such as Allen Forte, Walter, Frisch, Arnold Schoenberg, Carl Schachter, and David Lewin. Issues discussed include developing variations, rhythm, form, and ambiguity in Brahms. We cover a wide range of repertoire, ranging from piano works to choral works to symphonies.

**MUAC 3026 Sonata Form (4 Credits)**

This is a team-taught course on the topic of "sonata form," one of the central musical structures in classical Western art music, from Mozart to Brahms and beyond. The course will feature a dialogue between history, analysis, and performance, reflected in class activities at multiple levels.

**MUAC 3027 Arranging for the Classical Musician (4 Credits)**

Music initially created for one context becomes music for a new context through the art of arranging. How much of your professional life will you spend performing or teaching arrangements? Have you ever thought about writing your own? Is an arrangement automatically less worthwhile, or can it ever surpass the quality of the original? Class sessions will be spent studying arrangements of music by Bach, Björk, Chopin, Michael Jackson, Mahler, et al. as arranged by Brahms, Jacob Collier, Gil Evans, The Piano Guys, Ravel, and others. Students will also receive individual guidance as they plan, write, and perform arrangements of pieces and songs of their choice.

**MUAC 3030 Seminar-Performance Psychology (2 Credits)****MUAC 3059 Audio Production II (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the first sequence in the audio production concentration.

**MUAC 3060 Extra-Musical Roles of the Music Director (1 Credit)**

Under the supervision and guidance of the director of orchestral studies, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. These experiences will include managing orchestra personnel, librarian activities, running auditions, and recruiting. Open only to Artist Diploma in orchestral conducting students.

**MUAC 3061 Audio Production I (4 Credits)**

An introduction to analog and digital synthesis, MIDI sequencing, and DAW software.

**MUAC 3064 Audio Production IV (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as on-site training at Lamont School of Music performances. This is the third sequence in the audio production concentration.

**MUAC 3065 Audio Production V (4 Credits)**

This course covers theory in audio engineering and provides hands-on training in professional audio engineering for studio sessions and live events. Students receive classroom instruction as well as onsite training at Lamont School of Music performances. This is the fourth sequence in the audio production concentration.

**MUAC 3092 The Business Side of Music (4 Credits)**

A personal and clinical approach to developing music business skills and strategies.

**MUAC 3106 The Dynamic Body: Foundations in Movement Methods and Body Awareness Principles (2 Credits)**

An introduction to fundamental body awareness principles in relationship to physical performance skills for vocal performance majors. Methods for heightening kinesthetic awareness will be learned in the form of movement explorations, improvisations, structures, and learned phrases to gain somatic insight into the performer's sense of verticality in all places and dimensions of space. The concepts of the body in motion will be a primary context and focus for the progression of studies or 'études,' and for the reflective and analytical processes that include observation, journaling, discussion and peer commentary. Studio activities in solo, partnering, and group work will further the student's knowledge of how to become more responsive, expressive, and communicative when interacting with the surrounding environment and with others. Integrated with the body-mind practice and theoretical study, students will be encouraged to inquire, examine and articulate possible philosophies regarding why the mastery of the performer's physical body requires an essential sense of discipline that is cultivated in the performing arts, and how the somatic practices being investigated can serve his/her performance presence and support one's vocal training and health for the long-term.

**MUAC 3124 Composition Seminar (1 Credit)**

Composition Seminar focuses on the reading and performance of modern scores by Lamont and recognized composers. Any student composing music or wishing to perform new compositions at Lamont may register and participate. Requirements for composers include the completion, rehearsal and performance of a piece of music at the New Music Ensemble concert each quarter. Non-composers are required to rehearse and perform at the New Music Ensemble concert. Composers enrolled in the ensemble may be required to play compositions submitted as well.

**MUAC 3161 Topics in Modern Opera (4 Credits)**

This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

**MUAC 3165 Music Theater Survey (2 Credits)**

A historical overview of the American Broadway musical, performance technique, audition preparation and repertoire. Must be prepared to sing and perform.

**MUAC 3166 Music Theater Survey II (2 Credits)**

Fundamentals of music theater performance will be addressed through readings of the text, "Acting in Music Theater" by Joe Dee and Rocco dal Vera. Application of these techniques through performance of musical theater literature will be incorporated during the last number of weeks. Additionally, we will highlight prominent composers and their works throughout the quarter.

**MUAC 3212 Digital Music Creation (4 Credits)**

In this course, students will create, produce, and present their own digital music. Using one of the industry's leading digital music creation platforms (such as Ableton Live), students will learn the history of electronic music creation, create their own digital music portfolios, become familiar with relevant copyright issues, and oversee public performances of their music.

**MUAC 3240 Vocal Pedagogy I (1 Credit)**

Psychological and physical aspects of teaching of singing.

**MUAC 3241 Vocal Pedagogy II (1 Credit)**

Psychological and physical aspects of teaching of singing.

**MUAC 3243 Recitative in Opera (2 Credits)**

Working as a professional singer your proficiency with recitative should be high. Though a major part of many operas recitative is still often overlooked as a skill set. Through this course we will explore several different approaches to recitative from various compositional styles and time periods.

**MUAC 3282 Suzuki Violin Seminar II (2 Credits)****MUAC 3283 Suzuki Violin Seminar II (2 Credits)****MUAC 3284 Suzuki Violin Seminar II (2 Credits)****MUAC 3439 Teaching Note Reading (2 Credits)****MUAC 3460 Suzuki Cello Practicum (1 Credit)**

The Suzuki Cello Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and philosophy covered in the seminar classes. The course will also include some lecture and discussion on developing teaching strategies for effective technical development and communication in lessons.

**MUAC 3463 Suzuki Cello Seminar I (2 Credits)****MUAC 3464 Suzuki Cello Seminar I (2 Credits)****MUAC 3465 Suzuki Cello Seminar I (2 Credits)****MUAC 3466 Suzuki Cello Seminar II (2 Credits)****MUAC 3467 Suzuki Cello Seminar II (2 Credits)****MUAC 3468 Suzuki Cello Seminar II (2 Credits)****MUAC 3470 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3471 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3472 Suzuki Violin Seminar I (2 Credits)**

Comprehensive study of Suzuki philosophy, repertoire and teaching techniques for violin. Offered fall, winter, and spring quarters. May be repeated for credit.

**MUAC 3477 Suzuki Violin Practicum (1 Credit)**

The Suzuki Violin Practicum is designed to give the students enrolled in the Suzuki Seminar classes a forum to practice teaching using the pedagogical points and teaching philosophy covered in the seminar classes. The course will include some lecture focusing on teaching strategies for effective technical development and effective communication in the lessons. Prerequisite: MUAC 3470.



**MUAC 3492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)**

This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3493 Approaches to American Popular Music (4 Credits)**

We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3494 Music and Belief in World Cultures (4 Credits)**

How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world's religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops. Prerequisite: Junior or senior standing required; sophomores allowed with instructor approval.

**MUAC 3497 Studying Music in the Field: Theory and Method in Ethnomusicology (4 Credits)**

This course introduces issues that motivate ethnomusicological research and techniques for carrying out fieldwork, the ethnographic method which has largely come to define the discipline. Our primary texts include Bruno Nettl's classic text, *The Study of Ethnomusicology*, and *Shadows in the Field*, a seminal volume of essays discussing ethnomusicological fieldwork. This course also involves hands-on experience in some of the major fieldwork techniques, including field observation and writing fieldnotes, musical transcription and interviewing. This course culminates in a field research project in a Denver musical community determined in consultation with the professor. Note: this course is not open to freshman; sophomores with permission of instructor.

**MUAC 3498 Music, Dance, and Everyday Life in South Asia (4 Credits)**

This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged. This course is not open to first-year students. Sophomores allowed with instructor approval.

**MUAC 3499 Topics in Musicology (4 Credits)**

This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project. Prerequisite: Junior standing.

**MUAC 3502 Gender & Genre in World Music (4 Credits)**

How are concepts of "maleness," "femaleness" and other gendered categories constructed, maintained, and contested through musical performance? This course examines the issues explored and debated in recent studies of gender relation to music of various cultures including Western art music, popular music, and other world genres. We focus on reading and discussion of ethno-musicological and anthropological ethnographies, musicological studies focusing on gender and theoretical writings from gender and women's studies. Lectures and discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops. This course is not open to freshman. Sophomores can register with instructor approval.

**MUAC 3511 Mahler and Musical Culture (4 Credits)**

We explore Gustav Mahler's life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3512 Stories of Music History (4 Credits)****MUAC 3513 Wagner and the Ideology of the Artwork (4 Credits)**

We explore Richard Wagner's music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3515 Introduction to Baroque Performance Practice (2 Credits)**

This class serves to familiarize musicians with the stylistic parameters, aesthetic principles, and performing techniques common in Western art music of the Baroque era (ca. 1600–1750), as well as the historical and cultural context of the period. Students will learn how to apply these performance guidelines to their own interpretation of Baroque music.

**MUAC 3520 Topics in Baroque Music (4 Credits)**

Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3521 Topics in World Music (4 Credits)****MUAC 3536 Topics in Hindustani Music (4 Credits)**

This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course is developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, each class incorporates hands-on music-making through singing, rhythmic exercises, and/or dance. By the end of the term, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting). Must be at least junior standing or obtain instructor approval.

**MUAC 3537 Crouch, Hawkins, and Smallwood: Three Pioneers in Contemporary Gospel Music (4 Credits)**

Andraé Crouch, Walter Hawkins, and Richard Smallwood have each influenced the course of black gospel music for the last 50 years. Through listening to recordings, watching video performances, score analysis, readings, performance, and improvisation, this course will examine the music of these unique composer/performers and how their contributions have impacted black gospel music. Rather than simply read about and analyze the music, students will play the music of these composers and literally have hands-on experience with the colors and textures of the music that has shaped church music and the gospel music industry for the last five decades.

**MUAC 3545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)**

With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 3578 Advanced Composition (4 Credits)**

Advanced composition with students composing works of large scope and using a variety of advanced techniques consistent with interests and abilities; emphasis on imagination and originality of personal expression.

**MUAC 3590 Guitar History (4 Credits)****MUAC 3630 Basic Jazz Arranging (2 Credits)**

A study and practical analysis of the foundational techniques involved with composing and orchestrating for small group jazz ensembles. This course will cover the basics of form, notation, and orchestration in the small group jazz idiom, consisting of one to four horns and/or vocals, guitar, piano, bass, and drums.

**MUAC 3650 Orchestral Excerpts-Cello (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3655 Orchestral Excerpts-Bass (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock audition and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3660 Orchestral Excerpts-Violin (4 Credits)**

This course will explore excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students will be given a list of excerpts and coached on how to prepare them. They will participate in mock auditions and receive feedback. This course will also address the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3661 Orchestral Excerpts Viola (4 Credits)**

This course explores excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras. Students are given a list of excerpts and coached on how to prepare them. They participate in mock auditions and receive feedback. This course also addresses the mental aspects involved in taking successful auditions and the expectations demanded of them in the professional world of orchestras.

**MUAC 3662 Orchestral Studies for Brass (2 Credits)**

Study of orchestral literature brass players are likely to be asked to play at auditions for professional orchestras. Undergraduate participants should have passed their Sophomore Proficiency jury with distinction.

**MUAC 3663 Orchestral Excerpts, Viola II (4 Credits)**

Companion course to Orchestral Excerpts Viola I, this section expands the repertoire list beyond the standard works used for auditions today. In addition to further honing basic requisite material from section I, students study and prepare less frequently required works and principle viola solo repertoire. There is more extensive discussion of the audition process and mock auditions as a part of the course. While it is advised and preferable that students complete the first section of this course it is possible to take the course with the approval of the instructor.

**MUAC 3677 Bow Art Ensemble (0-1 Credits)**

The Bow Art Ensemble explores the study and rehearsal of traditional and contemporary chamber orchestra repertoire, history, and culture, to be led in conjunction with Lamont performance faculty and guest artists. Students will receive instruction on proper techniques, musical styles, study of traditional and contemporary collaborative leadership and democratic approaches to performing in a conductor-less ensemble.

**MUAC 3682 Topics-Orchestral Repertoire (4 Credits)**

We explore the history of the orchestra and orchestral literature from the baroque through modern eras, and examine a number of test cases in which conventional understanding has been challenged in recent years. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 3684 Choral Literature I (2 Credits)**

This course is an analysis of the development of choral repertoire from the Middle Ages through the Baroque era.

**MUAC 3686 Choral Pedagogy I (2 Credits)**

The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

**MUAC 3688 Choral Pedagogy II (2 Credits)**

The Choral Pedagogy course focuses on effective choral methods and techniques indigenous to primary schools of thought that have risen to prominence or have proven successful in practice and performance throughout the last 50 years in the academic and professional choral idiom. Through study and analysis of selected works by various composers, effective teaching techniques are explored in performance practice and style interpretation.

**MUAC 3689 Choral Literature II (2 Credits)**

This course is an analysis of the development of choral repertoire from the Classical period until the present day. This course is meant to be taken in sequence after Choral Literature I.

**MUAC 3698 Carillon History and Mechanics (4 Credits)**

A survey of the evolution of signal bells into the musical instrument known as the carillon. This subject is often called "campanology." The history will be traced from the 16th century in the Low Countries through modern times in Europe, North America, Australia/New Zealand and Japan. Topics will include bell foundries, bell casting and tuning, bell chambers, playing actions, carillonneurs, carillon schools, carillon organizations, the use of the carillon in its various regions and basic carillon maintenance.

**MUAC 3700 Carillon Repertoire (4 Credits)**

A survey of the music expressly produced for carillon from the earliest times through the present. Categories include automatic music (e.g., De Sany, Wyckaert, Eggert), the earliest compositions for manual play (Van den Gheyn and the Louvain manuscripts of the 18th century), and the 20th-century categories: Flemish, Dutch, French and North American. Mainstream publishers as well as incidental publications will be covered. The labs will focus on analysis through recordings and live performances by participants.

**MUAC 3706 Pedagogy & Repertoire Tuba (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the tuba.

**MUAC 3708 Pedagogy & Repertoire Horn (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the horn.

**MUAC 3710 Carillon Pedagogy I (2 Credits)**

An exploration of the physical and psychological elements that can lead to effective carillon teaching: technique, handling/pedaling ("fingering" on the piano), and developing an attitude that fosters successful performance.

**MUAC 3712 Pedagogy & Repertoire Trombone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the trombone.

**MUAC 3717 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3718 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3719 Pedagogy & Repertoire Percussion (4 Credits)**

Teaching techniques and survey of literature and teaching materials for percussion.

**MUAC 3724 Pedagogy & Repertoire Guitar (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the guitar.

**MUAC 3726 Pedagogy & Repertoire Viola (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the viola.

**MUAC 3727 Pedagogy & Repertoire Viola (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the viola.

**MUAC 3730 Pedagogy & Repertoire Cello (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the cello.

**MUAC 3733 Pedagogy & Rep Double Bass (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the double bass.

**MUAC 3736 Pedagogy & Repertoire Harp (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the harp.

**MUAC 3737 Pedagogy & Repertoire Harp (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the harp.

**MUAC 3738 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3739 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3740 Pedagogy & Repertoire Organ (2 Credits)**

Teaching techniques and survey of literature and teaching materials for the organ.

**MUAC 3742 Pedagogy & Repertoire Trumpet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the trumpet.

**MUAC 3747 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3748 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3749 Pedagogy & Repertoire Flute (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the flute.

**MUAC 3751 Pedagogy & Repertoire Clarinet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the clarinet.

**MUAC 3752 Pedagogy & Repertoire Clarinet (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the clarinet.

**MUAC 3753 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3754 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3755 Pedagogy & Repertoire Saxophone (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the saxophone.

**MUAC 3757 Pedagogy & Repertoire Oboe (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the oboe.

**MUAC 3758 Pedagogy & Repertoire Oboe (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the oboe.

**MUAC 3761 Pedagogy & Repertoire Bassoon (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the bassoon.

**MUAC 3762 Pedagogy & Repertoire Bassoon (4 Credits)**

Teaching techniques and survey of literature and teaching materials for the bassoon.

**MUAC 3765 Professional Brass Techniques (4 Credits)**

This 4-hour per week course will be divided into a lecture/seminar for two hours and performance practicum for two hours. Topics discussed and performed include orchestral playing, sight reading, practice, solo performance, jazz survival, ornamentation, transposition, and warm-up/maintenance routine.

**MUAC 3801 Introduction to Schenkerian Analysis (4 Credits)****MUAC 3804 Topics in Music (1-5 Credits)****MUAC 3810 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3811 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3812 Voice Repertoire (2 Credits)**

Styles, periods and traditions of vocal repertoire from earliest music to contemporary compositions.

**MUAC 3822 Piano Repertoire I (2 Credits)**

Performance and analysis.

**MUAC 3823 Piano Repertoire II (3 Credits)**

Performance and analysis.

**MUAC 3824 Piano Repertoire III (3 Credits)**

Performance and analysis.

**MUAC 3828 Songwriting Exploration I: Pop, R&B, & Hip hop (2 Credits)**

Songwriting Exploration I is an intermediate to advanced level course for songwriting Pop, R&B, and Hip hop styles. This course focuses on developing the skills necessary for writing thought provoking, creative, and fun songs to compete in today's popular music market. Students will learn song forms and creative lyric writing techniques used by successful songwriters to create hit songs. Students will also learn instrumentation, chord progressions, and the importance of rhythms that are commonly heard in the Pop, R&B, and Hip hop genres. This course will involve video and listening examples of classic and modern songs, in-class discussions, online assignments, student collaboration projects, and in-class presentations/performances of original works. Students will also receive online resources on music technology (electronic instruments) and software that current songwriters/producers are using to create basic recordings at home using a computer and DAW (Digital Audio Workstation). During the final week of the course, students will have an opportunity to record their songs in the Lamont recording studio on a pre-scheduled date or record at home.

**MUAC 3829 Songwriting Exploration II (2 Credits)**

MUAC 3829 is an intermediate to advanced level course for songwriting in Contemporary Jazz/Fusion, World, Pop, Rock, and R&B styles. This course focuses on developing the skills necessary for writing thought-provoking and creative songs to compete in today's contemporary and jazz market. Students will analyze more complex song forms, harmony, and creative lyric writing techniques used by successful songwriters. Students will also learn instrumentation, advanced chord progressions, and the importance of rhythms that are commonly heard in the Jazz, World, Pop, Rock and R&B genres. This course will involve video and listening examples of classic and modern songs, in-class discussions, transcription assignments, student collaboration projects, and in-class presentations/performances of original works. Students will also receive online resources on music technology (electronic instruments) and software that current songwriters/producers are using to create basic recordings at home using a computer and DAW (Digital Audio Workstation). During the final week of the course, students will have an opportunity to record their songs in the Lamont recording studio on a pre-scheduled date or record at home. Course Objectives and Relationship to Total Departmental Offerings • Establish and build upon techniques to write creative and compelling lyrics to compete in the modern contemporary music industry • Traditional and modern approaches to songwriting • How to write compelling melodies for lyrics • How to apply advanced harmonic devices and chord progressions to accompany lyrics • Techniques used by successful songwriters past and present • Collaborating with other writers, composers, and producers for projects through interaction with classmates and discussions • Perform works for an audience through in-class performance and other potential performance opportunities • Basic recording techniques for a professional recording studio or home studio • Compose and perform/record 4 songs (undergrad) or 5 songs (graduate) This is a new course being offered by a new faculty member in their area of expertise. This faculty member already offers a 2000 level class in songwriting and recently added the first part of a Songwriting sequence for Winter quarter (covering different writing styles and serving as the prerequisite for this new course). This class is an upper-division class exploring more advanced songwriting techniques and additional styles compared to what was covered in Songwriting Exploration I.

**MUAC 3830 Advanced Jazz Arranging I (2 Credits)**

A study and practical analysis of small to medium jazz ensemble writing with extended instrumentation. Consisting of nonette-style orchestration including orchestral instruments such as horn, tuba, woodwinds, and voice along with extended electronic textures, this course will cover the basics of form, notation and orchestration in the 21st Century hybrid small to medium size jazz ensemble idiom.

**MUAC 3831 Advanced Jazz Arranging II (2 Credits)**

A study and practical analysis of large "studio orchestra" type jazz writing with extended instrumentation. Consisting of medium to full orchestral string section, woodwinds, harp, percussion, brass plus jazz rhythm section, voices, and soloists. Exemplified by such modern ensembles as Snarky Puppy with the Metropole Orchestra, this will be a full studio orchestra with modern 21st Century jazz, rock, and pop sensibilities. String bowings and aspects of dynamic ensemble balances in the studio orchestra will be studied, as well as writing for the harp.

**MUAC 3832 Arranging for Computer-Based Media (2 Credits)**

This course will be an introduction to techniques of composition and arranging music for media, with an emphasis on practical assignments that the student will encounter in the professional world of media composition. Students will learn how to work in collaboration with filmmakers, master techniques of timing and synchronization, use traditional techniques of composition/arranging/orchestration to serve dramatic needs, and work efficiently in the recording studio under time and budget restraints.

**MUAC 3844 The Artist Entrepreneur (2 Credits)**

The Artist Entrepreneur is a course of study that examines the full spectrum of attributes and skills necessary for a student to “survive and thrive” in the every-changing landscape of the 21st Century. With a two-fold approach of examining effective strategies for a “modern artistry mindset” along with extensive case studies of successful 21st Century professionals, this course will offer the student a wide array of important recourses to guide their career. The case study aspect of The Artist Entrepreneur will be based on multiple evaluations of successful artists in the 21st Century in partnership with local presenters. Prerequisite: MUAC 3092.

**MUAC 3845 Writing for The Modern Large Jazz Ensemble I (2 Credits)**

A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Frank Foster, Sammy Nestico, Slide Hampton, Bob Brookmeyer and other modern practitioners. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.

**MUAC 3846 Writing for the Modern Large Jazz Ensemble II (2 Credits)**

A study and practical analysis of the major methods for writing for the modern large jazz ensemble (big band) as exemplified by Bob Brookmeyer, Maria Schneider, Gil Evans, Darcy James Argue, and others. A special emphasis will be placed on creating full works for the large jazz ensemble that uses textures and modern extended form approaches indicative of these artists. Application of analysis will be in the form of a complete arrangement or original composition for modern big band.

**MUAC 3847 Hip-Hop: Theory and Practice (4 Credits)**

Students in this class will examine the socio-cultural, economic, and political significance of hip-hop as a medium of expression for youth around the world. Through analysis of popular writing and media, as well as academic texts, we critically explore issues of race, social justice, masculinity, misogyny, censorship, technology, and intellectual property, as they relate to mainstream and underground hip-hop in America. Having discussed hip-hop's roots in the U.S., the remainder of the quarter will be devoted to tracing hip-hop's global routes.

**MUAC 3860 Basic Jazz Improvisation (4 Credits)**

The study of jazz improvisation techniques and forms. Open to music majors or by instructor permission.

**MUAC 3870 Jazz Improvisation & Composition (4 Credits)**

Improvisational styles of major jazz soloists studied through transcription and analysis of selected recorded jazz solos; scales and modes; rhythmic styles and devices; practice and development of individual student's improvisational technique. Prerequisites: MUAC 1011, MUAC 1012, MUAC 3830.

**MUAC 3910 Orchestration (4 Credits)**

Techniques of instrumental scoring.

**MUAC 3933 Graduate Music History Review (0 Credits)****MUAC 3935 Graduate Music Theory Review (0 Credits)**

This course provides an accelerated review of materials from the undergraduate theory core, including analysis and written exercises in diatonic and chromatic harmony, counterpoint, tonal forms, and an introduction to 20th-Century theory.

**MUAC 3959 Movement and Expression for Conductors (4 Credits)**

Conductors use their whole body to communicate and elicit successful performances from their ensemble. If you have unnecessary tension or lack of ease in your body, this is communicated unconsciously to your ensemble, hindering quality of performance. Additionally, physical tension can prevent your ability to communicate and think clearly under pressure. This course is an exploration of freedom of movement and the physicality of musical expression. Classes will include group activities in free-movement, dance, acting, keeping your cool, poise, balance, tension release, as well as hands-on instruction applying Alexander technique to your conducting.

**MUAC 3960 Advanced Orchestral Conducting (2 Credits)**

Discussions of and exercises in score study, interpretation, and techniques associated with orchestral conducting. Includes practical experience conducting orchestral repertoire. Required of MM Conducting students with Choral or wind concentrations. Open to other students with permission of instructor. Prerequisite: Permission of instructor (not needed for MM Conducting students with Choral or Wind concentration). Fall quarter only.

**MUAC 3961 Advanced Choral Conducting (2 Credits)**

Conducting complex choral works, including those with instrumental accompaniment; phrasing, interpretation and score reading. Prerequisite: MUAC 2940. Fall quarter only.

**MUAC 3962 Advanced Wind Conducting (2 Credits)**

Conducting complex wind compositions; phrasing interpretation and score reading. Prerequisite: MUAC 2970. Spring quarter only.

**MUAC 3973 Advanced Wind Literature I (2 Credits)**

This course is an overview of wind literature appropriate for junior high school, high school, college and professional programs including strategies in effective programming and creation of appropriate program notes.

**MUAC 3974 Advanced Wind Literature II (2 Credits)**

An in-depth study of successful compositional techniques by prominent composers of wind literature. Prerequisite: MUAC 3973.

**MUAC 3980 Advanced Jazz Improvisation and Composition (4 Credits)**

A three term sequence continuing the in-depth study of the theory, performance practices, style, and history of jazz improvisation and composition. Prerequisite: satisfactory completion of the three terms of Jazz Improvisation and Composition or consent of the instructor.

**MUAC 3990 Internship in Music (0-8 Credits)**

Internship in Music will offer opportunities for music majors to experience actual music related careers within a sponsoring music organization chosen by the student and accepted by the supervising faculty of the School of Music.

**MUAC 3991 Independent Study (1-10 Credits)**

**MUAC 4000 Introduction to Graduate Study (2 Credits)**

Problems of research in various chronological epochs of Western musical culture; research techniques and sources used in research; formal writing style.

**MUAC 4002 Form and Analysis (4 Credits)**

Analysis of structural elements and stylistic features in solo, chamber and orchestral literature from 1600 to present. Prerequisite: MUAC 2006.

**MUAC 4006 Post-Tonal Theory: Mode/Rhythm (4 Credits)**

Works of Stravinsky, Bartok, Satie, Debussy, and others are studied, employing various transformational theories, diatonic set theory, and 20th-century metric theories. Prerequisite: completion of Music Theory I and Music Theory II sequences.

**MUAC 4007 Post-Tonal Theory and Analysis: Set-Theory and Serialism (4 Credits)**

This course has two components: (1) A study of selected analytical techniques for post-tonal music, primarily pitch-class set theory and twelve-tone (serial) theory; (2) Analysis of representative works from the twentieth century, focusing on the music from the first half of the century (Schoenberg, Berg, Webern, Stravinsky, and Bartok). Six credits of Theory 2 or permission of instructor required.

**MUAC 4008 Modal Counterpoint, Renaissance Vocal Style (4 Credits)**

This course teaches students to compose vocal music in the Renaissance style. After surveying species counterpoint, students learn imitative techniques en route to composing three- and four-voice texted pieces.

**MUAC 4009 Tonal Counterpoint (4 Credits)**

Eighteenth-century counterpoint using J.S. Bach as a model, with two- and three-part fugue writing.

**MUAC 4010 Pedagogy of Music Theory (4 Credits)**

Materials, devices, techniques of teaching theory. Students must have successfully completed undergraduate music theory or passed graduate review theory.

**MUAC 4014 Music-Theoretical Approaches to Popular Music (4 Credits)**

This course is an environment for engaging with generating music-theory scholarship on popular music. "Popular music" in this context refers to commercially successful music (e.g., hip-hop, rock, pop, country, etc.) as well as the predecessors of those genres (e.g., bluegrass, funk, soul, etc.). The course surveys a scholarly ecosystem that includes both analytical methods designed for older repertoires as well as newer methods that engage popular music's current particularities. These methods explore form, rhythm and meter, timbre, modality, harmony, race & ethnicity, gender & sexuality, interaction & improvisation, music instrument studies, text expression, multimedia, music & technology, philosophical concerns of ontology and groove, and more. The structure of the course is not set by the instructor in advance. Rather, the instructor and individual students will devise a grading contract in the first week that guides the topics in which the students will complete their work. The aim of the work is the further students' scholarly agendas and improve their capacity to read and present secondary scholarship, write and present their own scholarship, transcribe music, and provide feedback to their peers. Cross Listed with MUAC 3014.

**MUAC 4020 Introduction to Research in Piano Pedagogy (2 Credits)**

This course is designed to support the research requirements for the lecture-recital and/or the independent graduate-level pedagogical project which meet the standard competencies of the piano pedagogy program.

**MUAC 4050 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4051 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4052 Major Adv Repertoire Guitar (2 Credits)**

Bibliographical survey of materials related to particular repertoire chosen by student for MA recital in preparation for major written project at end of year.

**MUAC 4090 Model Composition (4 Credits)**

Students in this course deepen their understanding of musical styles and techniques by composing works that imitate major composers before 1900. Music by each student is performed in a final recital. Prerequisite: Tonal Counterpoint, equivalent coursework from another institution, or permission of instructor.

**MUAC 4121 Seminar in Music Theory (4 Credits)**

Seminar in Music Theory focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

**MUAC 4160 Issues in Opera History and Adaptation (4 Credits)**

This course addresses cultural, historical, analytical, aesthetic, and scholarly issues relevant to the history of opera. Students will consider the various ways in which composers, librettists, singers, patrons, conductors, listeners, and scholars have adapted to changes in social and cultural practices surrounding and subsuming opera as a social phenomenon, as well as to changes in the art form itself. We will study representative works and productions from the earliest music dramas of the Baroque period through to contemporary operas and reflect on the challenges posed in staging these works for today's audiences. Assignments may include weekly reflection papers, oral or virtual presentations, and a research project developed in consultation with the instructor.

**MUAC 4161 Topics in Modern Opera (4 Credits)**

This course involves the close study of selected twentieth- and twenty-first-century operas, their respective musical styles and their videotaped performances. This study will include such issues as opera and film, opera libretto criticism, and the personal and public politics of the opera.

**MUAC 4189 Jazz Performance Techniques (2 Credits)**

Individual study of jazz performance techniques in a directed study environment.

**MUAC 4196 Graduate Composition Tutorial (2 Credits)****MUAC 4200 Diction-Graduate Voice Majors (2 Credits)**

This course is designed to help refine the diction skills of graduate students in voice, with an emphasis on Italian, French and German. Native speakers will be presented, and the student will learn some basic vocabulary and syntactical aspects of the language.

**MUAC 4300 Topics in Jazz History (4 Credits)**

A seminar focusing on a major figure of jazz history. Detailed examination of a single artist, their life, music and influences.

**MUAC 4305 Advanced Bebop Concepts (2 Credits)**

An in-depth study of the language of bebop jazz improvisation. The course will combine listening, composing and performing skills with theoretical knowledge of the great improvisers of the 1940s and 50s.

**MUAC 4350 Talam: Rhythmic Form and Process in South Indian Music (4 Credits)**

This course explores the rhythmic system (talam) of Carnatic music, the classical music of Southern India. We begin the quarter with a general introduction to Carnatic music performance, examining its relationship to religious identity, histories of colonialism and nationalism, and social practices of class, caste, and gender. Having contextualized South Indian classical music socio-historically, the remainder of the quarter will focus on theoretical and practical issues in Carnatic talam. Readings and discussions will examine Indian conceptions of time (musical, cosmological, and cultural), the setting of song-texts, the art of improvisation and accompaniment, as well as the relationship between music, dance, and the body. We will also discuss and analyze cross-cultural applications of Carnatic rhythm in the compositions and pedagogies of several rock, jazz, and classical musicians. Weekly modules in solkattu, a system of spoken syllables and patterned hand gestures, will help students build and sharpen rhythmic skills and develop an analytical understanding for the intricacies of Carnatic meter and rhythmic design. Over the quarter, students will learn increasingly challenging exercises and rhythmic compositions in a variety of tala cycles (3, 5, 7, 8, and 9 beats in length). Some class time will be devoted to hands-on instruction in Carnatic percussion, including the mrdangam, the principle drum of South Indian classical music, as well as other hand drums including the khanjira frame drum.

**MUAC 4450 Suzuki Group Lesson Practicum (1 Credit)**

The Suzuki Group Lesson Teaching Practicum provides an opportunity for Suzuki Pedagogy master's students and Suzuki Teaching Certificate students to receive feedback on their own group lesson teaching skills from the professor. Prerequisites: MUAC 3477 or MUAC 3461.

**MUAC 4492 History of Opera: From Monteverdi to Minimalism and Beyond (4 Credits)**

This seminar course surveys the history of opera from the invention of the genre c. 1600 to the present day. In addition to assigned excerpts, students view three complete operas during the quarter. Primary and secondary source readings supplement the required text and class lectures. Students write a research paper that may examine some aspect of a particular opera or that may compare a particular aspect found in several operas. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4493 Approaches to American Popular Music (4 Credits)**

We explore a number of topics involved in the study of popular music, including tensions between analytical and cultural approaches; issues of race, class, and gender; and constructions of authenticity and personae. Listening and reading are wide-ranging, encompassing diverse styles. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4494 Music and Belief in World Cultures (4 Credits)**

How does music affect religious experience and how does religion shape musical practice? Why is music vital in some religious rituals and expressly banned in others? If humans use music to create, reflect, and comment upon the worlds they experience and imagine, then the use of music in religious practice is among its most powerful and ephemeral. Students are introduced to a wide range of musical traditions and their relationship to many of the world's religions, including Islam, Judaism, Christianity, Buddhism, Hinduism, Native American belief and the religious practices of Africa and its diaspora. Readings, lectures and discussions are supplemented by guest lecture demonstrations, film/video screenings and hands-on workshops.

**MUAC 4498 Music, Dance, and Everyday Life in South Asia (4 Credits)**

This course serves as an introduction to a diverse array of performance traditions from the South Asian subcontinent. We examine the significance of music and dance in everyday life, the influence of media technology, and the relationship of performance to issues such as caste, gender, nationalism and globalization. Class discussions are supplemented by guest lectures, hands-on workshops and film screenings. Our study of music outweighs that of dance, and a music background is strongly encouraged.



**MUAC 4499 Topics in Musicology (4 Credits)**

This course focuses on particular musicology topics determined by the instructor. Course materials may include primary and secondary source readings, theoretical writings from other disciplines, a variety of listening assignments, film/video screenings, guest lecture demonstrations, and hands-on workshops. Students are expected to participate in class discussions and may be asked to write short response papers and/or to give short oral presentations. The course concludes with individual research projects, presented orally and in written form, on topics chosen and developed in consultation with the instructor. Expectations for graduate students enrolled in the course are commensurate with their training and background as compared to undergraduates enrolled in the course. In some cases, with the prior consent of the instructor, students may choose to combine performance with the final research project.

**MUAC 4511 Mahler and Musical Culture (4 Credits)**

We explore Gustav Mahler's life, historical context, and music, all in relation to one another. The focus is on recent and important scholarly approaches to this conductor and composer. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4512 Stories of Music History (4 Credits)**

We explore a number of case studies in which "conventional wisdom" about a composer, repertory, or a period of time turns out to be not universally "true," but instead contingent on cultural context and changing ideologies about music. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4513 Wagner and the Ideology of the Artwork (4 Credits)**

We explore Richard Wagner's music dramas, particularly the Ring operas, as well as theories and ideologies surrounding them. The focus is on recent and important scholarly approaches. The course concludes with individual research projects and presentations on topics students choose and develop.

**MUAC 4518 Musical Theft: Music Appropriation and Appreciation from Ariana Grande to Paul Simon (4 Credits)**

This course asks, what happens when people engage with music that is not their own? How do we determine who owns music? A piece? A tradition? What is the difference between theft, appropriation, and appreciation? We will explore these questions through diverse case studies examining popular, classical, and traditional musics from around the world. We will examine Paul Simon's engagement with South African musicians during apartheid, rap's overwhelming popularity among young white men in the United States, and Central African musicians' embrace of Cuban music in the 1960s and '70s. We will parse out what kinds of cross-cultural musical engagements occur, their impacts, and the responsibilities of individuals, governments, and international organizations in different contexts.

**MUAC 4519 Social Justice and Community Music Making (4 Credits)**

What is community music? How do community arts programs function? How do they integrate social justice and music? This interdisciplinary community engaged learning course examines these questions both inside and outside of the classroom. Students will analyze how music programs are built and run by applying ideas from in-class readings and discussions to collaborative projects with local social justice arts-based organizations (e.g., a social justice songwriting project with local teens, a storytelling performance project with a community choir). By working with local community arts and social justice program professionals, students will critically analyze best practices as they learn how organizations are constructed, get funding, demonstrate impact, and pursue their social justice and educational missions. Drawing on scholarship from community arts, social work, ethnomusicology, cultural policy, and music education, this course provides an interdisciplinary foundation for students to engage with (and even create) impactful arts- and social justice-focused programs in their communities.

**MUAC 4520 Topics in Hindustani Music (4 Credits)**

This course explores the melodic system (raga) and rhythmic system (tala) of Hindustani music, the classical music of North India. These conceptual frameworks act both as sound structures to be realized in improvised performance and as aesthetic entities manifested in the related traditions of dance, iconography, and film. A major emphasis of this course will be developing an understanding of raga and tala as musical structures through intensive listening as well as practical instruction. Accordingly, one class each week is designed to incorporate hands-on music-making through singing, rhythmic exercises, and dance. By the end of the quarter, students will become familiar with several ragas and talas and the stages by which they are developed in performance. A second, equally important objective is to learn to appreciate ragas as aesthetic entities. We will analyze their musical characteristics as well as the "extra-musical" characteristics of sentiment (rasa), performance time and/or season and iconographic associations (ragamala painting).

**MUAC 4521 Topics in Baroque Music (4 Credits)**

Through the study of selected Baroque instrumental, vocal and operatic works, this seminar course considers various approaches to performance practice issues such as "authenticity," the "historically informed" performance, period instruments, ornamentation, continuo realization, and editing. Facsimile editions and primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of Baroque music with an emphasis on performance practice. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4535 Baroque Opera on Stage (4 Credits)**

This course will explore aspects of Baroque opera not immediately conveyed by a score - including staging, gesture, scenic design, machinery, theater space, performers response - as they inform our understanding of specific Baroque operas and the cultural context within which they were performed. We will focus on operas by Monteverdi, Cavalli, Purcell, Handel, Lully, Campra and Rameau, among others. Students should expect to participate in class discussions, to write short response papers, to give short oral presentations, and to write a 12 to 15 page paper that examines a Baroque opera or operas in the light of one or more performance considerations. With the prior consent of the instructor, students may submit an alternative final project, one which combines performance with some form of written work.

**MUAC 4536 Musics of the African Diaspora (4 Credits)**

How have African music-cultures changed in their transitions to new lands? What performative Africanisms have been retained, reconstructed and/or highlighted in the aftermath of legal slavery? And within newer Afro-diasporic communities? What role does musical transmission play in cultural retention and survival? This course will explore the connections and differences in musical practice and worldview throughout the African diaspora. We focus primarily on music-cultures of North, South, and Central America, and the Caribbean, examining traditional forms of music and dance associated with religion and ritual such as Afro-Cuban bata drumming, practices which fuse music and movement such as Afro-Brazilian capoeira, jazz, and popular music such as rap. Lectures and class discussions are supplemented by guest lecture-demonstrations, film/video screenings and hands-on workshops.

**MUAC 4537 Psalms, Hymns, and Spiritual Songs: The Music of the African American Worship (4 Credits)**

This course is an experiential exploration of the spirituality of African-American sacred song. Participants will sing, consider the history of the music and explore their own connection to the songs, as well as the inspiration and challenge these songs may offer to present and future communities.

**MUAC 4538 Cultural and Psychological History of the African American Spiritual (4 Credits)**

In this graduate academic music course, we trace the cultural and psychological history of African American spirituals, which are the sacred folk songs that were created and first sung in the 18th and 19th centuries by African women and men enslaved in North America. We explore the cultural and psychological functions of the music during slavery and the different functions of choral and art song spirituals that evolved after slavery, peaking in their cultural impact during the Harlem Renaissance of the 1920s and 30s. We also examine the cultural relationship of the spirituals to gospel music, and the influence of the spirituals tradition on the emergence of the freedom songs of the Civil Rights Movement of the 1950s and 60s. Throughout the course, we reflect on the relationship of the spirituals to larger issues of racial identity and social justice. Finally, we examine the cultural and psychological meanings of the spirituals tradition in contemporary twenty-first century America.

**MUAC 4539 Music, Politics, and Policy (4 Credits)**

This course examines the ways in which policies and politics engage with popular, jazz, folk, and classical musics around the world. Students will explore contemporary and historical cases in which governments and NGOs foster, transform, reject, and otherwise use musics to promote their own ideas about local economies, national cultures, diplomacy, democracy, innovation, cultural diversity, and even criminal law. We ask, can music promote peace? Democracy? How? How do governments create local and national music scenes? Which local and national cultures do they promote and protect? To what end? We look at how the Cuban government has embraced rap music as emblematic of the nation's revolutionary ethos; how the United States government used jazz as a diplomatic tool during the Cold War; how NGOs in Israel and Palestine used popular and classical musics to promote peace and understanding; how American courts have used rap music as evidence in criminal cases; and how funding and intellectual property laws impact musical ownership, tradition, innovation, and creativity.

**MUAC 4540 Music and Activism (4 Credits)**

In many times and places, people around the world sing, chant, and drum in the streets. Their lived experiences don't line up with the equality and opportunity their governments claim to champion. Music is an integral part of their advocacy work. They play and sing as they draw attention to injustices, foster cohesion and community, communicate messages (both covertly and forcefully), express pain, joy and pride, energize and sustain themselves, as well as (de)humanize themselves and others. This course explores the special place music has in activism around the world. We examine protest movements such as the South African anti-apartheid movement, the American Abolitionist and Civil Rights movements, American/European White Nationalist movements, the Arab Spring, and the worldwide Black Lives Matter movements. We will explore community music projects with social justice agendas such as Youth on Record, The Spirituals Project, and the West-Eastern Divan Orchestra. We ask, why is music a particularly important part of activist work? What special place does it have? How is it used for both good and bad? For community mobilization, peace, and violence? Drawing on the fields of ethnomusicology, musicology, and cultural policy, we explore music, not just as a means to achieve certain ends, but as integral to the way humans position themselves in the world and advocate for themselves and others.

**MUAC 4545 The Making of Romantic Music: Paris and Leipzig in the 1830s (4 Credits)**

With a view to identifying the various interdisciplinary factors that led to the making of romantic music, this seminar course focuses on musical life in Paris and Leipzig in the 1830s. Specific attention is paid to the music of Chopin, Berlioz, Mendelssohn, and Robert and Clara Schumann and the personal and musical connections between these composers. Primary and secondary source readings serve as the texts for the course. Students write a research paper that examines some aspect of music and/or musical life in the 1830s. With the prior consent of the instructor, students may submit an alternative final project, one that combines performance with some form of written work.

**MUAC 4547 Topics in Advanced Keyboard Repertoire (4 Credits)**

Topics in Advanced Keyboard Repertoire focuses on special topics chosen by faculty members. Students should expect rigorous course work and a final project or paper.

**MUAC 4600 Extra-Musical Roles of the Music Director (0-2 Credits)**

Under the supervision and guidance of conducting faculty, students will gain hands-on, actual experience with many of the non-musical tasks that conductors face. Students will learn about and gain hands-on, actual experience with many of the non-musical tasks with which conductors are faced. These experiences will include managing ensemble personnel, librarian activities, running auditions, and recruiting.

**MUAC 4601 Soundpainting: The Study of the Live Composing Sign Language for the Performing and Visual Arts (2 Credits)**

In this course, students will study the soundpainting gestural language, a universal live composing sign language for the performing and visual arts.

**MUAC 4602 Free Improvisation Techniques (2 Credits)**

Free Improvisation Techniques will explore exercises in Tom Hall's book *Free Improvisation: A Practical Guide*. We will also explore how those exercises relate to the broader concepts of improvising as discussed in Stephen Nachmanovich's landmark book *Free Play*. This class is best suited for all musicians, especially those who are seeking to expand the way they relate to performing and how performing relates to other aspects of their life.

**MUAC 4801 Introduction to Schenkerian Analysis (4 Credits)**

**MUAC 4831 Current Trends in Piano Pedagogy (2 Credits)**

This course will explore current trends including some of the following topics: technology, professionalism, the history of piano pedagogy, employment opportunities and creative projects.

**MUAC 4837 Pedagogy and Repertoire Organ (2 Credits)**

Study of teaching techniques, survey of literature and teaching materials from the 20th and 21st centuries. Prerequisite: MUAC 3740.

**MUAC 4840 Piano Teaching Practicum (0-2 Credits)**

MUAC 4840 is a course designed to provide guided observations, lesson planning, and practice teaching students of various developmental age groups using foundations and principles developed in Piano Pedagogy.

**MUAC 4850 Elementary Piano Pedagogy I (2 Credits)**

An in-depth study of methods and curriculum for teaching piano at the beginner and elementary level. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials.

**MUAC 4851 Elementary Piano Pedagogy II (2 Credits)**

This course is designed in a sequence with Elementary Piano Pedagogy I. An in-depth study of methods and curriculum for teaching piano at the late elementary to early intermediate levels. Focus on philosophical, psychological, and physiological bases of piano study. Study and evaluation of current educational materials. Prerequisite: MUAC 4850.

**MUAC 4852 Group Piano Teaching Techniques (2 Credits)**

An in-depth study of methods and curriculum for group study and the teaching of adults and children. Focus on philosophical, psychological, and physiological bases for teaching the piano in groups of all ages. Study and evaluation of current resources.

**MUAC 4853 Intermediate Piano Pedagogy I (2 Credits)**

Course content will emphasize teaching methods, materials, and curriculum content at the intermediate level of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

**MUAC 4854 Intermediate Piano Pedagogy II (2 Credits)**

This course is designed in a sequence with Intermediate Piano Pedagogy I. Course content will emphasize teaching methods, materials, and curriculum content at the intermediate to early advanced levels of piano study. Reading and discussions will explore practical issues encountered by the contemporary piano teacher.

**MUAC 4991 Independent Study (1-10 Credits)**

**MUAC 4993 Independent Study (1-10 Credits)**

**MUAC 4995 Independent Research (1-10 Credits)**

**MUAC 5991 Graduate Thesis (1-10 Credits)**

## Music-Studio Lessons (MUPR)

**MUPR 3120 Alexander Technique (2 Credits)**

The Alexander technique is a skill that can be incorporated into practice, performance, and everyday life. Using the principles discovered by F. Matthias Alexander, students will learn how to identify and change faulty patterns of thought and movement. Emphasis will be placed on recognizing how these patterns affect music-making in practice and performance. Lessons are individually tailored and topics may include injury recovery and prevention, pain and tension reduction, stress management, performance anxiety, freeing the breath, using the back effectively, balance, and ease of motion.

**MUPR 3190 Jazz Piano (2 Credits)**

**MUPR 3210 Piano (2 Credits)**

For non-majors only. If you are interested in Piano for Non-Majors, please email [lamontpiano@du.edu](mailto:lamontpiano@du.edu).

**MUPR 3230 Voice (2 Credits)**

For non-majors only.

**MUPR 3250 Violin (2 Credits)**

For non-majors only.

**MUPR 3270 Violoncello (2 Credits)**

For non-majors only.

**MUPR 3290 Viola (2 Credits)**

For non-majors only.

**MUPR 3310 Bass Violin (2 Credits)****MUPR 3312 Jazz Bass (2 Credits)****MUPR 3330 Harp (2 Credits)****MUPR 3350 Organ Improvisation (2 Credits)**

This course is designed for organ students to introduce them to the art of organ improvisation, hymn and ensemble playing, as well as all possible forms of accompaniment. It is meant for undergraduate students (upper division), graduate students, and artist diploma graduates. Prerequisites: knowledge of music history, figured bass, and counterpoint. Permission of instructor required.

**MUPR 3351 Organ (2 Credits)****MUPR 3370 Clarinet (2 Credits)**

For non-majors only.

**MUPR 3390 Flute (2 Credits)**

For non-majors only.

**MUPR 3460 Bassoon (2 Credits)****MUPR 3480 Trombone (2 Credits)**

For non-majors only.

**MUPR 3481 Jazz Trombone (2 Credits)****MUPR 3500 Trumpet (2 Credits)**

For non-majors only.

**MUPR 3520 Horn (2 Credits)**

For non-majors only.

**MUPR 3540 Euphonium (2 Credits)****MUPR 3560 Tuba (2 Credits)**

For non-majors only.

**MUPR 3621 Jazz Guitar (2 Credits)****MUPR 3660 Percussion (2 Credits)**

For non-majors only.

**MUPR 3661 Percussion Set (2 Credits)****MUPR 3680 Oboe (2 Credits)****MUPR 3780 Saxophone (2 Credits)****MUPR 3900 Carillon (2 Credits)****MUPR 3920 Composition (2 Credits)****MUPR 3930 Conducting (2 Credits)****MUPR 4040 Music Production (2 Credits)**

This course is designed to meet you where you currently are in your production and theory experience and then progress from there. As such, the first 1 or 2 meetings may be to assess your current status and construct a plan for the academic quarter. Possible directions include, but are not limited to, audio theory, microphone technique, post-production (mixing/mastering), editing, songwriting and production, sound synthesis, and electronic music production, etc.

**MUPR 4191 Jazz Piano (2 Credits)**

**MUPR 4210 Piano (2 Credits)**

**MUPR 4230 Voice (2 Credits)**

**MUPR 4250 Violin (2 Credits)**

**MUPR 4270 Violoncello (2 Credits)**

**MUPR 4290 Viola (2 Credits)**

**MUPR 4310 Bass Violin (2 Credits)**

**MUPR 4312 Jazz Bass (2 Credits)**

**MUPR 4330 Harp (2 Credits)**

**MUPR 4350 Organ (2 Credits)**

**MUPR 4370 Clarinet (2 Credits)**

**MUPR 4390 Flute (2 Credits)**

**MUPR 4460 Bassoon (2 Credits)**

**MUPR 4480 Trombone (2 Credits)**

**MUPR 4481 Jazz Trombone (2 Credits)**

**MUPR 4500 Trumpet (2 Credits)**

**MUPR 4520 Horn (2 Credits)**

**MUPR 4540 Euphonium (2 Credits)**

**MUPR 4560 Tuba (2 Credits)**

**MUPR 4600 Classical Guitar (0-2 Credits)**

**MUPR 4610 Classical Guitar (4 Credits)**

**MUPR 4621 Jazz Guitar (2 Credits)**

**MUPR 4660 Percussion (2 Credits)**

**MUPR 4661 Percussion Set (2 Credits)**

**MUPR 4680 Oboe (2 Credits)**

**MUPR 4780 Saxophone (2 Credits)**

**MUPR 4900 Carillon (2 Credits)**

**MUPR 4920 Composition (2 Credits)**

One-on-one instruction for composition majors.

**MUPR 4930 Conducting (2 Credits)**

This course provides individualized instruction in conducting for graduate students majoring in conducting. Repertoire selection, analysis, rehearsal procedures, and gestures will all be studied. Students will prepare assigned repertoire for class each week. Significant time will be spent developing gestures that reflect the artistic and pedagogical intentions of each student. The individual lesson is also a mentoring time to develop strategies for career development and recital preparation. Analysis projects may be assigned to provide an opportunity for in-depth scholarly research and presentation of significant literature relating to the theme of the quarter.

**MUPR 4991 Independent Study (2-4 Credits)**

## **Organizational Leadership (ORL)**

**ORL 4000 High Impact Leadership (4 Credits)**

Leveraging learners' professional experience, this course delivers applied concepts and skills for professionals to effectively lead and manage individuals and teams. Course content is structured around three sequential themes. Early in this course, learners will focus on understanding and growing oneself as a leader including establishing an inclusive leadership mindset and forming effective communication and self-organization techniques. Next, learners will explore and apply effective techniques to develop individuals and high-performing teams, including approaches for feedback, accountability, coaching and motivation, and leading and managing change. Finally, learners will examine how to navigate organizational dynamics, including managing up and across the organization, and will cultivate their personal leadership and career growth using career design principles. Students use a leadership assessment tool to reflect on their leadership practice and inform the development of a personal leadership action plan. To further support learners in their leadership development, personalized, one-on-one leadership coaching is integrated throughout the course.

**ORL 4110 Fundamentals of Organization Development (4 Credits)**

This course explores the history of organizational development (OD), definitions, models, approaches, and how OD is and can be used in organizations today. An organizational development professional requires a multitude of skills to be effective. Students will assess their own skills and develop a plan to develop or increase required skills.

**ORL 4112 Organization Development Interventions (4 Credits)**

This course will equip students with a solid foundation in Organization Development interventions, enabling them to contribute effectively to organizational change efforts and improve organizational effectiveness for individuals, teams, and whole systems. Through critical analysis, practical application, and discussion of ethical considerations, students will gain the knowledge and skills necessary to navigate the complex landscape of contemporary organizations and drive positive change through OD interventions. In this course, students will explore how to set up interventions for success and examine a variety of intervention types in each of these categories that serve to support activities that change individuals, teams, and systems. Pre-requisites: ORL 4110 strongly recommended, or significant Organization Development experience.

**ORL 4115 Organizational Culture and Organizational Development Impacts (4 Credits)**

Organizational culture encompasses the organization's vision, mission, values, systems, symbols, structures, language, beliefs, and norms. This course proposes organizational development strategies that match, support, or are synergetic with organizational cultures.

**ORL 4120 Team Effectiveness and Interventions (4 Credits)**

To be successful, organizations of all types depend on teams of people who work together to complete tasks, achieve goals, and to help accomplish organizational change and strategy. As a result, focusing on the effectiveness of teams is a key value in organizational development. In this course, students learn how teams work and what makes them effective. Students investigate the tools and methods needed to conduct team assessments, diagnose the symptoms, and prescribe and evaluate targeted interventions that help teams achieve goals that impact organizational outcomes.

**ORL 4125 Evaluate and Sustain Change (4 Credits)**

This course explores organization impacts and change processes that are inherent in organizational development. Students will analyze various change models and assess how they explain the impact of change on organizations and their stakeholders. Students will also evaluate leadership and managerial practices that play a role in sustaining organizational change.

**ORL 4130 Individual Interventions (4 Credits)**

This course explores the theory and practice of an individual intervention as part of an organizational development process. Specifically, students will examine the roles of leadership and how it affects individual development strategy and interventions. A successful internal or external consultant needs to be well-versed in the intervention process and theory that supports it, as well as the different types of individual interventions. In this course, students will learn about the wide array of intervention tools, skills, and resources to successfully facilitate an individual intervention.

**ORL 4135 Large Scale Interventions (4 Credits)**

This course explores the theory and practice of a large-scale or organization-wide organizational development process—including entering the organization, assessing a strategy for a unique organizational culture, and presenting results—while understanding the human side of change. There are many organizational development strategies that can be used based on unique organizational considerations. This course examines the roles of organizational structure, type of organization, and the depth and breadth of the organizational change affecting organizational development strategy and large-scale interventions.

**ORL 4160 Integrating Personal and Organizational Success (4 Credits)**

This course explores the dynamic and ever-evolving relationship between individual and organizational success. Students will examine the profound impact of their mindset and the "interior condition" from which they lead on organizational performance and goals. They will also investigate how the application of awareness-based methodologies in systems thinking, innovation, and change management build organizational capacity and elevate performance. Additionally, students will build their own Personal Operating System and explore how it aligns with and contributes to organizational success, thereby strengthening their ability to achieve holistic success in their personal and professional lives.

**ORL 4170 Developing Human Capital in Organizations (4 Credits)**

Human capital represents the knowledge, skills, and abilities necessary to implement the strategy of any organization – public, private or nonprofit. Unlike other forms of capital such as financial and equipment, human capital resides within the individual. This course is designed to provide students with an understanding of the strategic role and typical responsibilities that organization leadership, along with human resources, play in unleashing the potential of employees. Developing Human Capital examines current challenges and trends in developing talent as new core competencies and ways to work emerge, technology enables collaboration, and demographics shift employee expectations. The Developing Human Capital in Organizations course provides a talent management and human capital development framework that demonstrates and supports integrated processes and systems that position and enhance employee and leadership development. Students explore the role of leaders and HR in unleashing talent, an organization's most important source of competitive advantage. Students will assess, analyze and apply concrete strategies that ensure talent development is strategic, relevant, culturally sustainable, and competency-driven.

**ORL 4190 Values-Driven Decision Making (4 Credits)**

This course explores both objective and subjective decision making models. Emphasis is placed on decision making for organizational effectiveness. The rational approach will be taught via maximization of expected outcomes and decision tree analysis. The course will also explore managers' preferred decision making styles. The irrational side of decision-making will be covered through demonstrations and discussion of decision bias and judgment heuristics. Decision making is a complex and challenging process. The need for an effective and efficient methodology that is simple, systematic, and logical is more important today than ever. This course is an answer to that problem by using examples from our text and up-to-date articles on decision making from experts in the field.

**ORL 4400 Leading Strategic Planning in Organizations (4 Credits)**

How does an organization translate its mission into specific activities? In this course, students will explore a variety of established frameworks and tools related to organizational strategy that drive long-term success. This course will provide students with the general skills necessary to understand and perform a strategic analysis of an organization. Students will learn techniques related to organizational development, project management, and strategy and will conclude this course by using those tools and techniques to conduct a strategic evaluation of an organization.

**ORL 4410 Principles of Environmental Scanning (4 Credits)**

Environmental scanning is the process of identifying and evaluating environments, both internal and external, that may affect an organization's ability to create and sustain competitive advantage in the pursuit of organizational effectiveness. Knowledge of environmental scanning models are critical to the role of leadership and management teams in organizations. This course provides students the opportunity to develop a process for making strategic decisions using environmental scanning models and tools.

**ORL 4420 Leading Change for Transformation (4 Credits)**

In the 21st Century, change is a constant in organizations that want to remain competitive. At the heart of organizational change are the people of the organization who must continuously adapt their ways of thinking/doing to help the organization adapt and transform. This course prepares students to become leaders of change in their organizations through an exploration of change theory as well as the tools, models, and techniques for facilitating organizational change. Students will also learn how to enable and inspire other individuals in organizations to create change.

**ORL 4500 Leadership Development (4 Credits)**

This course explores leadership as a dynamic relationship with the organizational environment, stakeholders, and followers. Leadership in context is an essential concept, as well as the research-based core leadership competencies that effective leaders exemplify. Leaders from the public, private, and non-profit sectors will be studied in an inclusive context to assess their core leadership competencies and those practices that may vary due to the organizational structure. Relevant contemporary leadership topics will be examined to gain a broad perspective on leadership and considering the diversity of human interrelationships. The importance of ethical, strategic, and system wide decision-making is examined from the standpoint that leadership opportunities exist at all levels of organizations, in the community as well as the workplace. Strategies used to influence culture, promote learning, and implement change to move organizations forward are addressed. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4501 Leadership Development in Action (4 Credits)**

Developing effective and successful leadership competencies is a lifelong endeavor that begins with the self and evolves throughout our career journey. In this course, inclusive leaders will be examined, including core leadership competencies and practices that may vary due to the organizational culture and structure. Students will identify core behaviors and practices along with effective communication skills and problem-solving tools to effectively move an organization forward. Students will assess their own leadership competencies and areas for growth to construct a personal leadership development plan.

**ORL 4510 Building the 21st-Century Organization (4 Credits)**

This course examines organizations in various sectors, and assesses the impact of internal and external factors on their designs and structures. Students will analyze group and individual behavior and organizational culture to understand their impact on organizational design, while also taking into account contemporary issues such as diversity and inclusion, unanticipated environmental events, and the role of stakeholders. Students will evaluate the appropriateness of current organizational designs, and provide recommendations for innovation and improvement.

**ORL 4520 Principles of Financing for Organizations (4 Credits)**

This course introduces basic financial concepts that lay the foundation for financial literacy. These financial concepts have varying relevance and different applications among public, private, and non-profit organizations. To understand these varying relationships, the course will focus on comparing and contrasting the use, non-use, and relevant application of financial concepts across sectors. Students will begin developing a skillset for applying these concepts appropriately to varying organizational types and structures. Additionally, the assessment of financial conditions will be combined with other indicators, such as an organization's strategy, to learn how to diagnose an organization's overall health.

**ORL 4530 Leading a Culture of Organizational Innovation (4 Credits)**

This course examines a proven process of innovation and how it applies to private, public, and non-profit organizations. Students will explore how leadership and organizational culture can impact innovation. They will develop skills to determine the most appropriate strategies and structures to encourage effective innovation within organizations. In particular, students will describe how to implement management systems to assess ongoing innovation, use metrics throughout the process, and determine how to incentivize innovation in work teams. Students will also assess an organization's current degree of innovation and propose an action plan for integrating innovation moving forward.

**ORL 4550 Strategic Organizational Partnerships (4 Credits)**

Partnerships extend the capability of the organization; public, private or nonprofit; and help to leverage available resources. Strategic partnerships also provide an alternative to vertical integration and a way to complement the organization's core competencies. This course defines and discusses the roles of various types of organizational partnerships, including internal and external, strategic partnerships, and joint ventures, and explores strategies for ethically managing these external and internal organizational relationships.

**ORL 4701 Topics in Organizational Leadership (4 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**ORL 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**ORL 4902 Capstone Seminar (4 Credits)**

The Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem in their degree field of study. The students produce a Capstone of 7000-8000 words that presents a position on a relevant problem, supports the position with professional and academic literature, analyzes and tests the proposed solution, and discusses the findings as related to the field of study. The seminar is dependent upon quality, collegial discussion, and feedback of students' research and work products, under the facilitation of a faculty member. The course structure guides the students through the process of independent, secondary research and writing of a Capstone. No primary research is allowed. Students generate the course content through ongoing discussion and peer feedback on the Capstone process and individual topic areas under investigation. Students professionally and academically communicate through written work and oral presentation. Students must have: acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4904 Interdisciplinary Capstone Seminar (4 Credits)**

The Interdisciplinary Capstone Seminar is a graduate seminar in which students utilize the knowledge and skills gained through the degree program to create a culminating work that critically addresses a problem or issue in the degree field of study. Members of the class will include students from various UCOL programs, representing multiple topics of study. On campus offerings of this course include required online components. The student produces a paper of 7000-8000 words that presents a position on a relevant problem or issue, supports the position with professional and academic work in the field, analyzes and tests the paper position, and discusses the role of the findings within the field of study. Students professionally and academically communicate their findings through written work and oral presentations. The seminar is dependent upon active and collegial discussion and critique of student research and work under the facilitation of a faculty member, and it is governed by the quality of participation and contributions of the students. Students must have: Acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better. Students must complete the Capstone Seminar in one quarter; no incomplete grades are assigned.

**ORL 4905 Graduate Social Research Methods (4 Credits)**

This course provides graduate students with a basic background in the methods of research in the social sciences. In our information-rich society, organizations and institutions have become more aware of the value of research data for informing critical decisions. As leaders in their organizations, graduates should have a knowledge base that allows them to critically examine basic research in the social sciences and to understand the methods involved in generating research results. They should understand the value of research to their organizations, be able to identify opportunities to gather information through research that will benefit those organizations, and participate in the ethical design of basic studies to gather that critical information. Students will develop and write a research proposal around a specific research question informed by a review of the literature.

**ORL 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**ORL 4980 Internship (0-4 Credits)**

The ORL internship is designed to offer students a practical educational experience in an industry related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the ORL master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all ORL students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the ORL degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**ORL 4985 Industry Innovation Project (1-4 Credits)**

Students in this course will participate as a part of a team of cross-discipline students working on an innovation project that is scoped to meet the specific needs of its industry client. Students will have a choice between a variety of project types so that each student can select the industry and team role that best supports their specific area(s) of study. Teams will consist of 4-8 students pursuing a mix of technical, business, and liberal arts degrees. Every project will be led by an experienced industry advisor who will be responsible for managing the project workplan, client engagement, and end product quality. Students will gain direct industry experience in their area of study with an emphasis on innovative thinking, team collaboration, and independent project management skills. Prerequisite: Academic director and academic advisor approval is required. Selection criteria will include academic status and project availability.



**ORL 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted into a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

## Philosophy (PHIL)

**PHIL 3000 Plato's Metaphysics (4 Credits)**

A systematic study of Plato's Middle and Late Period Dialogues that focuses on his arguments for the existence of abstract objects and the development of Plato's theory of Forms. Prerequisite: At least Junior standing or permission of instructor.

**PHIL 3003 Plato's Theory of Knowledge (4 Credits)**

A systematic investigation of Plato's treatments of knowledge throughout the dialogues with a focus on the theory of recollection, Forms as objects of knowledge, the relationship between the Forms and perceptual experience, and the challenges posed by notions of true and false belief. Prerequisites: At least Junior standing or permission of instructor.

**PHIL 3005 Cosmopolitics (4 Credits)**

This class will be a close reading of Plato's dialogue Timaeus, with a special focus on the cosmological, theological, and political dimensions of the text.

**PHIL 3010 Great Thinkers: Aristotle (4 Credits)**

A study of Aristotle's central theories and doctrines. Prerequisite: junior standing or instructor's permission.

**PHIL 3011 Great Thinkers: Virginia Woolf (4 Credits)**

In this course we will read Virginia Woolf as a philosopher. We will discuss her philosophy of nature, knowledge, art, politics, science, sensation, gender, and materialism throughout her fiction and non-fiction writings.

**PHIL 3023 Great Thinkers: Maimonides: Politics, Prophecy and Providence (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with RLGS 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**PHIL 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"--viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and RLGS 3024. Prerequisite: Junior standing or instructor's permission.

**PHIL 3026 Levinas and the Political (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting insight of "ethics as first philosophy," is a key figure in the histories of phenomenology, metaphysics, and theology. In this class, we examine the implications of Levinas' thought for politics and the political through close readings of his insights on peace, proximity, and justice in such works as "Reflections on the Philosophy of Hitlerism" (1934), Totality and Infinity (1961), Otherwise Than Being or Beyond Essence (1974), and "Peace and Proximity" (1995) in dialogue with key companion works in political thought and political theology, including Benjamin on Divine Violence, Butler on postmodern politics, Connolly on agonism, Critchley on anarchism, Marxist intersections, and Derrida and other "Jewish theologies" of messianistic impossibility. Themes addressed include: Justice; Covenant; Law; the grounding and paradox (or betrayal) of politics-with-ethics; phenomenologies of hospitalities and strangers, friends and enemies; liberalisms, socialisms, fascisms; revolutions and anarchies; agonisms v. antagonisms; impossibility; messianisms without Messiahs; logics of works v. logics of grace; on the role of love v. justice; anarchic grounds; temporalities of covenant and justice; fraternity; forgiveness and its limits; "the 3rd"; rational peace, peace between the wars, and impossible peace. This course is cross-listed: PHIL and JUST. Pre-reqs: This course is open to juniors and seniors except by special permission of the instructor.

**PHIL 3050 Great Thinkers: Hume (4 Credits)**

A detailed study of Hume's "radical" empiricism and its impact on contemporary analytic philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3061 Kant's Ethics/Aesthetics/Politics (4 Credits)**

A study of Kant's "value theory" and its historical significance. Prerequisite: junior standing or instructor's permission.

**PHIL 3062 Kant's Epistemology and Logic (4 Credits)**

A study of Kant's theory of knowledge, logic and related issues. Prerequisite: junior standing or instructor's permission.

**PHIL 3063 Kant on Religion (4 Credits)**

A study of Immanuel Kant's major writings on religion and their subsequent influence on theology and the philosophy of religion. Prerequisite: junior standing or instructor's permission. Cross-listed with RLGS 3456.

**PHIL 3070 Great Thinkers: Hegel (4 Credits)**

Hegel's "Phenomenology," later system and place in the history of modern philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3075 Marxism (4 Credits)**

This course is a survey in the theoretical and political work influenced by the writings of 19th century philosopher and economist, Karl Marx. The course covers both the historical traditions in Marxism in the 19th, 20th, and 21st century as well as the geographical traditions of these time periods in France, Germany, England, Italy, Russia, China, and America. It is not necessary that students have a prior background in Marx's work, but it is highly recommended. Cross listed with ECON 3075.

**PHIL 3090 Great Thinkers: Heidegger (4 Credits)**

Study of "Being and Time" and related essays by a major 20th-century philosopher. Prerequisite: junior standing or instructor's permission.

**PHIL 3092 Great Thinkers: The Later Heidegger (4 Credits)**

Study of the works of Heidegger after 1930. Prerequisite: junior standing or instructor's permission.

**PHIL 3100 Great Thinkers: Wittgenstein (4 Credits)**

The course introduces students to Ludwig Wittgenstein's two masterworks, the *Tractatus* (1922) and *Philosophical Investigations* (1953), both of which provide fresh, often counterintuitive and conflicting, insights into topics ranging from logic and language to ethics, religion, art and culture. The course explores how the end of the Austro-Hungarian Empire and the pressures of an incipient modernity impacted the style, direction and substance of Wittgenstein's thought, developments that had profound existential and spiritual import for him as he wrestled with the many contradictions of his life and thought. The course concludes with a consideration of the relationship between Wittgenstein's later philosophy and the existential-phenomenology of Martin Heidegger, both of whom insist upon humanity's radical finitude and the pre-ontological understanding (forms of life) that always already conditions and guides our questions about reason, truth, beauty and meaning.

**PHIL 3101 Great Thinkers: Kierkegaard (4 Credits)**

Each year, the philosophy department offers at least two courses in great thinkers. Specific figures may vary from year to year. Cross-listed with RLGS 3102. Prerequisite: 10 hours of Philosophy at the 2000 level or permission of instructor.

**PHIL 3120 Metaphysics (4 Credits)**

In the course of this study, we will cover a broad range of philosophical topics falling within metaphysics, philosophy of language, philosophy of science, and epistemology. Prerequisite: junior standing or instructor's permission.

**PHIL 3130 Knowledge Problems (4 Credits)**

Problems in the foundations and justifications of claims to knowledge. Prerequisite: junior standing or instructor's permission.

**PHIL 3146 Great Thinkers: Levinas (4 Credits)**

Emmanuel Levinas (1906-1995), famous for his arresting and original idea of "ethics as first philosophy," is an important figure in the histories of phenomenology, metaphysics, and theology. In this course, we set out to explore Levinas' insights on ethics, alterity, and infinity, including the connection of his ideas to Plato, Descartes, Kant, and Husserl, as well as his critical responses to Heidegger and his positive contributions to Derrida. In this course, we work through Levinas' two major works, *Ethics and Infinity* and *Otherwise Than Being or Beyond Essence*, as well as a number of shorter writings—including material from his Talmudic commentaries. Themes to be covered include: Being, Goodness, Risk, Ethics, Alterity, Transcendence, Law, Judaism, Gift, Forgiveness, Politics, Theology, and Justice. This course is cross-listed with JUST 3146.

**PHIL 3152 Philosophy Meets Mysticism: A Greek, Jewish and Islamic Neoplatonic Journey (4 Credits)**

Neoplatonism is a unique genre—somewhere between philosophy and mysticism. In this course, we investigate some of the leading themes of Neoplatonism, tracing the Greek ideas of Plotinus (the third century "father of Neoplatonism") into later Jewish and Islamic textual traditions. As part of our journey, we will investigate a host of philosophical writings, including the *Theology of Aristotle* and the *Liber de Causis*, as well as works by Plato, Plotinus, Proclus, Ibn Tufayl, Acemenna, Isaac Israeli, Solomon Ibn Gabirol, and Abraham Ibn Ezra. Themes to be covered include emanation and creation, apophatic discourse, divine desire, the theological significance of imagination, inward reflection and the call to virtue. Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3152.

**PHIL 3175 Morality and the Law (4 Credits)**

A systematic study of various elements of the relation between law and morality. Are we obligated to obey every law the government enacts? Why? If we do have an obligation to obey the law, are civil disobedients like Martin Luther King, Jr. justified in disobeying the law? Are immoral laws, laws at all, or must a law connect with some higher moral truth to have any authority? To what extent is it morally permissible for the law to restrict our personal freedoms? To what extent is it morally permissible for the law to enforce morality in general? If it is not permissible for the law to enforce morality, do we incur any obligation to obey the law? Prerequisite: junior standing or instructor's permission.

**PHIL 3178 Metaethics (4 Credits)**

This course systematically and critically examines the metaphysical, semantic, and epistemic issues central to the study of metaethics. Do moral properties exist? If so, how are they related to natural properties? Do moral properties exist independent of human agency, or do we construct morality? If moral properties exist, how can we come to have justified belief about them? Is it possible to know that a moral belief is true? Doesn't the phenomenon of widespread, intractable disagreement about moral matters establish that there are no objective moral truths? Is the process of gaining scientific knowledge really that different from the process of gaining moral knowledge? Prerequisite: junior standing or instructor's permission.

**PHIL 3179 Virtue Ethics (4 Credits)**

Virtue ethics purportedly provides a distinct approach to moral deliberation, moral reasoning, moral decision-making, and moral justification. This course is a systematic study of the nature of virtue ethics, the nature of a virtue, and the alleged superiority of virtue ethics over its more familiar consequentialist and deontological alternatives. We also study various responses to the following questions: Have moral psychologists generated any valuable studies on the nature of virtue? What virtues ought we to endorse? At least Junior standing required or permission of the instructor.

**PHIL 3185 Philosophy of Action and Agency (4 Credits)**

Wittgenstein once asked, "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" Understanding the difference between mere happening and an intentional action became central to the philosophical investigation of action and agency in the 20th century. In this course we examine this distinction and why it should matter to us. Our topics include intentional action, the causal theory of action, the metaphysics of action, agent causation, basic action, acting and trying to act, intentions, weakness of will, strength of will, and mental action. Requires junior standing or permission of instructor.

**PHIL 3201 Wittgenstein, Quine, & Kripke on Necessity and a Priori Knowledge (4 Credits)**

A study of Wittgenstein, Quine, and Kripke on the nature of necessity, a priori knowledge and their relation to understanding philosophy. Prerequisite: junior standing or instructor's permission.

**PHIL 3210 Philosophy of Movement (4 Credits)**

Everything is in motion. Yet, philosophers have consistently considered motion to be a derivative or secondary form of being. Why? What are the political and metaphysical consequences of marginalizing motion in the history of philosophy? The aim of this class is to read the history of philosophy with a unique focus on the status of movement and motion from the ancient to contemporary period.

**PHIL 3211 Contemporary Pol Philosophy (4 Credits)**

This class focuses primarily on the philosophical problems generated by thinking about political authority and justice. We discuss the nature of political authority, justice, rights, equality and the role of property in a modern state.

**PHIL 3215 Modern Jewish Philosophy (4 Credits)**

Prerequisite: junior standing or instructor's permission. Cross listed with JUST 3215.

**PHIL 3333 Logic, Language, and Metaphysics (4 Credits)**

This course provides a systematic exploration of the foundations of contemporary philosophy—namely, logic and language—and their metaphysical implications. The class can be divided in three broad modules. Our starting point is the collapse of Kant's system due to staggering discoveries in physics and geometry. Next, we shall discuss the subsequent development of mathematical logic and the philosophy of language in the work of Frege, Russell, Tarski, and Gödel. The last portion is devoted to philosophical applications of these logical results in the field of metaphysics. Specifically, we shall explore the work of Carnap, Quine, and Kripke. Junior or senior standing required (or instructor permission).

**PHIL 3445 Cultural Theory and Critique (4 Credits)**

This course will provide an overview of the major theories of culture and cultural critique, as well as a consideration of some of the major controversies and recent developments in this field. It will proceed roughly chronologically, beginning with liberal humanist critique and continuing with hermeneutics, materialist and Marxist critique, psychoanalysis, the Frankfurt School, structuralism, post-structuralism, and contemporary British cultural studies. It will also consider more recent developments, such as feminist critique, GLBT critique, and postcolonialism. While the approach will be mainly philosophical, implications for other areas such as literature, art, emergent media, religion, and politics will also figure in the discussions, so it is appropriate for students in many fields, not just philosophy. Prerequisite: Junior standing or permission of the instructor. Note that this course will serve as a foundational offering for students interested in participating in the Critical Theory specialization.

**PHIL 3446 Philosophy in the American Tradition (4 Credits)**

The course introduces students to the thought of the three premier American Transcendentalist writers: Ralph Waldo Emerson, Margaret Fuller, and Henry David Thoreau. These three writers—by turns friends, rivals, neighbors, and even housemates in nearby Concord, Massachusetts—created what Emerson called "a poetry and philosophy of insight and not of tradition" and laid the foundations for American philosophy and literature as we know it today. They also led the first countercultural movement in American history, advocating causes as varied as environmentalism, abolitionism, women's rights, and the "higher law" of the individual conscience in an age of unbridled capitalism and populism. We will consider the Transcendentalists as both writers and reformers, examining their calls for a uniquely American literature and their romantic sacralization of nature as well as their deep commitment to reform and their engagement with the turbulent politics of their time. In the final weeks of the course, we will explore the Transcendentalists' profound influence on American cultural history, ranging from their contemporaries (Frederick Douglass, Walt Whitman, Emily Dickinson, and Nathaniel Hawthorne) to ours (Marilynne Robinson, Terrence Malick, and W. S. Merwin).

**PHIL 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault's thesis with reference to different theoretical models of subjectivity and "subjectification" (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault's 1981-82 lectures entitled *The Hermeneutics of the Subject*. This course is cross-listed with RLGS 3448.

**PHIL 3450 Phenomenology and Theology (4 Credits)**

Cross listed with RLGS 3455. Prerequisite: junior standing or instructor's permission.

**PHIL 3460 Nietzsche & the Death of God (4 Credits)**

This course involves an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Prerequisite: junior standing or instructor's permission. Cross listed with RLGS 3460.

**PHIL 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with RLGS 3465. Prerequisite: junior standing or instructor's permission.

**PHIL 3466 Contemporary Continental Philosophy (4 Credits)**

A critical study of current trends in European philosophy, focusing on such thinkers as Deleuze, Badiou, Zizek, Meillassoux, or Laruelle. Prerequisite: junior standing or instructor's permission.

**PHIL 3610 Advanced Topics in Philosophy, Psychology, and Cognitive Science (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, psychology, and cognitive science. More specifically, our main goal is to engage in a critical discussion of how the study of the mind requires an interdisciplinary approach that integrates empirical findings with conceptual and philosophical theorizing. Cross listed with PSYC 3610. Prerequisites: PSYC 1001 and junior standing (or instructor approval).

**PHIL 3611 The Boundaries of Scientific Knowledge: A Philosophical Exploration (4 Credits)**

Despite its staggering successes, public trust in science is disquietingly low. What has gone wrong? Why is a substantive portion of the population unwilling to trust the advice of specialists? A central problem lies in the tendency of scientists, philosophers, and various pundits to hype, bloat, and overemphasize the promises and results of scientific research. This leads to scientism, broadly conceived as the imperialist tendency to reduce all knowledge to scientific knowledge. But what exactly is scientism? Despite the pejorative connotation of the term, is it an intellectual sin or a virtue? The aim of this course is to map the terrain, exploring various dimensions of scientism, and how it affects the public dimensions of scientific research and its relation to the humanities, religion, and other domains of knowledge, culture, and society.

**PHIL 3612 AI and Robotics (4 Credits)**

In this interdisciplinary seminar we will discuss foundational issues regarding artificially intelligent systems. We will seek to understand how recent advances in AI research bear on our understanding of the nature of the mind, intelligence, agency, rationality, and consciousness. We will also discuss how philosophical advances can advance empirical progress. Additionally, we will discuss some barriers to progress that these technologies might pose. In particular, we will be focused on three groups of questions: 1. What special opportunities and challenges are presented by deep neural net and deep learning technology regarding building and understanding artificially minded intelligent agents? 2. What is the role of the body and environment in producing intelligence? 3. Deep neural net algorithms are already commonly used to predict recidivism rates, diagnose illnesses, and make advertising more effective. In what ways might such algorithms be approaching human or animal intelligence, or shed light on such intelligence? In what ways might human and animal intelligence be importantly different? In what ways might contemporary intelligence research perpetuate injustice and oppression? This seminar is designed to be interdisciplinary, and I welcome students working in philosophy, robotics/AI, and cognitive science who want to work hard and dig deeper. There are no strict prerequisites, but some background knowledge in relevant disciplines will be highly useful.

**PHIL 3618 Philosophy of Biology (4 Credits)**

A survey of conceptual issues that lie at the intersection of biology and philosophy: the central concepts of evolutionary theory (such as natural selection, fitness, adaptation and function), the relation of biology to other "lower" sciences (can it be reduced to physics and chemistry?), whether there are genuine scientific laws in biology, and the relation between biology and other fields like cognitive science and ethics. At least Junior standing required.

**PHIL 3620 Philosophical Perspectives on Economics and Social Sciences (4 Credits)**

This course provides an advanced survey of conceptual and methodological issues that lie at the intersection of philosophy, economics, and the social sciences. More specifically, the main goal is to engage in a critical discussion of how sciences such as psychology, sociology, and neuroscience can challenge and modify the foundations and methodology of economic theories. The course is structured around three broad modules. After a brief introduction, we begin by discussing the emergence of rational choice theory which constitutes the foundation of classical and neoclassical economics and present some paradoxical implications of expected utility theory. The second module focuses on the relationship between economics and psychology. More specifically, we examine the emergence of behavioral economics, the study of the social, cognitive, and emotional factors on the economic decisions of individuals and institutions and their consequences for market prices, returns, and resource allocation. Finally, the third module focuses on the implications of neuroscience on decision making. We discuss some recent developments in neuroeconomics, a field of study emerged over the last few decades which seeks to ground economic theory in the study of neural mechanisms which are expressed mathematically and make behavioral predictions.

**PHIL 3699 Proseminar in Philosophy (4 Credits)**

Philosophy is a diverse discipline with various subfields, most of which are becoming increasingly specialized and methodologically autonomous. Specialization is often (rightly) perceived as an indicator of disciplinary progress and intellectual development. However, it is important that students of philosophy pursue breadth as well as depth. The goal of this course is to provide an overview of a series of seminal texts in philosophy, from a variety of subfields, epochs, and traditions. Each weekly meeting is devoted to the presentation, analysis, and discussion of a text that any student of philosophy should read at some point in her or his career. Requires junior standing or instructor's permission.

**PHIL 3700 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3701 Topics in Philosophy (1-4 Credits)**

Prerequisite: junior standing or instructor's permission.

**PHIL 3702 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3703 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3704 Topics in Philosophy (1-4 Credits)**

Prerequisite: 10 hours of Philosophy at 2000 level or permission of instructor.

**PHIL 3991 Independent Study (1-8 Credits)****PHIL 4991 Independent Study (1-10 Credits)****PHIL 4995 Independent Research (1-10 Credits)****PHIL 5300 Philosophy Colloquium (4 Credits)****PHIL 5400 Cultural Theory Colloquium (1-5 Credits)**

## Physics & Astronomy (PHYS)

**PHYS 3111 Quantum Physics I (4 Credits)**

First of a two-quarter sequence. The Schrödinger equation: interpretation of wave functions; the uncertainty principle; stationary states; the free particle and wave packets; the harmonic oscillator; square well potentials. Hilbert space: observables, commutator algebra, eigenfunctions of a Hermitian operator; the hydrogen atom and hydrogenic atoms. Prerequisites: PHYS 2252, PHYS 2260, PHYS 2556, PHYS 3612 and MATH 2070.

**PHYS 3112 Quantum Physics II (4 Credits)**

Second of a two-quarter sequence. Angular momentum and spin; identical particles; the Pauli exclusion principle; atoms and solids: band theory; perturbation theory; the fine structure of hydrogen; the Zeeman effect; hyperfine splitting; the variational principle; the WKB approximation; tunneling; time dependent perturbation theory; emission and absorption of radiation. Scattering: partial wave analysis; the Born approximation. Prerequisite: PHYS 3111.

**PHYS 3251 Astrophysics: Radiative Processes (4 Credits)**

Because light is the primary means by which astronomers learn about the Universe, understanding the production and subsequent behavior of light is key to interpreting astronomical observations. This course introduces students to the physics of astrophysical radiation and its interaction with matter as it travels from its source to our detectors. Topics may include radiative transfer, emission and absorption processes, Compton processes, synchrotron radiation, thermodynamic equilibrium, radiative and collisional excitation, and spectroscopy of atoms and molecules. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3252 Astrophysics: Observations (4 Credits)**

Astronomy is fundamentally an observational science and as such it is important for practitioners to understand how their data are collected and analyzed. This course is therefore a comprehensive review of current observational techniques and instruments, aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. This class introduces students to the capabilities and limitations of different types of instruments while exploring the sources and types of noise and providing statistical tools necessary for interpreting observational data. Credit can apply toward physics or astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3254 Astrophysics: Stars (4 Credits)**

Stars are the fundamental building blocks of the Universe. Hence, understanding the nature of stars is the first step toward understanding the Universe. This course is therefore intended to introduce students to the rigorous physical and mathematical treatise of stellar structure and evolution. Topics may include the theoretical origins and applications fundamental equations of stellar structure and other supporting equations, and theoretical and observational applications of stellar evolution. The course is aimed at advanced undergraduates, as well as graduate students focusing on astrophysics research. Credit can apply toward Physics major or Astrophysics minor. Prerequisites: PHYS 2252 and MATH 1953, or instructor's permission.

**PHYS 3270 Workshop: Practical Astronomy (1-5 Credits)**

Capstone coursework featuring studies in experimental, computational, and/or theoretical work in astronomy and astrophysics. Credit can apply toward physics or astrophysics minor.

**PHYS 3510 Analytical Mechanics I (4 Credits)**

Lagrangian and Hamiltonian mechanics. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070 and consent of instructor.

**PHYS 3611 Electromagnetism I (4 Credits)**

First of a two-quarter sequence. Vector algebra; differential vector calculus (gradient, divergence and curl); integral vector calculus (gradient, divergence and Stokes' Theorems); line, surface and volume integrals; Electrostatics: the electric field, electric potential, work and energy in electrostatics; method of images, boundary value problems and solutions to Laplace's equation in Cartesian, spherical and cylindrical coordinates; multipole expansion of the electric potential; electric fields in matter: polarization; the electric displacement vector; boundary conditions, linear dielectrics. Magnetostatics: magnetic fields and forces. Prerequisites: PHYS 1113, PHYS 1213, or PHYS 1214 and MATH 2070.

**PHYS 3612 Electromagnetism II (4 Credits)**

Second of a two-quarter sequence. Magnetic vector potential; magnetic fields in matter: magnetization; fields of magnetized objects; linear and nonlinear magnetic materials; electromotive force, Ohm's law; electromagnetic induction; Faraday's law; Maxwell's equations; the displacement current; boundary conditions; the Poynting theorem; momentum and energy density of the fields; the Maxwell stress tensor; the wave equation and electromagnetic waves in vacuum and matter; absorption and dispersion; wave guides; the potential formulation and gauge transformations; retarded potentials; dipole radiation. Prerequisite: PHYS 3611.

**PHYS 3700 Advanced Topics: General (3 Credits)**

Offered irregularly, depending on demand. May be taken more than once for credit. Prerequisite: instructor's permission.

**PHYS 3711 Optics I (4 Credits)**

First of a two-quarter sequence. Gaussian optics and ray tracing; matrix methods and application to optical design; elementary theory of aberrations; light as electromagnetic wave, diffraction and interference; interferometers and their applications. Elementary theory of coherence; selected topics. May include laboratory work as appropriate. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214, and MATH 2070.

**PHYS 3841 Thermal Physics I (4 Credits)**

First of a two-quarter sequence. Laws of thermodynamics; thermal properties of gases and condensed matter; kinetic theory of gases, classical and quantum statistics. Prerequisites: PHYS 1113, PHYS 1213 or PHYS 1214 and MATH 2070.

**PHYS 3991 Independent Study (1-10 Credits)****PHYS 3995 Independent Research (1-10 Credits)****PHYS 4001 Introduction to Research I (1,2 Credit)**

This course is the first of the 3-course sequence designed to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students review essential material in mathematical physics, learn basic programming techniques and improve upon their skills in literature search and scientific writing, especially proposal writing. Special in-class seminars in collaboration with the Penrose Library and Writing and Research Center are scheduled. Student are introduced to research conducted by Physics and Astronomy faculty so that they can choose a faculty member with whom to take on a Winter Research Project during the winter interterm and winter quarter as part of Introduction to Research II. Students must prepare and submit a research proposal before the end of the fall quarter.

**PHYS 4002 Introduction to Research II (1-3 Credits)**

This is the second of the 3-course sequence to provide the opportunity of learning fundamental skills to conduct independent research in any physical science discipline. In this course, students conduct an independent research or study project that they have outlined in the research proposal they submitted as part of Introduction to Research I under supervision of a faculty advisor of their choosing. At the same time, students have time to review issues that we face as researchers. Prerequisites: PHYS 4001 and consent of a faculty research advisor.

**PHYS 4003 Introduction to Research III (1,2 Credit)**

This is the third of the 3-course sequence to provide students with the opportunity of learning fundamental skills to conduct independent research in any physical science disciplines. In this course, students complete their Winter research project conducted as part of Introduction to Research II and present the results in writing as a term paper and in oral presentation as part of the Departmental Colloquia. Special in-class sessions in collaboration with the Writing and Research Center are included. Prerequisite: PHYS 4002.

**PHYS 4100 Foundations of Biophysics (3 Credits)**

Focus of the course is on application of basic physics principles to the study of cells and macromolecules. Topics include diffusion, random processes, thermodynamics, reaction equilibriums and kinetics, computer modeling. Must be admitted to the MCB PhD program or related graduate program with instructor approval. Cross listed with BIOP 4100.

**PHYS 4111 Quantum Mechanics I (3 Credits)****PHYS 4112 Quantum Mechanics II (3 Credits)****PHYS 4251 Intro to Astrophysics I (3 Credits)****PHYS 4252 Intro to Astrophysics II (3 Credits)****PHYS 4255 Astrophysics: Black Holes, Cosmology, and Relation to Other Systems (4 Credits)**

The very small, the very large, and the very gravitational provide extreme tests of physics. In this course, we will cover two of these: cosmology, i.e., the universe on large scales, or as a whole (the very large) and black holes (the very gravitational). We will cover some basics of special and general relativity and quantum mechanics relevant to these topics, and discuss recent research testing these frontiers of physics, emphasizing analogies that help to relate these exotica to more familiar physical systems.

**PHYS 4320 Introduction to Quantum Materials (4 Credits)**

This physics course will introduce students to the recent experimental and theoretical developments in the field of quantum materials. Students will gain a basic understanding of how reducing the dimensions of materials to the nanoscale can produce extraordinary physical properties. The course will focus on fundamentals and recent advances in the fields of quantum transport, 2D materials, strongly correlated electronic systems, topological materials, and superconductivity. The goal of this course is to prepare students to engage with the modern condensed matter physics research and application engineering of novel quantum materials. Prerequisites: PHYS 4411 Advanced Condensed Matter or instructor's permission.

**PHYS 4350 Physics and information (4 Credits)**

Students in Physical Sciences are often well versed in the art of model building but less so in the process of model-selection when multiple models can describe the same data. Students rarely learn tools beyond curve fitting and least square error minimization for model selection. Consequently, students are often unaware of the scope of different tools and fail to make judicious choice of algorithms/theories when faced with diverse problems. For example, building a model from data is very different from generating data (stochastic or deterministic) from a model. Next consider two contrasting challenges of model building i) when there is limited data vs ii) when there is too much data. For the first problem – inferring models from limited data – the solution can be traced back to Boltzmann's formulation of Statistical Physics describing motion of atoms. The connection between Information theory, Inference and Boltzmann's description, however, is often overlooked in introductory or even advanced classes in Physics, and Statistics. Studying these similarities can unlock novel solutions for problems well outside of thermodynamics, even as far as Image processing, Biology and Network science. Inference also requires us to appreciate fundamental topics in Probability – difference between frequentist and non-frequentist approach, Bayesian formalism – that are rarely taught to physical scientists, life scientists or engineers. At the other extreme, faced with data deluge, we routinely ask: how do we make sense of too much data? We use clustering, PCA, Neural Networks. In this course we will discuss and connect all these seemingly disparate concepts and apply them – at the appropriate context – to diverse problems in Physics, Chemistry, Biology and beyond. In the process we will gain an in-depth knowledge about commonly heard but perhaps less understood topics such as: Entropy, Likelihood maximization, Bayesian statistics, PCA, Classification algorithms, and Neural Networks. We will also address another often overlooked but fundamental and fascinating topic, biology's inherent ability to encode and decode information. Currently there is no such course that address all these topics in Information and Data Science in a unified manner – deeply connecting their formal basis, regime of applicability – grounded on physical principles, with a forward looking approach towards application in many areas well outside of traditional sciences. A lot of learning in the course will happen 'on the fly', where the tools and application problems are learnt as needed.

**PHYS 4411 Advanced Condensed Matter I (3 Credits)**

Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4111.

**PHYS 4412 Advanced Condensed Matter II (3 Credits)**

Materials structure; structure analysis; elastic properties; defects; plastic mechanical properties; thermal properties and phonons; free electron gas; energy bands and Fermi surfaces; crystalline and amorphous semiconductors; quasiparticles and excitations; electrical properties and ferroelectrics; magnetic properties and ferromagnetics; classical and high-Tc superconductors; other advanced materials. Co-requisite: PHYS 4112.

**PHYS 4511 Advanced Dynamics I (4 Credits)****PHYS 4611 Adv Electricity & Magnetism I (3 Credits)****PHYS 4612 Adv Electricity & Magnetism II (3 Credits)****PHYS 4720 Light-Matter Interaction (4 Credits)**

This course will introduce the theory and applications of light-matter interactions. Fundamental theory will be explored from both semi-classical and quantum perspectives, and photon-carrier interactions will be studied in a variety of physical systems, including atoms, glasses, semiconductors, and metals. Experimental techniques will also be discussed, such as absorption, photoluminescence, and coherent spectroscopies, in addition to ultrafast nonlinear optical interactions. Students will also build their own demonstration and teaching module for elementary-age children, and will use their module to teach children at a local school.

**PHYS 4750 Seminar in Physics (1 Credit)****PHYS 4811 Statistical Mechanics I (4 Credits)**

Fundamentals of thermodynamics, microcanonical and canonical ensemble, quantum formulation noninteracting particle systems.

**PHYS 4860 Numerical and Computational Methods in Physics (4 Credits)**

The main goal of this course is to gain a better understanding of physical problems by solving them numerically; in the process, students learn about several numerical methods and computational techniques that have a very broad range of applications in many other scientific fields. Depending on the problem, students work with a software package (Mathematica), and also acquire coding experience in different programming languages. Graduate students carry out projects involving more complex simulation and numerical methods currently used in many areas of condensed matter physics, quantum chemistry and biophysics, such as Density Functional calculations, Monte Carlo and Molecular Dynamics methods.

**PHYS 4870 Special and General Relativity (4 Credits)**

This course will start with the techniques in Special Relativity and build familiarity with tensors. In the second part of the quarter, we will generalize to curved spaces and the Schwarzschild solution. And, finally, we will set up and solve the Einstein equations using the Cartan equations of structure to study the Robertson Walker metric spacetime used to construct the energy budget of the universe.

**PHYS 4910 Special Topics Physics (1-5 Credits)****PHYS 4991 Independent Study (1-10 Credits)****PHYS 4995 Independent Research (1-10 Credits)**

# Professional Writing (PWRI)

## **PWRI 4000 Masterworks: Fiction (4 Credits)**

A "masterwork" of fiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful fiction works of modern times. Discussions and writing assignments will focus on how exposure to the fiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

## **PWRI 4001 Portfolio Foundations (0 Credits)**

Master's and certificate-seeking students in Professional Creative Writing must register for and take Portfolio Foundations in their first quarter in the program. Students must complete the course and assessment-related tasks, including writing their learning goals, in order to pass the course. Non-completion of this required course will result in a no-pass grade on student transcripts.

## **PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice (4 Credits)**

This is a workshop-based course on the fundamentals of writing fiction. It touches on popular subgenres such as literary fiction, science fiction, fantasy, suspense, mystery, historical fiction, satire, romance, and more. Students will read, discuss, and create presentations on works by established fiction writers; experiment with craft concepts in their own stories; provide and receive constructive feedback in a supportive workshop environment; and maintain a consistent writing practice throughout the course.

## **PWRI 4020 Writing the Short Story (4 Credits)**

The dramatic elements of the short story are distinct from any other form of fiction. This workshop is for writers who plan to seriously study the form of the contemporary short story, and to apply their learning to their own projects. Students focus equally on reading published works and writing/revising an original short story, as well as discussing aspects of publishing. Weekly writing exercises, readings, and workshops of student stories will be combined to provide the most direct, effective training in this dynamic form. (It is strongly encouraged that students take PWRI 4010 Writing Fiction: Foundational Concepts, Skills, and Practice prior to this course.).

## **PWRI 4030 Writing the Novella (4 Credits)**

This course concentrates on the craft of writing a form of fiction that combines the intense thematic focus of short stories and the complex character development typical of the novel. The novella offers writers the opportunity to create an extended story without juggling the complexities of multiple points of view, intricate plot lines, and difficult-to-manage back stories. Typically concerned with a character's emotional and personal development rather than the interaction of many characters in a complicated social context, the novella usually takes place in one location or in a larger but well-defined setting. Novellas are common in genres such as mystery and science fiction, and because of their strong focus and relative brevity, they are widely considered the perfect form for adaptation to the stage, film, and television.

## **PWRI 4100 Masterworks: Creative Nonfiction (4 Credits)**

A "masterwork" of creative nonfiction is a literary text that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, theme, and cultural values work together in the most powerful works of modern creative nonfiction. Includes popular sub-genres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Discussions and writing assignments will focus on how exposure to the creative nonfiction of different countries can help us see our own literary and cultural assumptions with fresh eyes.

## **PWRI 4110 Writing Creative Nonfiction: Foundational Concepts, Skills, and Practice (4 Credits)**

This course concentrates on the craft of writing nonfiction, which includes popular subgenres such as narrative nonfiction, memoir, the personal essay, travel writing, humor, criticism, nature and science writing, literary journalism, and experimental forms. The primary focus will be fundamentals and techniques of creative nonfiction to be used in virtually every sub-genre. Students will later apply these classic skills in courses devoted to various nonfiction sub-genres, such as memoir. Class discussions will emphasize essential writing skills and professional approaches to research, taking advantage of a supportive workshop format. Students will express their ideas about both craft and content and workshop their writing with a view toward professional publication.

## **PWRI 4120 Writing the Personal Essay (4 Credits)**

The author Dinty Moore describes the personal essay as being for writers who want to capture a bit of life, producing a written record of their better thoughts. Like the short story in fiction, the personal essay is one of the original forms of creative nonfiction. It is a lively form that has tracked through the ages—from ancient archetypes to the school of Enlightenment essayists, 19th-century realists and romantics to robust 20th-century conventionalists, and on to Digital Age innovators where it deeply informs blogs, social media posts, and other contemporary writings. Conventions of the craft are covered in this course, but students will not be expected to embrace creativity-stifling rules. The work will be hands-on, with workshopping that pushed students to pursue new pathways and fresh approaches in their personal essay writing.



**PWRI 4130 Writing the Memoir (4 Credits)**

The memoir is as popular as ever – tales of persistence and overcoming odds grip us like no other. Students in this course will concentrate on the craft of writing the memoir, a work of creative nonfiction rooted in and focused on the writer's memories. Unlike personal essays, memoirs foreground the writer's past to illuminate the complex development of understanding that past. This aim results in works that are typically book-length, in which the writer applies the techniques of creative nonfiction to describe and make observations and draw conclusions from personal experience. Class discussions emphasize essential writing skills, techniques for exploring and recording memories, and professional approaches to the research required to make the past come to life for the reader. Taking advantage of a supportive workshop format, students will share their ideas about craft and content with a view toward book publication.

**PWRI 4140 Natural Science and Literature (4 Credits)**

This class will explore the practice – and art – of nonfiction writing about science and nature. Students will begin with an examination of influential historical works and move into contemporary writing on science and nature. The class will be a sort of journey, from ruminative essays on the individual in nature to impassioned (and science-heavy) explorations of ecosystem destruction to exuberant studies of love and sex in the animal kingdom. Students will seek to understand the narrative and linguistic machinery that make these pieces of writing “tick” through discussions, short writing exercises, brief reviews, and workshop participation. This course will also address the development of students' own writing. Specifically, students will seek understanding of the writing techniques that can be used to make the complex fields of science and nature accessible subjects of writing intended for mainstream or literary publications. The key challenge will be to find a topic, a format (memoir, essay, narrative journalism), a structure, and a voice suitable for creating a single, sustained piece of writing that each student will devise, draft, workshop, and polish throughout the course.

**PWRI 4200 Masterworks: Poetry (4 Credits)**

Poetry is the most ancient of the written arts, so there are thousands of poetry masterworks—far too many to be usefully studied in a single course. That's why this course focuses on the one resource that every poet must develop in order to write well: a personal “poetic lineage.” Students will learn how to explore the work of other poets and identify significant parts of their poetic lineages. They will also learn how to use that exploration to develop, expand, and refine their own poetic lineage, which will shape and nourish their poetry over a lifetime.

**PWRI 4210 Writing Poetry: Foundational Concepts, Skills, and Practice (4 Credits)**

This course is a combination of readings in poetry and poetics, brief lectures, and open discussions focused on the interplay of image, metaphor, rhythm, emotions and ideas in the expressive form of writing called poetry. Students will learn to tap the imaginative sources that all creative writing springs from and flow those energies into poetic form. The instructor will provide examples to illustrate successful uses of key poetic concepts and help students explore, through a range of open-ended exercises, various approaches to expressing themselves fully and clearly. Students will also develop practical critiquing skills with the aim of helping themselves and their classmates write with greater subtlety and power.

**PWRI 4220 Writing Traditional Verse and Contemporary Song Lyrics (4 Credits)**

This course focuses on the shared building blocks of traditional formal poetry and contemporary song lyrics: meter and rhyme, repetition, and verse/stanza structure. Beginning with simple constructions like limericks and nursery rhymes, and moving swiftly into more sophisticated verse organizations like the sonnet, the villanelle, the ballad, and the popular song, students will explore a variety of existing examples, then produce their own pieces that follow (or break) the established rules of each form. The course will take a workshop format, in which students will generate, share, and receive feedback on their formal experiments; the focus will be on developing a more finely tuned ear for form, and on deploying “traditional” poetic techniques in relevant, radical, and inventive ways. (NOTE: The ability to sing or play an instrument is NOT required for this course; when discussing and writing songs, students will focus on the texts only, not the harmonic/melodic elements of songwriting craft.)

**PWRI 4230 Writing Improvisational Verse and Prose Poetry (4 Credits)**

This course focuses on the writing of improvisational verse and prose poems, certainly the most popular forms of poetry today both in America and around the world. The course will explore a wide variety of approaches to non-metrical verse and examine how poetry sounds when it appears in prose form. Using a workshop format, students will generate, share, and receive feedback on their poetic experiments, with an emphasis on developing a more finely tuned ear for cadence and phrasing. Robert Frost famously wrote that writing what he called “free verse” was like “playing tennis with the net down.” This course aims to demonstrate why Frost was wrong.

**PWRI 4300 Masterworks: Drama (4 Credits)**

A “masterwork” of drama is a play or screenplay that has achieved both broad recognition for artistic excellence and an extraordinary level of influence within and beyond its culture of origin. In this course, students will engage such works from an aspiring writer's point of view, drawing on them to develop a deeper understanding of the way structure, style, character, imagery, theme, and cultural values work together in some of the most powerful dramatic works of modern times. The course will also explore the impact of stagecraft, the needs of actors, and vision of directors on the way a play is developed. Discussions and writing assignments will focus on how exposure to the drama of different countries can help us see our own literary and cultural assumptions with fresh eyes.

**PWRI 4310 Playwriting: Foundational Concepts, Skills, and Practice (4 Credits)**

In this course, students analyze short and full-length plays, compose experimental exercises, write drafts of short plays, evaluate each other's writing, and revise a short play to develop the skills required to write for the stage. Students learn key theatrical skills and terms as they analyze varied plot structures, create vivid characters, and write realistic and stylized dialogue. Students examine theatre's collaborative process, and model possible relationships between environment, stagecraft, and the ways playwrights shape their texts. Scripts read for class discussions illustrate uses of key dramatic techniques while suggesting various approaches to theme, genre, character, and structure. Students develop practical critiquing skills while incorporating colleagues' feedback into script revision, with the aim of crafting compelling plays that appeal to both theater professionals and theatrical audiences.

**PWRI 4320 Writing the Screenplay (4 Credits)**

This course provides a comprehensive overview of the industry standard elements of screenwriting. Through readings, film viewings, written analyses, online discussions, and creative exercises, students will learn how to write original stories for a visual medium, use prescriptive filmic story structure ("screenplay formatting"), and identify key elements that make a script successful. With these tools in hand, students will create the first act of an original feature-length screenplay, develop an outline ("script treatment") for the entire film, and finish the course prepared to complete the project and present it to the film-making industry.

**PWRI 4330 Writing for Personal Performance (4 Credits)**

This course focuses on writing texts that the authors aim to perform themselves, including spoken word poetry, storytelling, one-person plays, presentations in TED Talk and other formats, and even standup comedy. Using a variety of readings and recorded performances, brief lectures, and writing assignments, the course helps writers develop the skills required to shape their work for public performance. Students learn to distinguish between their "page voice" and their "performance voice" so that they can produce more effective texts for performance. Using a supportive workshop format and class discussions, students will apply practical critiquing skills with the aim of helping themselves and their classmates create compelling performance pieces that appeal to audiences of all kinds.

**PWRI 4340 Writing the Adapted Screenplay (4 Credits)**

Much of Hollywood's source material in recent decades was not written originally for the big screen – it was first created and popularized in another medium, like a book, memoir, an article, a video game, or even an album. Clearly, the marketplace has a proven demand for adaptations. In this course, we examine the adaptation of literary and nonfiction works and the film interpretations of each work. This class will explore the principal development questions involved in a successful adaptation, look at the legalities of securing the rights to a property, and dive into the specifics behind pitching an adaptation. Students will study the main developmental issues of adaptation and write a range of short adaptations across multiple mediums, plus create a pitch and a first act for a feature project. The course also aims to enhance the critical skill of students as well as their craft abilities.

**PWRI 4410 Writing and Healing (4 Credits)**

In this course, students evaluate theoretical and practical aspects of written expression as it relates to healing. Students analyze foundational concepts of healing through the lens of contemporary creative literature. Students apply these concepts to their writing practice through journaling processes, written therapeutic strategies, and poetic techniques aimed at cultivating self-awareness and personal growth. Through a course-long inquiry into the concept of "healing," students will learn to articulate how their writing processes enhance their writerly identities and develop a practical set of therapeutic, expressive techniques for everyday use.

**PWRI 4420 Writing as Translation (4 Credits)**

In its literary sense, translation is the closest reading possible, and learning its processes enables a deeper reading of our own work. Effective translation—of our own writing or that of others—depends on intimate attention to the many elements of literary writing. This course examines common translation practices and examples with emphasis on elements such as syntax, word choice, pacing, setting, and imagery, with the goal of enhancing the student's knowledge of and skill with those elements. Once acquainted with translation processes, students apply them to their own work. Assignments are completed in English and no second language is required.

**PWRI 4430 Writing for Television (4 Credits)**

This course provides an overview of two important television writing skills: the creation of a pilot for an original series and the writing of a "spec," which is writing an original idea for a television show that currently exists (a requirement in the pursuit of employment as a TV writer). Students will intensively study the structure, character build, template, theme, and franchise involved in the development of TV shows (both half hour and hour long), as well as learn about the current business of TV. Since this is an intensive writing and workshoping course, students will be required to submit their work to and to give constructive criticism to their fellow writers. Prerequisite: PWRI 4320 Writing the Screenplay.

**PWRI 4500 The Writing Life: Concepts, Practices, and Professionalism (4 Credits)**

This course aims to provide aspiring writers a basic knowledge of the creative and professional tools they will need to succeed, whatever their individual goals or life situation. This course tackles questions and challenges common to all writers at one time or another. Primary considerations include: What exactly does it mean to be a writer? What are my motivations for wanting to write? How can I identify and prioritize writing projects? How do I move my writing projects forward from concept to completion? These primary challenges require writers to narrow their creative focus and to cultivate habits of thought and behavior that sustain creative efforts in a world full of distractions, obligations, and competing claims on their time.

**PWRI 4510 Literary Genres for Writers (4 Credits)****PWRI 4520 The Writers Workshop (4 Credits)**

"A writer writes" is the universal mantra of the writing life, but one of the critical steps in developing a work in progress is getting constructive feedback. Unfortunately, all too often, a writer ends up disappointed because the feedback received is superficial, too polite, or little more than proofreading. This course teaches students to workshop in a meaningful way, responding to content, focus, coherence, and organizational issues. Students learn to elicit more feedback from their workshop colleagues, demonstrating the relationship between reader and writer. The class will explore a variety of genres, and each student produces short exercises and longer projects that demonstrate a grasp of various aspects of the writing craft.

**PWRI 4540 Children's Literature: From Picture Books to Books for Young Adults (4 Credits)**

This course offers an introductory study of children's literature, from toddler board books and easy readers to chapter books and books for young adults. It is designed primarily for students interested in writing for children and those planning to teach children's literature, though new and soon-to-be parents would find it illuminating as well. Touching on all the major categories/levels and subgenres of children's literature, students will learn to identify the unique characteristics of each and apply definable quality standards to assess a wide range of particular texts from both creative and analytical points of view. Note that, though students may do some creative writing, this is not a course in writing children's literature.

**PWRI 4560 Writing Books for Children (4 Credits)**

This course concentrates on the craft of writing three distinct categories of children's fiction: the picture book, the early/easy/transitional reader and novels for older readers (chapter book, middle grade and young adult novel). Within each category, students have a unique opportunity to explore storytelling for a specific young audience whose members vary in age, reading interest and reading ability. Note that this course covers narrative fiction only; nonfiction, though a valuable genre of children's literature, is beyond the scope of this course. Prerequisite: PWRI 4540 Children's Literature.

**PWRI 4600 Breaking the Chains of Genre: An Exploration of Hybrid Literatures (4 Credits)**

Hybrid genre, cross-genre, multi-genre, or mixed genre literature is literature that combines writing from different genres to create one text. The text created might be fragmentary or unified; it might be coherent or disjointed. Cross-genre literature is not new, but contemporary authors are more frequently pushing on the boundaries between genres in their creative and scholarly writing to produce rich, open, polyphonic texts as a result. How has cross-genre literature been deployed in different literary and cultural traditions? What advantages does cross-genre literature provide for the writer and for the reader? This course will explore the ways in which authors have experimented with mixing genres in different cultural traditions and writing disciplines as well as how this genre-bending has enabled them to accomplish various creative, narrative, and rhetorical purposes. Required Prerequisite: PWRI 4510.

**PWRI 4701 Topics in Literature (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of established masterworks to examining the latest trends in developing genres or wrestling with several works by living masters.

**PWRI 4702 Topics in Writing (4 Credits)**

This course is designed to provide a deep dive into advanced topics of special interest to creative writers. Topics may range from close studies of compositional techniques used in established masterworks to examining the development of new genre forms or wrestling with texts whose approaches are drawn from multiple genres.

**PWRI 4901 Professional Creative Writing Capstone Project (4 Credits)**

The Creative Capstone Project provides students the opportunity to apply the knowledge and skills gained through the degree program to create a culminating project consisting of three major parts: a creative core (fiction, creative nonfiction, poetry, or some other kind of creative writing); a researched analysis essay exploring an idea, issue, or problem that is closely related to the creative core (however, the essay is not about the creative core); and a reflection essay placing the creative core and the analysis essay in the context of the student's coursework at University College and his or her writing goals for the future. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the project. Please see the Creative Capstone Project Guidelines for additional details. Note: For the creative core, students should not attempt a genre they have not written in at least one of their University College courses. Prerequisites: a Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, and completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**PWRI 4917 Market Research for Writers (4 Credits)**

All writers of every medium considering a professional career path must not only learn their craft but learn to navigate the publishing and production worlds. This course discusses the relationships between agents, editors of books, journals and magazines, literary managers, artistic directors, publishing houses (both big and boutique), and booksellers, as well as production companies. Additionally, students determine ways to cultivate relationships with those industry professionals and find opportunities (such as contests and fellowships) with the goal of submission and acquisition. This course also covers the research required for target-rich submission campaigns, the process of manuscript submission and acquisition, as well as learning copyright and contractual basics. Students will learn how to generate marketing materials that aid in the submission process, across all mediums, and how to develop an author platform, using branding and social media opportunities, that cultivates a professional, public persona critical to connecting with their audience. Ultimately, students consider how to build a writing community that will provide the foundation for support, education, and networking, which is vital for success. Required Prerequisites: PWRI 4500, 4510, and 4520. Note that this course must be completed before enrolling in either the PWRI Portfolio Capstone or Creative Capstone Project.

**PWRI 4920 Portfolio Capstone (4 Credits)**

The Portfolio Capstone course provides students the opportunity to reflect upon the work they have done throughout their graduate studies at University College and synthesize their learning. Students in the Portfolio Capstone produce deliverables that include: (1) a thorough annotation of their portfolio, a process requiring critical and creative thinking about their educational experience, and (2) a pinnacle project that identifies, analyzes, and elaborates significant themes in their program experience, evaluates their accomplishments, connects their coursework to their professional goals, and assesses those goals in the context of their chosen field.

**PWRI 4980 Internship (0-4 Credits)**

The PWRI internship is designed to offer students a practical educational experience in an industry-related setting. The internship is an individualized learning experience that is directly related to the knowledge and skills covered in the PWRI master's degree program. Students are responsible for finding their own internship site and proposing their internship ideas. University College sends notification to all PWRI students if they hear of internship possibilities. Students may also work through the DU career center to explore opportunities for internship experiences. The objectives, activities, responsibilities, and deliverables for the internship are defined in a training plan that is developed by the student jointly with the internship supervisor at the sponsoring organization. The training plan is approved by the academic director. Prerequisites: The student must be unconditionally accepted in the PWRI degree program, have completed a minimum of 28 hours of graduate coursework, including at least two core courses, and have earned a GPA of 3.0 or better. Enrollment must be approved by the academic director.

**PWRI 4991 Independent Study (1-4 Credits)**

This is an advanced course for students wishing to pursue an independent course of study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, have obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent Study is offered only on a credit basis and only for degree candidates.

## Psychology (PSYC)

**PSYC 3020 Adolescence (4 Credits)**

This course examines development during the adolescent years exploring biological, cognitive, and social transitions central to this developmental stage. It considers key contexts in which adolescents develop: families, peer groups, schools, work, leisure, and the mass media. Special attention is given to the importance of diverse social and cultural experiences and its impact on adolescent behavior and cognition. Prerequisites: PSYC2070 and PSYC3050, must be major or minor in psychology, must have junior or senior standing.

**PSYC 3029 Imaging the Mind (4 Credits)**

Imaging the Mind is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 4255. Prerequisites: PSYC 2031 and PSYC 3050, must be major or minor in psychology, must have junior standing. Permission of the instructor required.

**PSYC 3032 Introduction to Neural Networks (4 Credits)**

Introduction to basic principles and computational methods in artificial neural network modeling; neural models of cognitive and psychological processes examined and evaluated. Cross listed with PSYC 4254. Prerequisite: PSYC 1001 and PSYC 3050. Must be major or minor in psychology. Must have junior standing. Permission of instructor required.

**PSYC 3035 Seminar: Cognitive Neuroscience (2 Credits)**

This seminar is for students in the cognitive neuroscience specialization, a joint program with Biological Sciences. The goal of the seminar is to provide an opportunity for senior-level cognitive neuroscience majors to apply the knowledge and skills they have acquired in other courses to current cutting-edge topics in the field. Prerequisites: PSYC 2031 and PSYC 3050, must have cognitive neuroscience concentration, must have senior standing.

**PSYC 3151 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2750, PSYC 2751 and PSYC 2752.

**PSYC 3152 Senior Honors Research Seminar (1-5 Credits)**

In conjunction with senior research thesis. Prerequisites: PSYC 2751 and PSYC 2752.

**PSYC 3350 Cultural Psychology (4 Credits)**

This seminar examines how people's sociocultural context shapes their thoughts, feelings, and behaviors. To approach this question, we read and discuss classic as well as recent theoretical and empirical articles from the field of cultural psychology. Topics include defining culture; dimensions of cultural variation; culture-biology interactions; methodological considerations; cultural influences on cognition, emotion, the self, moral judgment, and health; cultural neuroscience; cultural approaches to race and ethnicity; and mechanisms of cultural influence. Throughout, this course emphasizes sociocultural diversity in psychological processes. Students are encouraged to develop empirically tractable ways of asking and answering questions relating to cultural psychology and to apply concepts of cultural psychology to their own research. Prerequisite: PSYC 2740 and PSYC 3050; must be a major or minor in psychology, must have junior standing.

**PSYC 3666 Brain Development & Cognition (4 Credits)**

Examines what the brain tells us about development and what development tells us about the brain. Topics include subcortical and cortical developments to the acquisition of language and drawing. Prerequisites: PSYC 2070 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3701 Topics in Psychology (1-4 Credits)**

Prerequisites: PSYC 1001 and PSYC 3050; must be major or minor in psychology, must have junior standing.

**PSYC 3991 Independent Study (1-10 Credits)**

Maximum of 5 hours per quarter not to exceed a total of 10 quarter hours.

**PSYC 3999 Psychology Senior Assessment (0 Credits)**

This course involves a required assessment of graduating psychology majors' knowledge of the discipline based on coursework taken one quarter prior to graduation. Prerequisites: at least any four of the following courses required for the major: PSYC 1001 or equivalent, PSYC 2300, 3050, PSYC 2500, PSYC 2070, PSYC 2031, PSYC 2740, and at least 163 total credit hours or at least 30 credits of psychology hours.

**PSYC 4002 Prosem in Memory and Cognition (4 Credits)**

Theory/research on thinking, problem solving, language, creative thought, other aspects of knowing process.

**PSYC 4011 Proseminar in Emotion (4 Credits)**

Social/physiological aspects of emotions, including motivation, physiological processes, basic emotions, cognitive appraisal, cross-cultural issues, empathy, effects of emotions.

**PSYC 4015 Nonverbal Behavior (4 Credits)**

This course will be cross-listed with Psyc 3015 (undergraduate students in 3015 and graduate students in 4015 will be seated in the same classroom but will have different requirements). Most humans speak for a very small portion of their day (by most estimates, an hour or less) but during every waking moment of your life, you display nonverbal behaviors. These behaviors include facial expressions, eye gaze, posture, head movements, movement toward and away from things, gestures, distance from other people, vocal intonation, and many other subtle bodily actions. In this class, we will survey an enormous scientific literature regarding the causes and consequences of nonverbal behaviors. Our focus will be on nonverbal behavior in humans, but we will also review the role of nonverbal behavior in the social life of human and non-human animals alike. Topics include, but are not limited to questions such as: What methods should scientists use to examine the causes and consequences of nonverbal behavior? Do nonverbal behaviors reveal emotions and other psychological states or do nonverbal behaviors instead function for the purpose of social influence? What is the role of nonverbal behavior in deception and the detection of deception? Do people non-consciously process the social meaning of others' nonverbal behaviors?

**PSYC 4020 Proseminar in Personality (4 Credits)**

Personality structure/dynamics, theory and findings, interrelationships between personality and socio-cultural determinants of behavior.

**PSYC 4021 Prosem in Social Psychology (4 Credits)**

Major theoretical issues and empirical research in social psychology; topics include cultural, social structure, cognitive consistency, social neuroscience, social cognition, person perception, the self, social influence, attitudes, relationships, emotion, coping.

**PSYC 4025 Intergroup Relations (4 Credits)**

This course is intended to provide a foundation in understanding how individuals and groups relate to each other within a social structure. Social groups can take many forms, ranging from classic social groups (e.g., race, gender, ethnicity, religion, sexual orientation) to minimal groups where membership is arbitrary. This course will explore foundational principles in classic and contemporary research on intergroup relations.

**PSYC 4028 Social Cognition (4 Credits)**

Social cognition describes how people make sense of themselves and others. The emphasis on "how" is important—social cognition research focuses on perceptual, cognitive, and affective processes that help people think about themselves and others. You will learn about the theories, findings, and methods in a specific area of study.

**PSYC 4032 Developmental Proseminar: Social-Emotional (4 Credits)**

Problems/theories in developmental psychology including Piagetian theory, language, emotional, perceptual, personality development, learning, biological bases of behavior, genetic influences.

**PSYC 4033 Devel Proseminar: Biological (4 Credits)**

This course provides an overview of major biological processes during development and their effects on physical, cognitive, and social development. Specific topics will include: history, concepts, and central themes of developmental psychology; theoretical and biological models of human development (e.g., developmental psychobiological systems view); brain development and plasticity; behavioral genetics; sleep and circadian rhythms; sexual differentiation and hormonal influences on behavior; stress and the HPA axis; effects of nutrition and toxic substances.

**PSYC 4045 Proseminar in Human Brain Development (4 Credits)**

This course offers an overview of current research and methodologies in the field of developmental cognitive, affective, and social neuroscience. It explores the insights that the brain provides about development and, conversely, what development reveals about the brain. Topics covered include sensitive periods for neuroplasticity, pediatric neuroimaging techniques, and the development of cognitive, affective, and social processes, as well as the impact of environmental factors. Emphasis is placed on discussing current research, evaluating findings, and proposing new research ideas in the field. Prerequisite: Instructor permission.

**PSYC 4055 The Neuroscience and Psychology of Parenthood and Parent-Child Relationships (4 Credits)**

This course explores the theory, research and issues relevant to parenthood and parent-child relationships. The course overviews the evolutionary, neurobiological, and psychological perspective of parent-child relationships with a focus on the understanding of recent advances in neuroscience research. Topics include neuroplasticity of parental brain, maternal vs. paternal biology for parenting, and social and biological determinants of parent-child relationships. Emphasis is placed on discussion of current research, evaluation of the findings, and proposals and ideas of new research in the field. The goal is not to memorize facts but rather to learn to think like a developmental cognitive/social neuroscientist. Cross-listed with course PSYC 3055. Prerequisite: Instructor permission.

**PSYC 4085 Stress & Health (4 Credits)**

This course will serve as an introduction to the field of psychoneuroimmunology, with a focus on stress and development. The first section of the course will review basic immunology including immune system components and functions, and relations between the immune system and other systems. The later portion of the course will focus on effects of stress for different disease mechanisms (infection, allergy, cancer etc). Instructor approval required.

**PSYC 4235 Teaching Psychology (1-5 Credits)**

Experiential approach to learning techniques for teaching psychology.

**PSYC 4241 Seminar-Discourse Processes (4 Credits)****PSYC 4254 Intro to Neural Network Models (4 Credits)**

Cross listed with PSYC 3032.

**PSYC 4255 Imaging the Mind (4 Credits)**

Imaging Cognition is an introductory course to the basic theory and data analysis techniques used in functional magnetic resonance imaging (fMRI). It will cover basic brain anatomy, the basic physics of MRI, experimental design, data processing and the issues associated with data processing, and interpretation of fMRI data. Students in this course will receive hands-on experience in processing a data set from start to finish. They will apply different image preprocessing techniques, statistical design parameters, and statistical models to determine how these factors influence the outcome of the data and how these factors influence the interpretation of that data. In this manner, each student will be exposed individually to the decision issues and interpretation pitfalls involved in fMRI data analysis. Cross listed with PSYC 3029.

**PSYC 4256 Seminar:Cognitive Neuroscience (4 Credits)**

Neural systems underlying human perception, memory, language, pathological syndromes that result from damage to these systems.

**PSYC 4257 Psychophys & Neuroscience Lab (4 Credits)****PSYC 4258 Social Neuroscience (4 Credits)****PSYC 4262 Affective Neuroscience (4 Credits)**

Affective neuroscience is the study of emotions in the brain. In this course, we explore how new frontiers in emotion research, from brain scans to psychoactive drugs to monkey colonies, have changed the way we think about emotions and moods. We aim to learn how scientists ask these new questions: how and what can we learn about emotion from animal models, patient studies, genetic studies, brain scans, and drugs? We learn and debate different theories about what emotions are: when are emotions helpful and harmful? Why do we have them? How many are there? Can we control how we feel? Finally, we learn how to think about emotions scientifically: What kind of evidence matters? How do emotion scholars talk about their work? What kind of questions can we ask, and what kind can we hope to answer?.

**PSYC 4295 Research Design & Inference (4 Credits)****PSYC 4300 Correlation and Regression (4 Credits)**

The course reviews the logic of statistical inference before introducing the procedures of correlation and regression. We begin with simple bivariate relationships before moving on to multivariate relationships for both categorical and continuous independent variables. Topics in regression include multicollinearity, variable selection, and curvilinear relationships. The course emphasizes the (stringent) requirements needed to be able to interpret correlational data in terms of cause and effect. The course also emphasizes the assessment of interactions in regression analysis for both categorical and continuous independent variables. Also included is basic coverage of logistic regression and regression assumptions. Prerequisite: PSYC 4295.

**PSYC 4330 Analysis of Variance (4 Credits)**

Complex analysis of variance, other quantitative methodologies. Prerequisite: PSYC 4300 or instructor's permission.

**PSYC 4350 Structural Equation Modeling for the Social Sciences (4 Credits)**

This advanced course covers the basics of structural equation modeling and how this flexible approach to statistical analysis can be applied in the social sciences. Specific techniques that will be covered will include testing for mediation, path analysis, confirmatory factor analysis, and the analysis of longitudinal data, as well as other related topics. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments and an emphasis on interpreting and critiquing structural equation models in published research. A course on correlational methods and regression is a pre/co-requisite.

**PSYC 4355 Multilevel Modeling for the Psychological Sciences: Theory and Applications (4 Credits)**

This advanced course covers the basics of multilevel (hierarchical) linear modeling and how this flexible approach to statistical analysis can be applied to theory and data in the psychological sciences. Specific techniques that will be covered include the analysis of nested data, family and dyadic data, and longitudinal data as well as mediation and moderation. There will be an emphasis on applying these techniques to students' own research through hands-on demonstrations and homework assignments. There will also be an emphasis on interpreting and critiquing multilevel modeling analyses in published research. Courses on analysis of variance as well as correlational methods and regression are pre/corequisites.

**PSYC 4360 Programming Psychology: Experiment Building with Python (4 Credits)**

This graduate-level course provides an introduction to computer programming. The goal of the course is to help psychology students develop practical coding skills in Python that will allow them to design and create complex, computer-based experiments. Students will also learn to analyze and plot data. No previous experience with programming is required (or expected). The course begins with an introduction to basic principles of programming with Python. From there, students learn to code by solving challenges specific to the design/construction of a psychological/vision-based experiment. The class is highly interactive— each class includes a mixture of lecture, group-based problem solving, and coding in teams or individually. This class is highly recommended for students who wish to improve their programming proficiency before enrolling in PSYC 4365, although it is not a prerequisite.

**PSYC 4365 Programming Psychology: Model-Fitting and Analysis (4 Credits)**

An introduction to creating, fitting, and performing statistical inference using computational models with an emphasis on binary choice data. The aims of this course include familiarizing students with the mathematical basis of model-fitting, learning the value of taking a variety of approaches to fitting trial-by-trial data, and giving students practical hands-on experience with maximum likelihood fitting methods. This course will use both MATLAB and R. Though not a prerequisite, this course is intended to follow Programming Psychology: Experiment Building in MATLAB (PSYC 4360), and so will assume students already have a basic knowledge of coding in MATLAB (including debugging, scripts, functions, loops, and plotting). This course is open to graduate students outside of the Department of Psychology.

**PSYC 4411 Assessment-Cognition (4 Credits)**

This course will provide students with a graduate level overview of theory, research, and practice in the measurement of cognitive functioning. Students will gain practical skills in administering standardized measures of cognitive and academic functioning. They will also develop skills in interpreting cognitive test results and recognizing patterns in cognitive profiles related to specific learning and developmental disorders.

**PSYC 4413 Assessment-Psychopathology (Social, Emotional, and Behavioral) (4 Credits)**

Overview of evidence-based psychological assessment (emotional, behavioral, and social) with a focus on integrating theory, research, and clinical practice.

**PSYC 4512 Prosem in Psychopathology (4 Credits)****PSYC 4518 Readings in Family Therapy (4 Credits)**

This course will survey major historical and contemporary theories from the field of family therapy. Basic family therapy techniques will be covered, and integrated with other modes of therapy (e.g. individual, marital). In the second half of the course, students will work with families and receive group supervision.

**PSYC 4525 Prosem in Develop Neuropsych (4 Credits)**

We will cover the theory and measurement of brain-behavior relations across the lifespan in several major neuropsychological domains, including executive functions, language, memory, and visual-spatial function. As is characteristic of the developmental neuropsychological field, students will learn to integrate information across multiple levels of analysis (genetic, brain, cognitive, behavioral) and draw on principles of neural and cognitive development in their application of neuropsychological theory to research and clinical issues. We will discuss current controversies in the field and continued areas for growth.

**PSYC 4526 Prosem in Cog Neuroscience (4 Credits)**

This is a graduate-level introduction to cognitive neuroscience. It covers basic theories of cognition and their neurological support.

**PSYC 4565 Systems of Psychotherapy (4 Credits)**

The course provides an introduction to evidence-based treatment for children and adolescents. Conceptual and empirical underpinnings of youth therapies are examined. Treatments for three prominent child and adolescent disorders - disruptive behavior problems, depression, and anxiety disorders - are highlighted. Demonstration and practice of specific treatment components is included.

**PSYC 4566 Systems of Psychotherapy II (4 Credits)**

Conceptual/empirical foundations of interventions for clinical problems, including (but not limited to) parasuicidality, Borderline Personality Disorder, and substance abuse.

**PSYC 4571 Multicult Issues & Ment Health (4 Credits)**

Theory, research, and practice issues related to the mental health of racial/ethnic minority and other diverse groups.

**PSYC 4587 Workshop in Marital Therapy (4 Credits)****PSYC 4612 Marital Conflict (1-10 Credits)****PSYC 4620 Advan in Couples Intervention (4 Credits)****PSYC 4625 Marital/Couples Thrpy-Div Popl (4 Credits)**

This course will cover the complexities in couples research and intervention that are the focus of current investigations in labs around the world. The major issues revolve around the role that marital problems play in the development, maintenance and treatment of a variety of child and adult problems and vice versa. These will include, adult sexual problems, alcohol and drug use and abuse, anxiety disorders, depression, medical problems, and that marital discord and destructive conflict are generic risk factors for a wide range of child and adult mental health problems and that marital health is a protective factor.

**PSYC 4660 Perception: A Cognitive Neuroscience Approach (4 Credits)**

An introduction to human perception with a strong emphasis on visual perception. This course evaluates the current understanding of how neural activity in the brain allows people to perceive basic sensory features (e.g., brightness, color, size, position, depth, movement, loudness and pitch) as well as recognize and discriminate complex perceptual patterns (e.g., 2D-shapes, 3D-objects, faces, and scenes). The underlying mechanisms are discussed on the basis of behavioral, neurophysiological, and computational evidence.

**PSYC 4665 Executive Functioning (4 Credits)**

This course provides an overview of current research, theories, and methods in the study of executive function and cognitive control. We will explore executive function from an interdisciplinary perspective, drawing on work from cognitive psychology and neuroscience, clinical neuropsychology, and developmental and educational psychology. Topics include the brain basis of executive function and cognitive control, the unity and diversity of executive functions, the development of executive functions, emotion and motivation as modulating influences on executive control, executive function in psychopathology, the role of individual differences, and links between executive function performance and higher-order behavioral outcomes. Enrollment restricted to Ph.D. program or with instructor approval.

**PSYC 4688 Clinical Psychopharmacology (4 Credits)**

This course offers an in-depth examination of medications used to treat mental disorders, including the neurobiology of these medications. Different options available for each disorder will be discussed, along with issues related to the effective use of psychiatric medications. Prerequisites: Instructor approval required.

**PSYC 4920 Ethics-Psych & Rsrch Practice (2 Credits)**

Ethical issues on psychological research. Teaching, practice.

**PSYC 4925 Clinical Ethics and Professional Issues in Psychology (3 Credits)**

Ethical topics related to clinical psychology; professional topics in clinical psychology such as supervision and consultation. Instructor permission required.

**PSYC 4928 Initial Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's first year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4929 Advanced Clinical Practicum (0 Credits)**

Applied clinical training in psychology focused on assessment and therapy, primarily during trainee's second year of training at the Center for Child and Family Psychology. May be repeated up to 5 times. Prerequisite: Admission to doctoral program.

**PSYC 4930 Psychology Practicum-Clinical (1-5 Credits)**

On-the-job training in clinical psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4931 Psychology Practicum-Teaching (0-5 Credits)**

On-the-job training in teaching psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4932 Psychology Practicum-Research (1-5 Credits)**

On-the-job training in research psychology. May be repeated for a maximum of 24 quarter hours. Prerequisite: Admission to doctoral program.

**PSYC 4933 Psychology Practicum - Advanced Clinical (0 Credits)**

Advanced on-the-job training in clinical psychology. May be repeated up to 6 times. Prerequisite: Admission to doctoral program.

**PSYC 4934 Practicum: DCN Neuropsychology (1-10 Credits)****PSYC 5991 Masters Independent Study (1-10 Credits)****PSYC 5995 Independent Research (1-10 Credits)****PSYC 6981 APA Internship (8 Credits)**

1 Year APA approved Internship in clinical psychology - the course is not graded.

**PSYC 6991 Ph.D Independent Study (1-10 Credits)****PSYC 6995 Independent Research (1-10 Credits)**

## Public Policy (PPOL)

**PPOL 4100 American Public Policy System (4 Credits)**

The American Policy Agenda, which is required for MPP students, will provide an intensive overview of the development of American public policy in the 20th century, with special emphasis on the interconnection between the values of the public and private sectors. Through the lens of a useful descriptive model, graduate students will learn concepts of the role of government have evolved from: the (1) constitutional period, wherein political society was thought to be a rational device for the protection of property and liberty and prosperity was equivalent to the free management of affairs; to the (2) administrative period, wherein powerful regulatory agencies were created to control concentrations of corporate power and the idea developed that the market does not always reflect the social good; to the (3) bureaucratic period, wherein the stock market collapse of 1929 and the Great Depression reversed key ideas of limited government inherent in the constitution and, beginning with the New Deal, social engineering in the "public interest" defined virtually every problem as "national;" to the (4) social welfare period, wherein government became the source of vast entitlements and benefits and interest groups came to dominate the policy debate; to the (5) current period of stalemate, gridlock, and reconsideration, wherein big government is a given, along with a utilitarian social contract defined as that which provides the most efficiency, the most productivity, and the most consumption for the most people.

**PPOL 4200 Microeconomics for Public Pol. (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the MPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus," will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality".



**PPOL 4225 Economic Policymaking: From Concepts to Practice (4 Credits)**

This course focuses on understanding the policymaking process and the social, political, and economic forces that influence it. We focus on the study of selected examples of policy design, discussing the views, constraints, and motivations of key actors and groups that influence the policy formation process and explore how these results differ from the policy prescriptions in neoclassical economic theory. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics, international economics, and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, and the reliability of economic data.

**PPOL 4250 Hacking for Good (4 Credits)**

The basic structure of the course involves teams of students competing to find the most innovative approach to a common problem. The course is led by faculty member, who will connect students to local experts and policy makers. Students will work together to research, analyze, propose, and present a proposal that addresses some aspect of a pressing societal project. The final product is judged by a panel of local policy makers and other experts. Topic vary from year to year. Examples include such issues as combatting homelessness in Denver, designing more efficient transportation systems, reducing water use in urban areas, reducing Denver's carbon footprint, and the like.

**PPOL 4300 Quantitative Analysis-Pub Pol (4 Credits)**

This course will provide the MMP student with the tools of mathematical analysis needed for the advanced study of public policy issues and evaluation of alternatives. Topics will include descriptive statistics, probability, sampling, estimation, inference and hypothesis testing, variable analysis and correlation, regression theory, reliability and validity, and prediction and simulation. Students needing review of college-level algebra will be referred to appropriate tutorials. The overall learning objective of this course is to help students recognize and apply basic statistical concepts to Public Policy and, more in general, Social Science analysis. Students will learn how to use statistical software to: build datasets, describe data in a visual and analytical fashion, perform statistical tests, and construct basic statistical inference models. Students will also learn how to report their analytical findings for Public Policy analysis.

**PPOL 4350 The Policy Lab: Local/National (4 Credits)**

The Policy Lab is an experiential course designed to introduce students to the policy-making and political environment surrounding a specific area of public policy at the state and national level. In different years, the Policy Lab might cover as a specific area, for example, fiscal policy, education policy, or health policy, and so on. The basic structure of the course is designed to: (1) introduce students to general thematic scholarship and expertise on the policy area being examined, (2) immerse students in the state and/or national policy-making environment through guest lectures and discussions with lawmakers, academics, policy experts, and political practitioners, and (3) connect students to lawmakers, nonprofit organizations, or other advocacy groups working on the specific policy area in order to work on proposing legislation, ballot initiatives, or other frameworks for reform design and implementation. The final product is a professional policy consultant report or the equivalent. The course will be led by faculty members with deep professional expertise in the policy issue being explored.

**PPOL 4351 The Policy Lab: Comparative/International/Global (4 Credits)**

The Masters in Public Policy Curriculum has two tracks depending on student professional experience and expectations. The first, and long standing, track centers on working professional policy problems centered in a U.S. context. The second track is centered on comparative/international/global policy questions for those students seeking to work in international and/or non-U.S. contexts. Both tracks have a Policy Lab requirement but given the potential diversity of the logical policy questions to be addressed, each has its own Policy Lab designation to help match faculty expertise and student interest to the learning objectives sought of the course. The basic structure of the lab course involves student teams, each working on a different issue for an external client. The course is led by a faculty member who coaches the student teams and stands in as or gathers a panel from the PPOL community to serve as the clients, identifies other experts and policy makers who can be resources for the team, helps students learn how to learn about the issue, provides feedback at critical junctures during the quarter, and assesses the quality of the students' work. The final product is a professional consultants' report.

**PPOL 4400 Introduction to Policy Analysis (4 Credits)**

This course will provide the student with the analytical tools necessary to evaluate competing points of view, using empirical techniques, logic, and statistical inference. Case studies will be drawn from the current legislative and regulatory environment and will provide the MPP student with opportunities to construct a course of action, based on the use of logically consistent arguments and on the persuasive use of facts and empirical data. Students in this course will also learn the history and development of the scientific method, how to distinguish speculation, theory, fact, and opinion, how to identify the validity, ideological content or irrationality of data, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to argument not based on evidence. Students in this course how to identify the validity, ideological content or irrationality of information, how to identify the intentional obfuscation of issues, and how to evaluate one's own prejudices and vulnerability to arguments not based on evidence.

**PPOL 4410 Health Policy (4 Credits)**

This course will examine major health care policy decisions and how each shaped fundamental elements of the U.S. health care system. Course material will explore the questions of why America spends more on health care than other industrial nations, why 8.6 percent of Americans do not have health coverage, and why the location of one's birth or current neighborhood may affect their health. These topics will be explored through the lens of recent and current policy debates, including the Affordable Care Act and other federal health care programs, the response to the COVID-19 pandemic, and the cost and affordability of prescription drugs. In addition to mastering the content in these areas, the course will weave in policy scenarios and exercises meant to mimic decisions federal and state policymakers must make when addressing policy challenges created by the U.S. health care system.

**PPOL 4500 Cost-Benefit Analysis/Pub Pol (4 Credits)**

How do we determine if programs have met their objectives? Increasingly, this is a matter for empirical evaluation. This course will focus on quantitative approaches to program evaluation and on the primary tool available to the policy analyst in the modern organizational framework, cost-benefit analysis. Various issues will be considered, including the "costs" associated with taxes (and tax expenditures), governmental mandates, health and safety regulation, environmental regulation, government "investments," such as those in education, defense, law enforcement, and the regulation of financial industries.

**PPOL 4501 Great Issues Forum (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4502 Issues Forum II (2 Credits)**

Intensive Great Issues Forums provide cutting edge opportunities to study emerging issues, like innovation and technology, antitrust, privacy, health care, education, fiscal policy, national security, economic growth, ethics, and metropolitan dynamics. We maintain close affiliations with leading think tanks, such as the Brookings Institution and the American Enterprise Institute in Washington, D.C., and with important political figures and policy-makers. The Great Issues Forums are unique short courses devoted to a single policy issue and taught by a nationally-recognized authority in the area. These courses will occur on a periodic basis, with at least two forums to be offered each academic quarter. Participation in these courses is required for graduate students in the MPP program. Each course will be taught on an intensive workshop basis, over the course of two or more days, for example, all-day sessions on Friday and Saturday. Specific topics will be determined by the immediacy of the policy issue and its relevancy to the curriculum of the MPP.

**PPOL 4550 International Development Policy (4 Credits)**

This course surveys international development policy. It has two main goals: (1) to build a multi-faceted understanding of what constitutes "development" and (2) to compare and assess different approaches to aiding the success of low- and middle-income countries. We will begin by asking what development is and examining the expansive ways in which it can be defined and measured, looking at these questions from economic, institutional, social, and political angles. We will study macro approaches to industrialization, economic growth, and development over the past half-century, with an emphasis on comparing and contrasting different development strategies. We will then focus on the development and aid business, looking at what the World Bank and other aid agencies do, the successes and failures of traditional approaches to foreign aid, and new thinking and actors in international development policy. We will end by examining how development policy could better address key contemporary challenges, such as the natural resource curse, corruption, and the challenges of building effective and legitimate governance in developing countries.

**PPOL 4600 Regulation and Institutional Analysis (4 Credits)**

This course will provide the MPP student with a solid understanding of the legal basis for policy action, through a case-based examination of executive and legislative authority, judicial policy-making, the expansion of the due process and equal protection clauses of the 14th Amendment, and the expansion of administrative authority under the Administrative Procedure Act. Such issues as affirmative action, government contracting, school finance, antitrust, and substantive due process will be presented utilizing a combination of traditional legal analysis and the cost-benefit approach of the policy specialist.

**PPOL 4655 Negotiating Environmental Conflict and Policy (4 Credits)**

Environmental issues engage multiple stakeholders with differing knowledge sets, beliefs, values, and even worldviews. Science alone is ill-equipped to resolve such complex disputes. Environmental conflicts involve negotiating differences, as do the development and implementation of environmental policies. This course explores both these 'downstream' and 'upstream' arenas. Within the domain of environmental and public policy conflict and policy, it focuses on the range of processes used to address these conflicts and issues, what different processes may have to offer, and the tradeoffs in both process and substance that must be considered. Themes of public involvement, information management & integration, and designing for adaptation will undergird consideration and critique of approaches. Multiple case studies will be explored and compared.

**PPOL 4700 Public Management & Budgeting (4 Credits)**

This course introduces students to the topic of public management, which includes concepts such as organizational structure, performance management, and strategy development. In addition, the instructor will teach the techniques and concepts of government and non-profit budgeting/financial management. The budgeting process includes program development/implementation, cost and revenue estimation and projection, and budget evaluation. The relationship between public management and budgeting will be explored.

**PPOL 4701 Special Topics in Public Policy (1-4 Credits)**

Various topics in public policy are covered. Topic subjects to change each term as deemed appropriate with local, regional and federal policy issues and regulation changes. Two examples are: "Denver Dynamics" explores the policy options and responses to the challenges of big city governance. Exclusive interactions with major stakeholders in the City and County of Denver are featured, with a view to giving the student an insider's view of power, economic development, political influence and decision-making. "Getting Results Inside the Beltway: Power and policy in Washington, D.C." is a travel course consisting of specially-arranged one-on-one sessions with Washington-based lawmakers, decision-leaders, and policy experts, through which graduate students will gain an understanding of the dysfunctionalities of the current budget process, political polarization, the interest groups that shape the current policy dynamic, the increasing importance of media in shaping policy, the solutions that will be required for the United States to regain fiscal sanity and solvency—and the challenges that will need to be met to preserve American hegemony and redefine national security.

**PPOL 4702 Special Topics in Public Policy Skills (1-4 Credits)**

Various professional skills and competencies are covered in these 1-credit classes. Each student will be required to complete four of these for the MPP degree. The topics are subject to change given student needs. Examples of topics may include: Diversity and Inclusion in Public Policy, Drafting a Policy Memo, Presenting a Policy Position to a Professional Audience, Working in Teams Addressing Complex Issues, Ethics Challenges in Public Policy Choices, and The Practice of Public Policy.

**PPOL 4715 Negotiation Workshop (2 Credits)**

Negotiation is an important skill for most jobs and professions. Whether you are crafting policies or legislation, negotiating agreements, advocating for rights, making arrangements to meet human needs, or implementing programs, the ability to strategically advance your own or your group's interests while working through differences allows efficient and mutually acceptable solutions to be created. Though some may feel negotiation is an art, it is also a skill that can be taught and practiced. In this course you will learn, and have opportunities to practice and improve, analytic skills, communication skills, and forms of preparation and execution. You will leave with new tools to advance your goals and to work with others to create solutions that are "win-win."

**PPOL 4821 Executive Introduction to Public Policy (4 Credits)**

This course offers an introduction to the contemporary study of public policy for the Executive MPP student. It has three main goals: (1) to build a multi-faceted understanding of what constitutes public policy, with a particular emphasis on how public policy is co-created by government, private sector, and civil society actors; (2) to understand the range of political, social, economic, and institutional forces that shape public policies and their outcomes; and (3) to introduce different forms and techniques of public policy analysis tied to audience, context, and objectives. We will begin by asking what public policy is and examining why we need it, explicitly addressing how political and societal context and decisions shape public policymaking. We will examine the traditional foundations of how public policy is typically framed and analyzed, rooted in neoclassical economics. We will round out the course by considering new ways of thinking about and analyzing public policy.

**PPOL 4822 Executive Microeconomics for Public Policy (4 Credits)**

Microeconomics for Public Policy Analysis will provide a comprehensive, case-based overview for the EMPP student of the consequences of contemporary public policies for individuals, households, and firms. Public policy is often said to consist of the distribution of scarce or valuable resources or benefits through the mechanisms of the public sector. This course will provide the opportunity to gain fluency and expertise in the application of economic analysis to such problems as transfer payments, entitlements, government subsidies, taxation, housing, education, labor, welfare, and crime. Issues concerned with exploring the government's role in encouraging innovation, maintaining a growing economy, and budgeting under conditions of "surplus" will be explored using contemporary policy initiatives. Two competing visions of public policy will be examined: the role of economic policy in securing the benefits of "ordered liberty," which accrues to the individual; and (2) the vision of public policy as fundamental to the correction of anomalies in the market and in the distribution of scarce resources, often based on interest group claims of "disparity" and "inequality."

**PPOL 4823 Executive Data Analysis and Visualization (4 Credits)**

This course is aimed at helping policy professionals to review basic principles of statistics and apply this knowledge to visualizing data for policy analysis and communication. Students will use software to produce visualizations for effective and accessible data description and analysis.

**PPOL 4841 Executive Cost Benefit Analysis (4 Credits)**

This course will focus on economic analysis and will provide an intensive overview of analytical tools used in public policy decision-making. After discussing economic theory and its role in policymaking, we will cover analytical techniques such as Cost Benefit Analysis, Cost Effectiveness Analysis, Cost Utility Analysis, and other analytical approaches. Economic analysis is both a science and an art. The aim of this course is to give students an understanding both of the practical aspects of economic analysis as well as its economic and philosophical foundations and ethical implications. Students should gain an appreciation of the role of economic analysis in policy decision-making and become comfortable with various analytical approaches commonly used by government officials and policymakers.

**PPOL 4842 Executive Policy Making Process (4 Credits)**

Governments make public policies through a complex process, which varies in its details across countries, over time, and even from issue to issue within the same country. In this course we will study several parts of those processes and some of the inputs into them. The overall goals for this course are: (1) to introduce students to the multiple features of the policy making process and the literature on those features; (2) to enable students to use effectively databases and other research tools to examine those features of the policy making process; and (3) to give students the experience of tracing a specific policy issue through the policy process to analyze how some features of that process affect the outcomes of the policy.

**PPOL 4843 Executive Policy Writing and Briefing (2 Credits)**

In this two-credit course, students will develop policy-specific applied writing skills for the most important contexts and purposes in government and policy settings. Students will learn the key elements, formats, and styles for four categories of policy writing: 1) issue analysis briefs, 2) decision briefs, 3) legislative testimony, and 4) comments to proposed regulations. Students will take part in peer-review exercises as well as simulated policy briefings summarizing their written materials.

**PPOL 4852 Executive International Economic Policy (4 Credits)**

This course focuses on understanding how governments design and implement economic policy and how economic, social, political, and cultural forces impact on that process. The course centers on key debates around major government policy decisions and analyzes the alternative paths open to policymakers at the time at which they took those decisions. We will emphasize central questions in macroeconomics as well as international and development economics through a case-study lens focused on evaluating decisions by assessing the arguments in favor of and against various policy alternatives. In the discussion of these cases, we will contrast neoclassical economic theories of optimal policy design with political economy, structuralist, and institutional views of the policymaking process. Through each example, we will engage with the views, constraints, and motivations of key actors and groups that influenced the policy formation process. Topics covered include global financial and health crises, fiscal deficits, structural adjustment, the role of multilateral organisms, high and runaway inflation, the causes of underdevelopment, economic sanctions, debt limits, the spread of globalization, financing climate action, and the reliability of economic data.

**PPOL 4889 Capstone: Intelligence/Threat Assessment (4 Credits)**

All students in the Certificate of Specialization in Strategic Intelligence must complete a capstone project centered on demonstrating the ability to provide a professional grade strategic assessment or other intelligence product. One of the Certificate-associated faculty will supervise the set of projects for each year as needed to meet graduate requirements for the participating students on a one-to-one or small group basis. The total credits via the Capstone are 4 and the standard is the same as any other Korbel independent project of same number of credits.

**PPOL 4950 Policy Memorandum (4 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

**PPOL 4991 Independent Study (1-4 Credits)**

Students will work in collaboration with faculty from the Institute for Public Policy Studies to complete an independent study project.

**PPOL 4995 Independent Research (1-8 Credits)**

The Policy Memorandum research project is designed to provide the MPP student with a capstone experience that will synthesize the knowledge and skills that were acquired during the 60 quarter hours of formal coursework. Included among the skills that students will apply are research, quantitative methods, economic analysis, cost-benefit analysis, budgeting and project management.

## Real Estate (REAL)

**REAL 4000 Fundamentals of Real Estate and the Built Environment (4 Credits)**

An exploration of the importance of real estate and the built environment through triple bottom line analysis of its social, environmental, and economic impacts. The course considers a "cradle to cradle" sustainability model that links the various phases, functions, and professions of real estate, project delivery, and asset/facility management to create holistic, value-generating solutions for society. Professional practices/skill sets associated with the many career options that engage the built environment are demonstrated. Principles of real estate, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title concepts, deeds, purchase contracts, listing contracts, law of agency, environmental issues and disclosures, types of mortgages, basics of home loan finance, appraisal investment and tax benefits will also be covered. Partially satisfies Colorado real estate broker licensing requirements.

**REAL 4002 The Business of Real Estate (2 Credits)**

This is an introduction to home ownership, real estate industry and its markets; legal aspects of home ownership from consumer's point of view, including property rights, title, concepts, deeds, and purchase contracts. Listing contracts, law of agency, types of mortgages, basics of home loan finance, appraisal, investment and tax benefits are also covered in this class. Partially satisfies Colorado Real Estate sales licensing requirements.

**REAL 4007 Real Estate Financial Analysis (4 Credits)**

Alternative analysis formats that can be applied to a wide array of real estate analysis issues; simulates working/decision-making environment; structured overview of analysis tools focused on specific facets of multidimensional real estate decision-making environment; applications in investment analysis, feasibility analysis, valuation, market analysis, and report writing and presentation. Prerequisite: REAL 4407.

**REAL 4010 Real Estate Capital Markets (4 Credits)**

This course exposes students to the commercial real estate capital markets; including real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS), plus institutional investors. The complexities of capital market products are discussed, students receive a greater understanding of the alternatives that are available. The class includes lectures, guest speakers, readings, class discussions, a major REIT analysis project, and case studies. Prerequisite: REAL 4007.

**REAL 4140 International Immersion in Real Estate and the Built Environment (4 Credits)**

Inbound U.S. and outbound U.S. real estate issues, with a mix of cultural issues that impact real estate transactions. Application of sustainability concepts is important in this course dealing with international real estate issues. This course will require on campus preparation for projects followed by 1-2 weeks of travel which will include working with host universities, students and industry partners.

**REAL 4210 Planning, Entitlements, and Public Finance (4 Credits)**

Real estate development, place making, and community building require the combined efforts of the public, for-profit, and non-profit sectors. Participants in the real estate development process need to understand and appreciate the sometimes competing and sometimes collaborative interests of governments, agencies, and the private developer. This course is designed to familiarize students with the overall context of urban planning and land use. Students discover the variety of participants in the development process and also become familiar with the project entitlement process, zoning, and land use regulation. Students also examine public/private financing structures such as public-private-partnerships (P3s) and become familiar with detailed calculations relating to Tax Incremental Financing (TIF) and Metropolitan Districts.

**REAL 4337 RE Securities/Syn/Entrep (4 Credits)**

Introduction to real estate securities; emphasis on private offerings; determining whether a contemplated transaction involves a security, and what happens if it does; exemptions from registration (Reg D); registration requirements; investor suitability, how to syndicate, acquisition of property, marketing of the property, tax structure and formation of syndication, compensation to syndicators, real estate tax considerations.

**REAL 4347 Property and Asset Management (4 Credits)**

Explore the complexities of managing apartments, condominiums, office buildings, industrial property and shopping centers. This course covers rental markets, development of rental schedules, leasing techniques and negotiations, repairs and maintenance, tenant relations, merchandising, selection and training of personnel, accounting, and owner relations.

**REAL 4357 Corporate Real Estate & Management (4 Credits)**

This course provides a snapshot view of the corporate real estate life cycle and how to strategically plan and manage it. Over the ten week period we will address the diverse but critical components that together account for Facility Management. These shall include: Building Life Cycles and sustainability, facility management as part of the enterprise model within a corporate structure, regulatory agencies, professional relationships and the impact of the build environment on the bottom line, contracting and budget management, move-add-change (MAC) / operations, and general administrative services.

**REAL 4369 Real Estate Taxation (4 Credits)**

Tax factors affecting investments and operations in real estate; special attention is given to legal forms of ownership, depreciation, tax basis, tax impacts of exchanges, syndications, real estate securities, and other federal tax laws affecting real estate.

**REAL 4407 Income Property Finance (4 Credits)**

This course explores conventional and alternative financing, mortgage banking, law and markets, loan underwriting analysis and the impact of monetary and fiscal policies on the real estate and mortgage markets, with emphasis on decision making from the equity investors point of view. Specific topics include an overview and history of real estate finance, the taxation and legal aspects of real estate finance, compounding and discounting, functions of interest and real estate capital markets and securities. Specific areas of focus are residential property finance, income property finance, and construction and development financing.

**REAL 4417 Income Property Valuation and Appraisal (4 Credits)**

Residential/Commercial appraising, including market cost and income approaches to value, gross rent multiplier analysis, neighborhood and site analysis, valuation of income properties including market cost and income approaches to value, capitalization theory and techniques, mortgage-equity analysis, and investment value concepts. Prerequisite: REAL 4407.

**REAL 4438 Legal Aspects of Real Estate and the Built Environment (4 Credits)**

To gain an understanding of certain legal issues that are repeatedly encountered by real estate and construction professionals.

**REAL 4467 Property Development and Feasibility (4 Credits)**

Commercial real estate development analysis and feasibility includes economic base analysis, tenant demand analysis, development and construction cost analysis, lease-up analysis, financial feasibility, leasing and property management practices. Five major property types (office, industrial, retail, apartment and hotel) are covered. Prerequisite: REAL 4407.

**REAL 4477 Income Property Investment (4 Credits)**

Comprehensive analytical framework for real estate investment decision-making, equity investment decisions via discounted cash flow, and risk analysis models and strategic planning concepts, structuring parameters to maximize rates of return while controlling downside risks; emphasis on theory, concept building, and practical application to various types of investment properties. Prerequisite: REAL 4407.

**REAL 4701 Topics in Real Estate (0-4 Credits)****REAL 4800 NAIOP Challenge (2-4 Credits)**

A unique non-traditional course, where the students will work on a complex real estate problem culminating in an internal competition and external competition which includes a written report and an oral presentation. Cross listed with CMGT 3800, CMGT 4800, REAL 3800.

**REAL 4890 Internship (0-4 Credits)****REAL 4980 Adv Valuation/Report Writing (1-10 Credits)**

Advanced cutting-edge techniques not yet institutionalized nor commonly practiced in the field. Includes writing skills workshops appropriate to specialized nature of appraisal reports, and composition of a complex field problem report to prepare student for writing "demonstration" report required for MAI professional designation. Prerequisite: REAL 4417.

**REAL 4991 Independent Study (1-10 Credits)**

## Religion (RLGN)

### **RLGN 4000 Theories and Methods in the Study of Religion (4 Credits)**

This course begins with a brief overview of the history of the study of religion in the west, from antiquity to the modern period. When we reach the modern period, the course shifts to considering 'representative' theories of religion, broken down roughly along ideological and/or disciplinary lines.

### **RLGN 4105 Empire and the Rise of Christianity (4 Credits)**

This course covers approximately the first five centuries of Christian history with a view toward understanding the role empire played in the rise of Christianity, both in terms of the confluence between Christianity and the Roman Empire as well as its role in the development of Christian beliefs, practices, production of discourse, institutions, and strategies of social control.

### **RLGN 4106 Second Century Life & Thought (4 Credits)**

An attempt to understand Christian life and thought in the Roman Empire in the Second-century by analyzing primary sources.

### **RLGN 4107 Women in Early Christianity (4 Credits)**

An exploration of the role women played in early Christianity, with attention given to the social and literary constructions of women in Greco-Roman antiquity.

### **RLGN 4108 Jewish and Christian Non-Canonical Literature (4 Credits)**

This seminar examines Jewish and Hellenistic backgrounds; the social scientific study of early Christianity; and the New Testament in its literary environment.

### **RLGN 4109 Formation of the Bible (4 Credits)**

This course focuses on the development of the Christian Bible. Some attention, however, will be given to the emergence of the Jewish canon, primarily as it relates to and impacts the Christian canon. The chronological expanse of the course ranges from the Hellenistic through the late Roman period. The approach of the course is necessarily literary and historical, but theoretical issues about what constitutes scripture and canon will also be given attention.

### **RLGN 4110 Hebrew Reading (2 Credits)**

Advanced work in biblical languages or a selected issue in a language study.

### **RLGN 4111 Greek Reading (2 Credits)**

Selected readings from the New Testament and other early Christian literature. Greek I, II and Exegesis are prerequisites Offered each year. May be repeated for credit.

### **RLGN 4113 The Bible and Its Afterlives: Jonah (4 Credits)**

This course invites students to place the biblical book of Jonah in conversation with works of literature, art, and theology that interpret Jonah or explore themes in the book, including the nature of God, prophecy, election, death, and transformation. The course will introduce students to the history of interpretation (or reception history) by considering Jonah's afterlives in a variety of Jewish, Christian, and Islamic texts, artistic programs, and manuscript illuminations.

### **RLGN 4115 Hebrew Bible Literature: Genesis (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4116 Hebrew Bible Literature: Exodus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4117 Hebrew Bible Literature: Leviticus (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4118 Hebrew Bible Literature: Numbers (4 Credits)**

### **RLGN 4119 Hebrew Bible Literature: Deuteronomy (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4125 Hebrew Bible Literature -Job (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4128 Hebrew Bible Literature: Jeremiah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4129 Hebrew Bible Literature: Jonah (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4130 Hebrew Bible Literature: Prophetic Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

### **RLGN 4131 Hebrew Bible Literature: Wisdom Literature (4 Credits)**

Interpretation of selected Hebrew Bible literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4135 Poetry in the Hebrew Bible (4 Credits)**

In this course, we will analyze poems primarily from the books of Job, Lamentations, Psalms, 2 Isaiah, and Jeremiah. Class sessions will be divided between studying some aspect of Hebrew prosody (e.g., metaphor, parallelism, lineation) and looking at the ways in which various poets use these particular devices. We will be particularly interested in identifying how poets bring their messages to life, engage their audiences, challenge (or uphold) the status quo, and revitalize the community's imagination and, in turn, its faith in YHWH. Each week, we will read about a particular aspect of poetry and prepare specific poems with the readings in mind; the readings will provide us with a language that we might discuss specifically how the poets impart and encode their messages.

**RLGN 4141 New Testament Literature: Mark (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4142 New Testament Literature: Luke (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4143 New Testament Literature: John (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4144 New Testament Literature: Acts of the Apostles (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4145 New Testament Literature: Romans (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4146 New Testament Literature: Corinthians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4147 New Testament Literature: Galatians (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4148 New Testament Literature: Hebrews (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4150 New Testament Literature: Revelation (4 Credits)**

Interpretation of selected New Testament literature. Each course focuses on a book or selected topic. Different courses are offered each year.

**RLGN 4151 Studies in Early Christianity (4 Credits)**

A critical study of themes and selected movements within early Christianity and other religions of the Greco-Roman world. May be repeated for credit.

**RLGN 4152 Identity in the Hebrew Bible (4 Credits)**

This course explores diverse constructions of selfhood in the Hebrew Bible in conversation with theories of identity and the self from a range of disciplines, including anthropology, philosophy, sociology, and psychology. In this class, we will consider how the biblical texts present different models of selfhood through discourse, practice, and ritual. Each class session will focus on a different aspect of identity: gender, social class, ethnicity, nationality, colonialism, the body, and kinship and family. Throughout the course, we will discuss the implications of these constructs of identity for ethics, agency, and theology.

**RLGN 4153 War, Politics, & Society in the Hebrew Bible (4 Credits)**

This course examines the interrelationship between war, politics, and society in the Hebrew Bible and their interplay both in the texts and in larger historical, social, and cultural contexts.

**RLGN 4154 Migration and the Bible (4 Credits)**

Migration and people on the move pervades the Bible, from Adam and Eve to Jesus. This course examines migration in the Bible and the resources it offers for responding to the current realities of migration, immigration, exile, deportation, and other aspects of migration in the world today. A range of perspectives on migration and the Bible are considered, including denominational resources, international aid agencies, and theoretical viewpoints.

**RLGN 4155 Being Human in the Bible (4 Credits)**

What does it mean to be human, according to the biblical writers? This is both a simple and complicated question to ask, much less answer. How it is addressed has important consequences. A range of perspectives and answers to the question therefore will be taken up in this course. These can include life and death, gender and sexuality, technology, education, family relations, politics, peoplehood, ecology, human vs. animal, philosophy, and economics. These perspectives and answers are engaged in pursuit of gaining a greater appreciation for how one might think through this question.

**RLGN 4160 Teaching the Bible (4 Credits)**

Designed to integrate faith development theory, biblical interpretation and confluent education. Education instructional models for the purpose of assisting students to develop professional self-understanding and functional skills as interpreters and teachers; experience in teaching adults in a local setting.

**RLGN 4161 Queering Early Christianity (4 Credits)**

This course surveys some of the major influences of queer theory on the study of the New Testament and early Christianity, beginning with the work of Judith Butler and continuing through the contributions of queer theorizations inflected by affect, violence, diaspora, race and racialization, and trans discourses. The course considers a variety of canonical and non-canonical texts and practices from the first centuries of the Christian tradition, with an eye to how theorizations of queerness help frame inquiry into the formation of Christian "identity" and belonging.

**RLGN 4162 Minoritized Interpretation of the New Testament (4 Credits)**

Though the academic study of the New Testament has long been controlled by European and North American institutions and persons of European descent, recent decades have seen a surge of other perspectives that are sometimes collected under the heading of “minoritized.” These perspectives include postcolonial and decolonial approaches, and methods centered on racial or ethnic identities, geographies, cultures, shared historical experiences, and gender and sexuality, to name a few. This course considers these forms of interpretation together and separately, as ways of reading biblical texts outside of the field’s historical biases.

**RLGN 4204 Multi-Cultural Pastoral Care & Counseling (4 Credits)**

Examines multicultural issues in pastoral care and counseling and explores the dynamics and complexities of culture, race and other socializing factors in pastoral care conversations.

**RLGN 4205 Introduction to Process Thought (4 Credits)**

This course provides an overview of Process Theology from its early developments out of Process Philosophy to its current incarnations in theopoetics, ecological civilization, and radical interrelationality.

**RLGN 4206 Spiritual Care of Trauma (4 Credits)**

This advanced course integrates knowledge, capacities, and skills for practicing justice-seeking, interreligious, and research-literate spiritual care of trauma. This course draws upon psychological research on trauma and spiritual struggles. Readings on socially just spiritual care focus on practices, beliefs, and values that lament harm done by religiously based violence. A spiritually integrative pedagogy uses (1) body-based self-care practices and deep listening conversations about self-care; (2) self-assessment of one’s interpersonal capacities for deep interreligious listening; (3) a qualitative analysis of one’s spiritual orienting system (self-care practices, struggles, values, and beliefs) embedded in conversations about one’s spiritual practices; (4) spiritually integrative assignment about a personal experience of trauma; (5) conversations with a learning partner and Dr. Doehring about this integrative assignment. These experiential components help students develop capacities for spiritual self-differentiation, empathy, and reflexivity. These experiential components are designed to help students integrate critical theory and research into practices of spiritual self-care, integration, and interreligious deep listening.

**RLGN 4207 Moral Stress, Resilience & Spiritual Integration (4 Credits)**

Moral stress arises from shame/guilt/fear of causing harm involving conflicts in values. Moral injury arises from traumatic stress that is more shame than fear based, and has been researched extensively among military personnel. Spiritual integration of moral stress and injury uses spiritual practices and theological meaning-making to compassionately identify life-limiting embedded shame-based values, beliefs, and ways of coping with moral stress and injury (lived theologies) in order to compassionately understand the origins of moral stress and injury. Relational resilience is the outcome of spiritual integration based on spiritual practices fostering compassion and more complex theological ways of understanding moral conflicts, stress and injury.

**RLGN 4208 Erik Erikson: Resource for Pastoral Care (4 Credits)**

This course explores Erik H. Erikson’s life cycle theory as a resource for the pastoral care of children, adolescents, young adults, adults, and older adults. Attention is given to Erikson’s psychoanalytic orientation and the development of his life cycle theory over the course of his career. The course encourages the use of developmental theory to deepen the student’s introspective reflection and vocational orientation. By focusing on the work of a single author, this course is meant to illustrate how a pastoral theology student may use the work of a prominent psychologist in the development of a dissertation topic.

**RLGN 4209 Spiritual Care in Pluralistic Contexts (4 Credits)**

This course helps students learn emergent pastoral theologies of spiritual care in a pluralistic context and use them to reflect on case studies written by experienced practitioners. In this course, students will identify their personal values, attitudes, and beliefs and examine their own social identities to better understand how these dimensions of self can guide and challenge them in reflecting on spiritual care with those who are different from them.

**RLGN 4210 Theories of the Self in Pastoral Theology (4 Credits)**

This advanced course introduces students to psychological concepts and theories of the self that are operative in pastoral and spiritual care and counseling. Toward that end, this course traces understandings of the self within the works of pastoral theologians, psychologists of religion(s), and practitioners in pastoral and spiritual care. Particular attention will be given to identity formation, relationality, interdependence, and psychic-injury.

**RLGN 4220 Research Methods and Ethics in Lived Religion/Practical Theology (4 Credits)**

This course introduces students to a variety of qualitative and quantitative approaches to rigorous scholarly research in lived religious contexts, as well as to particular ethical challenges and questions that such approaches may elicit. Students will also be introduced to the Institutional Review Board (IRB) process as a foundational component in developing a critically informed, contextualized methodology for any research-based project in the fields of lived religion and practical theology.

**RLGN 4302 Buddhist Philosophy (4 Credits)**

An introduction to the Buddhist philosophical tradition that covers both the different philosophical movements within Buddhism as schools of thoughts and major philosophical issues, such as the theory of karma and determinism, the nature of mind, proofs for past and future lives, theories of knowledge, ethics, the doctrine of emptiness and the nature of enlightenment.

**RLGN 4303 Sacred Space and Place in Comparative Perspective (4 Credits)**

This course examines sacred spaces and sacred places from a comparative perspective. Through close reading and discussion of primary and secondary sources, students are challenged to think critically and theoretically about sacred spaces and places.



**RLGN 4304 Material Divinity (4 Credits)**

This course explores how religion happens in material culture- broadly defined as images, devotional and liturgical objects, architecture and sacred space, works of art, and mass-produced artifacts.

**RLGN 4305 Pilgrimage in Comparative Perspective (4 Credits)**

This is a comparative course that examines the dynamics of pilgrimage from a number of different angles - theoretical, doctrinal, ritual, social - and which utilizes a variety of sources - including classical, ethnographic studies of actual pilgrimages, and focused studies of particular pilgrimage places - with the goal of gaining a thorough understanding of the phenomena of pilgrimage in all of its complexity.

**RLGN 4321 Islam and Gender (4 Credits)**

This course examines issues surrounding gender and sexuality in Islam. Through a close reading of religious texts, critiques of patriarchy, and historical studies, students are challenged to think critically about the construction of gender roles and the regulation of sexual practices in Islam. By the conclusion of the class, students gain insight and understanding regarding the ways modernity has radically altered norms surrounding gender and sexual preference in Muslim-majority societies.

**RLGN 4322 Interreligious Dialogue: A Critical Analysis (4 Credits)**

This course exposes students to the theory and practice of interreligious dialogue (broadly defined) and the issues raised by interreligious dialogue, such as theologies of religious pluralism, secularism, religiously motivated violence, and religion and public life. Students have opportunity to read critical scholarship on these topics generally, as well as study specific cases where points of contact occur between religious groups—either in terms of dialogue (or other mutually edifying endeavors) or conflicts that have arisen between religious groups. In the process students will also learn about some of the more prominent organizations working in interreligious dialogue.

**RLGN 4401 Race, Gender, Class: Historical & Social Analysis of Racism in the Modern World (4 Credits)**

An historical survey of the role of racism, sexism and classism in shaping the oppressive institutional structures of the existing world order and of how sociological analysis of these structures can help justice and peace activists direct effective action toward the elimination of race, gender and class oppression.

**RLGN 4402 American Indian Cultures and Worldview (4 Credits)**

A survey of the worldviews of Native American people, as these pertain to both inter-tribal beliefs and Native American ceremonial life, with an attempt to show how Native American practice proceeds from their worldview.

**RLGN 4403 Sects, Cults & New Religions (4 Credits)**

An exploration of non-mainstream religious groups. Topics include innovation and recruitment; "cult" controversies; sectarian Christianity, gender and sexuality; UFO religions; and religion and marginalized racial projects.

**RLGN 4404 Race and Religion in the United States (4 Credits)**

An exploration of the different ways in which race is understood religiously in the United States and how race impacts both white and racial minority religious institutions. Specific topics include the black church, the Nation of Islam, Native American theology, the Christian far right, Asian American religions, Latino/a religions, and multiracial congregations.

**RLGN 4405 Social Construction & Selfhood (4 Credits)**

This course invites us into a collection of investigations into the intersections of social structures and individual identity or selfhood. While reading in a variety of disciplines and genres, we are drawn together around the questions of how one understands the possibilities for individual or communal agency in light of the formative, systemic power of social structures and institutions. Beyond conceptual understanding of this relationship, we ask questions of how to encourage coherent religious, educational, and other forms of practice in light of the realities of social construction. These reflections are particularly important for persons who are interested in social change and the very real barriers to its generation.

**RLGN 4406 Education and Social Change (4 Credits)**

This course investigates the role of education in maintaining and transforming social structures, identity, and commitments. We examine how educational practices can contribute towards social change in both religious and public settings.

**RLGN 4407 Ritual Studies (4 Credits)**

By reading some of the most important "classic" and recent theorists of ritual, and by learning to observe and understand ritual behavior, this class will examine the important role of ritual in defining religious groups, creating religious identity, forming religious beliefs, and structuring how we view the world. Prerequisite: Masters students need permission of instructor.

**RLGN 4408 Science & the Christian Right (4 Credits)**

An examination of the American Christian Right's challenges to mainstream scientific theories and practices. Specific topics include Intelligent Design movement, reparative therapy of homosexuality, denial of human-driven climate change, and opposition to stem cell research.

**RLGN 4409 Social Movements from Liberationist Perspectives (4 Credits)**

Liberationist thought has greatly impacted how social movements, and the theological and ethical perspective which inform them, has been implemented to bring about social and political change since the mid-twentieth century. But with the state of the new millennium, many have proclaimed the death of liberation theology, dismissing its significance as a passing fad. The purpose of this course is to explore the roots, development, and history of liberationist thought as it first manifested itself within a Latin American context then expanding to other continents and faith traditions, and how that thought has been utilized to inform social movements.

**RLGN 4410 American Christianity and Indian Genocide (4 Credits)**

A collaborative research seminar exploring different aspects of the history of the relationship between American Christianity and genocidal campaigns against native peoples, including the colonial period through the 20th century. Students will research particular personalities and historical events related to this topic, including the campaigns of the military on the 18th century Western frontier, sites of massacres including Sand Creek in Colorado, and other events normally obscured by accounts of US history. Students will learn the relationships of ideology and worldview to the narration of history, as well as skills in identifying and working with primary historical sources.

**RLGN 4412 Health & Healing, Death & Dying: Technologies of Inspiration and Expiration (4 Credits)**

Through this course, students will encounter a variety of perspectives on the nature, morality, justices, and injustices of health, healing, and dying.

**RLGN 4413 Theology and the Construction of Race (4 Credits)**

Several important books have recently been published making the case that religion, and more specifically, Christian theology, have played a constitutive role in creating the ideas of race and racial hierarchies. This course is an extended argument (with which students are free to agree or disagree in part or in whole—in any case they will become familiar with the relevant literature and concepts) that 1. In significant ways religion and race are modern, not universal or permanent, constructions; that 2. Religion and race are two of the very few fundamental conceptual building blocks of the modern world, such that, no matter what one thinks of religion and race, one is unable to think or operate in the modern world without them; and that 3. Religion and race are mutually imbricated in such a way that, even when race is not explicitly a topic of discussion or observation, modern religion is always already racialized.

**RLGN 4414 Atheists, Secularists & Nones (4 Credits)**

An examination of non-religious and/or non-affiliated populations, with a primary focus on the United States. We will explore: 1) the variety of beliefs among those not affiliated with religious institutions; 2) different social expressions of atheism; 3) the implications of recent religious trends for debates about secularization in the modern West.

**RLGN 4415 Environmental Racism: The Problem with Water (4 Credits)**

The course seeks to develop a constructive conversation on the intersection of environmental racism and water by examining significant issues surrounding present-day issues the degradation of water quality its negative impact on communities of color. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

**RLGN 4416 Decolonizing Theories and Methods (4 Credits)**

Religious studies draws from multiple disciplines which include anthropology, history, feminism, transnationalism, empire studies and sociology. Often, students approach theories and methods by reading classic authors and mainly contemporary eurocentric scholars of religion. This course will approach theories and methods from through the lens of decoloniality, concentrating of the perspectives and contributions emerging from the margins of eurocentric thought.

**RLGN 4417 Still Black Post-human: Blackness Beyond Posthumanism (4 Credits)**

Blackness waits at the door. It sits in the room. It seeps into crevices. It disrupts stable sensibilities. It is the abyss. It is an overwhelming presence of life and the beyond. And it waits. This course will explore many presentations of Blackness as an ontology, material essence, and tangible modality. In doing so, this course will not only explore ontomateriality of Blackness, but present a case for it as an integral framework to engage posthumanism's proclivity to emphasizes animal studies and ecology while holding fast to liberalism's damaging modes of uncritical inclusivity. This is important to the state of the theological experiment as James Cone insisted Blackness is the key to global salvation over 50 years ago. With recent moves to decenter human exceptionalism, shifts in focus to future realities, and intentional re-imaginings of the human-creature-divine relationship. It is important to continue to unravel humanist descendent offerings. As such, this course will provide a lens to investigate/disrupt the potentiality that posthumanity presents, pushing beyond its less obviously regressing boundaries, towards liberative future realities.

**RLGN 4418 Decolonizing Congregational Leadership (4 Credits)**

This course explores the applications of postcolonial and decolonial discourses to the theory and practice of parish leadership, particularly within Christian congregational contexts. Students will reflect on leadership praxis across several areas (i.e., euro-western constructions) of congregational life including: worship and liturgy, education and formation, organizational culture, and missions. As a whole, the course interrogates notions of tradition, practice, and leadership identities in the context of congregations toward the de/construction of lived realities.

**RLGN 4501 Holy Spirit: History and Traditions (4 Credits)**

What have Christians believed and written about the Holy Spirit through the centuries? Why does Pentecost show up in such different ways across the pages of Christian theology and literature? In the midst of the European Enlightenment, why did John Wesley hold such special reverence for the role of experience in Christian thought and education? Why has the Pentecostal legacy functioned simultaneously as a subversive trope for critiquing dominant church paradigms while also sparking creative, re-interpretations of Christian tradition among so many reformers? These are just a few of the questions explored in this class as we discuss historical and theological works by contemporary scholars in pneumatology and church history.

**RLGN 4502 Historiography (4 Credits)**

This course surveys the various theories and methods developed by historians since the emergence of the historical profession from the roots of historicism and philosophy of history in the mid-1800s; and examine the relationship of history to theology, cultural theory and literary studies.

**RLGN 4503 Women in Medieval Europe (4 Credits)**

This class focuses on the role of medieval women, who struggled to find a voice in the political, religious, social and literary arenas of medieval Europe from about 1100 to 1600. Through primary and secondary source readings we look at everyday women's lives in this period. The class also includes the lives and careers of some of the most famous women writers and leaders of the period, such as Hildegard of Bingen, Eleanore of Aquitaine, Marie de France, Margery Kempe, Julian of Norwich, Queen Isabel of Castile, Teresa of Ávila, and Queen Elizabeth I of England.

**RLGN 4504 Muslims, Jews and Christians in Medieval Spain (4 Credits)**

An exploration of the "Golden Age" of cross-cultural encounters that occurred in Medieval Spain from the Muslim conquest in 711 to the fall of Granada and the expulsion of Jews in 1492. This course offers an overview of the historical and ecumenical dimensions of Jewish, Christian, and Islamic coexistence, known as "La Convivencia," and critical reflection on the relevant lessons this era still holds in the post 9/11 period.

**RLGN 4505 Spanish Mystics and Reformers (4 Credits)**

Early modern Spain witnessed the emergence of Catholic and Protestant individuals whose timeless works and popular appeal in subsequent centuries rested largely upon the practice of "contemplation in action." This course examines the historical context and works of such mystics and reformers as Teresa of Ávila, John of the Cross, Ignatius of Loyola, Juan de Valdés, Constantino Ponce de la Fuente Cipriano de Valera, Casiodoro de Reina, Antonio del Corro, and others, and others. It also explores the influence of Islam and Judaism on these sixteenth century religious movements, as well as modern Spain's subsequent rejection of this pluralistic legacy as it sought to define the young nation-state sought to define its new national identity and consolidate power across Europe and its vast colonial territories in the Western Hemisphere.

**RLGN 4506 The Pursuit of Happiness: A History (4 Credits)**

This course provides a historical examination of key concepts, major questions, and practices about humanity's search for happiness from the Hellenistic-Roman period of Antiquity through the Early Christian and Medieval periods. The content centers on the role of Classical moral philosophy and Christian theology in the formulation of eudemonic theories about the problem of happiness in relation to metaphysical and religious influences as well as to socio-cultural, political, and institutional norms and practices that shaped Christian notions of human purpose and potential. The legacies of these ancient ideas on the development of modern assumptions about happiness and human flourishing are also discussed towards the end of the course.

**RLGN 4507 Violence & Tolerance in Medieval Europe (4 Credits)**

This course examines a wide range of texts and events from the 11th to the 16th centuries dealing with various forms of violence across the medieval European world and contrasts these with medieval European notions of toleration in theological, literary, and political discourse. Among the topics to be covered will be the Peace of God and the Truce of God, feudal warfare and its legacy, the Crusades and their impact upon the Latin West as well as the on Arab East, anti-Semitism in the Latin West, the Inquisition, persecution of heretics and witches, Church and State struggles, and the various dialogues of mutual, theocentric edification among Islamic, Jewish, and Christian authors.

**RLGN 4508 Judaism, Gender, and Religion (4 Credits)**

Germans refer to the period of roughly 1770-1850 as the Sattelzeit, or "Saddle Era"—the time between the end of the early modern world and Europe and the modern world. During this era basic assumptions that we continue to make about what religion is and what gender is are constructed. This is also the era when what we think of a Judaism is re-shaped in major ways. Through a close reading of primary texts by Jewish women we will examine the intersection of gender, Judaism, and religion and examine the modern construction of these categories.

**RLGN 4509 Jewish Christian Relations 50-500 C.E. (4 Credits)**

This course considers the "parting of the ways" between Judaism and Christianity, beginning with the tumultuous first century (the Jewish War and the beginnings of the Jesus tradition) and continuing through the synthesis of Christianity and Empire in late antiquity. Along the way, we will consider how Christianity and Judaism emerged from a common matrix, influenced and co-created each other, and Othered each other in their processes of self-definition. We will attend especially to the problems with the "World Religions" model, ancient identity formation, the origins of Christian anti-Semitism, the effects of empire and diaspora, and modern attempts to explain the "parting."

**RLGN 4520 Religion and Film (4 Credits)**

Can film elicit the holy? Does the story of Jacob and Esau look different when told by a North African filmmaker? How does a Buddhist sensibility shape the form of Japanese films? Can we ask theological questions about secular films? In this course films are the primary texts, supplemented by readings, lecture and discussion. Students develop the film literacy and theological and theoretical acumen to explore these and other interactions between religion and film in cultural context. While there is no explicit prerequisite, background in film or literary criticism and/or theological or religious studies is helpful.

**RLGN 4604 Religion in the Public Square (4 Credits)**

What is the proper role of religion in the public debates necessary to healthy democracy? Some argue that religion in the public square threatens the fundamental democratic right the freedom of conscience; others that only religion can insulate the communal values that make democracy possible. This course examines the best and most prominent arguments in this contemporary debate.

**RLGN 4605 Feminist Theology (4 Credits)**

Analysis of feminist theology with attention to methodological issues, the relation of contemporary feminist visions to historical material, the ideas of God/Goddess and the question of what it means to be female. Prerequisite: At least one introductory level theology course.

**RLGN 4607 Liberating Sex (4 Credits)**

The purpose of the course is to search the Christian Scriptures, in spite of its accusations of being patriarchal, to find biblically-based guidelines for developing an ethical sexual lifestyle that is aware of how racism, classism, and specifically sexism influences the current conversation on sexual ethics. This course focuses on developing healthy models that foster intimacy and vulnerability for a disjointed and at times oppressive community.

**RLGN 4608 Latinx Theology and Ethics (4 Credits)**

The primary sources of Latinx theological and ethical thought are read to discover its foundational tenets. The course explores this contextual approach to religion to discover how it could serve to liberate the Latinx community from prevalent oppressive social structures. Comparisons are made with Eurocentric ethics and theology.

**RLGN 4609 Queer Theory, Theoethics & Activism (4 Credits)**

Queer theory has transformed religious thought in extraordinary ways especially over the course of the past four decades. This course explores the nature of queer theory as a discipline within and outside of the religious academy. This course also invites students to explore the ways that queer theory intersects with theories of race and praxes of activism.

**RLGN 4610 Ethics of Neoliberalism and Globalization (4 Credits)**

People of faith have responded to the triumph of the free market economy around the world in a variety of ways. To some, "neoliberalism" seems to hold the key to sustained economic growth worldwide and, eventually, to nothing less than the eradication of poverty itself. To others, it represents the unleashing of corporate greed on a scale previously unknown, with momentous and often disastrous consequences for the working poor, the economically marginalized, and the environment. Does the new global economy signify the lifting of all boats or the race to the bottom? Does it further Christian ethical values, or subvert them?

**RLGN 4611 Theology and the Challenge of Postmodernism (4 Credits)**

An examination of representative postmodern thinkers, how they have changed the context for theology, and how theology has responded to them.

**RLGN 4612 African Theology and Post-Colonial Discourse (4 Credits)**

This course attempts to examine the relationship between the emergence of African Theology and the historical conditions which characterize Africa's encounter with the European/American will to power. The initial hypothesis to be tested is the claim that the will to power provides the locus classicus for formulating the identity of African theological reflection. This makes the latter a part of a much larger discourse on Africanity. The course takes the student through a close reading of basic texts produced by African theologians themselves. All the major issues characteristic of the discourse of African Theology is dealt with.

**RLGN 4613 Augustine and His Influence: 400 C.E. to 1000 C.E. (4 Credits)**

Theological contribution of the great North African Bishop; his major writings, such as Confessions, City of God and The Trinity; and his anti-Pelagian, anti-Donatist, and anti-Manichaean writings.

**RLGN 4614 Liberation Theologies (4 Credits)**

Consideration of contemporary liberation movements with focus on feminist, black and Third World theologies. Special concern is with what the various perspectives of sex, race and class analysis suggest for one another and for theology and social ethics generally.

**RLGN 4615 Being Human in the Modern World (4 Credits)**

What does it mean to be human? After a brief survey of traditional Christian answers to this question, we focus on the theological anthropology that has become the de facto theory of human nature since the emergence of the modern western world in the early 19th century. Theological anthropology can be the driver of other doctrines in a systematic theology; it also underpins work not necessarily seen as theological, such as ethics, development, and human rights. A rich understanding of this anthropology is necessary for theological reflection in our current context.

**RLGN 4617 Forgiveness (4 Credits)**

In the histories of philosophy and religions, 'forgiveness' emerges as a grounding concept for thinking about God, self, and community. This course examines core texts and contexts within a range of religious, philosophical, and theological discourses on forgiveness, 'loving the enemy', and reconciliation. The course explores a variety of spaces of forgiveness as well as the possibility that the 'impossibility of forgiveness' must be allowed to emerge as a valued theological, ethical, and civic principle of personal and communal identity.

**RLGN 4618 Doctrine of God in the Modern World: The Pantheism Controversy (4 Credits)**

What is the most fruitful model for thinking about God? There are a few perennial options, each of which have social, political, and ethical implications in addition to metaphysical ones. In the post-Enlightenment world a version of the pantheism model swept through philosophers and theologians, Jews and Christians, raising issues which, if possible, are even more pressing in our post-Christian context. The so-called Pantheism Controversy has the advantage of not only unpacking all the issues involved in the various models of God, but of also being a good story of the personal lives and relationships of a fascinating group of people. This course introduces students to the most pertinent writings from this controversy and engages theological and philosophical work, influenced by the controversy, from our own contexts.

**RLGN 4619 Christian Theology and Disability (4 Credits)**

Using the category of "disability" as a starting point, this seminar examines constructive theologies in which attention to human vulnerability, limitation, and interdependence is fundamental to religious thought and practice. It presents "ableism" as a form of social injustice, emphasizing its intersections with other forms of oppression. It names Christianity's past and present complicity in ableism, while also highlighting the tradition's resources for effective opposition. Consideration expands beyond persons with disabilities to include common phases of life like infancy and frail old age. The course's primary aim is to equip students to articulate theologies that affirm that which ableism devalues.

**RLGN 4620 Fanon, Foucault and Friends (4 Credits)**

This course reads the primary sources of post colonialists (mainly Fanon) and postmodernists (mainly Foucault) to explore creating ethical approaches to globalized manifestations of race, class, and gender oppression. Special attention is given to the use of Christianity as a liberationist response to global structures of oppression in spite of its historic use in causing much of said oppression.

**RLGN 4621 Kierkegaard and Existential Theology (4 Credits)**

Kierkegaard and the origins of existentialism; twentieth-century forms of existentialism and recent developments; the decline of neo-orthodoxy and resurgence of phenomenology.

**RLGN 4622 Schleiermacher as Resource (4 Credits)**

Consideration of the theology of Friedrich Schleiermacher. Analysis of the philosophical and theological predecessors of Schleiermacher as well as the tradition of theological liberalism that followed him.

**RLGN 4640 Doing Christian Ethics from the Margins (4 Credits)**

Many of us have been taught religion through the eyes of white, middle-class males. How then do we do ethics from the perspective of the disenfranchised? The aim of this course is to enable students to: construct ethical responses to case studies from the perspectives of those suffering from race, class and gender oppression; to investigate Biblical protest narratives as to the resistance and struggle against race, class and gender domination and oppression; and to examine various liberationist ethical interpretations as a source for overcoming dominant religious power structures.

**RLGN 4641 Formative White Male Ethicists (4 Credits)**

This course on formative white male figures in Christian Ethics examines the ethical canon from a historical perspective. Special attention is given to texts and traditions as living changing heritages.

**RLGN 4642 Theology and the Rise of the Historical Consciousness (4 Credits)**

Theological work today is done in the context of the rise of the historical consciousness, a phenomenon with its roots in the late 18th and early 19th centuries. We inherit a fundamentally different worldview from the worldviews of the ancient and medieval worlds that gave rise to many of the classical Christian practices and beliefs, and different from contemporary non-western worldviews. The historical consciousness leads to a particular set of assumptions about Biblical authority, identity and subjectivity, epistemology, the relationship of individuals to communities, etc. This class examines important texts in the development of the historical consciousness, analyzes issues raised for Christian theology, and points to some of the theological resources developed in its wake.

**RLGN 4643 Women and Christian Theologies from the Global South: A Postcolonial Feminist Approach (4 Credits)**

This course is a critical study of the challenges and contributions of Christian feminist theologies from the global south to theological studies in North America, particularly, Christian feminist theologies. Framed in postcolonial discourses, this course will study works of representative figures in Christian feminist theologies from Africa, Latin America, and Asia. Topics will include the impact of globalization, postcolonial discourse, religion and culture, sexuality and spirituality, and ecological concerns.

**RLGN 4644 Environmental Ethics and Global Hunger (4 Credits)**

The course seeks to develop a constructive conversation on the causes of global hunger by examining significant issues surrounding the present-day distribution of food and its negative impact on the environment. Furthermore, the course will examine what type of praxis can be employed to bring about social and political change.

**RLGN 4645 Artificial Intelligence and What It Means to Be Human (4 Credits)**

Artificial Intelligence raises pressing questions about machines: Are they really intelligent? Can they have consciousness? Ought they have moral status? Are algorithms related to computers like minds are to bodies? Do smart machines change the relationship of humans to technology? Each of these questions, in turn, is actually a question about human nature: What are the kinds of human intelligence, and are they unique to humans? Why do humans have moral status? What kinds of embodiment are essential to humans? (Do we include things like race and gender?) Are humans tool-users, or did we evolve as humans because of tools? In that case, have humans always been cyborgs? Questions about human nature are one of the classic theological loci, falling under the rubric of theological anthropology. In other words, religious traditions have thousands of years of deep thinking on these questions that are being raised in new ways (as Nick Bostrom has famously argued, AI is like "philosophy with a deadline"). This course is a sophisticated but non-technical introduction to the history of AI and to the tools and ideas of AI in its current forms. We will cover the most important ethical issues with which AI confronts us, and bring the resources of philosophy and theology to tackling some of the questions of human nature raised by AI.

**RLGN 4646 Ethics in an Age of Plagues, Pestilence, and Pandemics (2 Credits)**

The world is gripped by a deadly pandemic. This is neither the first time, nor probably will be the last. What we do know is in the aftermath of such deadly epidemics, the societal bonds which once held community together are frayed if not completely broken as radical changes take hold and new ways of being arise. This course will wrestle with the importance of maintaining a moral compass during crisis and an ethical vision as a new reality is constructed. Special attention will be given to how not all suffer equally, and the roles of racism, classism, and sexism during national emergencies. Finally, the course would assist the student in finding their own ethical voice during a time of hopelessness and desperation.

**RLGN 4647 Jesus for Christians and Non-Christians (4 Credits)**

Who is Jesus of Nazareth, and what is his relationship to Jesus Christ? This course will examine this central question in multiple religious and non-religious cultural contexts. We will use the methods of comparative theology to read ideas about Jesus in the contexts of Christianity, Islam, Judaism, Paganism, Spiritual But Not Religious (SBNR), and non-theistic texts. Students will compare and contrast these ideas of Jesus to create their own understanding of Jesus' narrative and his relationship to our present world in their particular context.

**RLGN 4648 Biblical Ethics (4 Credits)**

Anyone who reads the Bible does so from a particular social location. We are all born into an on-going society that shapes us. When we turn our attention to the biblical text as the source of our ethical perspectives, we participate in a dialogue between the written word and the meanings our community taught us to give to these words. Many of us have been taught to read the Bible through the eyes of white, middle-class males. Yet, can the text liberate those who are oppressed? To do so, it must be read with the eyes of the disenfranchised. This course will explore how the Bible can be used to bring about justice for those who suffer due to race, class and gender oppression.

**RLGN 4649 WOMANIST THEOETHICS (4 Credits)**

This course will focus on the canonical works of womanist theology and womanist ethics. Students will read the seminal texts of first wave womanist theologians and first wave womanist ethicists. Students will also read works by third wave womanists and evaluate how these texts build upon the canonical works to form what is known as the Womanist House of Wisdom. The course will seek to examine how pioneer womanist scholarship was interpreted in its historical context and how the discipline of womanist religious thought in theology and ethics was formed. Students will also explore womanist methodologies and how they can be operationalized by people outside of Black female embodiment. Finally, students will learn how womanist theoethics is used in womanist social justice praxis, pastoral care, and preached in congregational settings.

**RLGN 4650 Advanced Practical Theological Research (4 Credits)**

This collaborative seminar provides an opportunity for students to explore the process of practical theological research for their own dissertation projects and to work collaboratively to shape research that is impactful and compelling. Students will establish the theoretical framing of their project through deep engagement with a body of literature relevant to their topic, engage in rigorous contextual analysis of their research site/community, and begin the descriptive work necessary for their particular question, and in doing so refine their research question and appropriate self-reflexive research strategies necessary to their project.

**RLGN 4651 Social Issues, Social Ethics (4 Credits)**

The purpose of this course is to examine social issues through the lens of Christian Social Ethics. Students will learn about the discipline of Christian Social Ethics with focused learning on ethics from the margins and the ethics of responsibility. Students will learn how to analyze social issues through a Christian social ethical framework. A component of the course will focus on student leadership development with assignments that will develop students as leaders through the course's focus on skill development. The social issues examined in the course will vary each time the course is taught.

**RLGN 4701 Topics in the Study of Religion (0-4 Credits)****RLGN 4702 Topics in Biblical Studies (0-4 Credits)****RLGN 4703 Topics in Theological Studies (0-4 Credits)****RLGN 4761 Social Ethical Issues (4 Credits)**

Examination of the scope of Christian social ethics and the relationship of the analytic and diagnostic task to normative and prescriptive endeavor. May be repeated.

**RLGN 4762 Justice & Peace Struggles (2,4 Credits)**

Regular offerings include "Columbusday and the History of Christian Denial," "Justice in Native America," and "Church and the Colonial Residual: Pine Ridge, the Black Hills, Missionaries and Indian Justice.

**RLGN 4991 Independent Study (1-4 Credits)****RLGN 5000 Pedagogy and the Teaching of Religion (4 Credits)**

This course looks at pedagogical methods as they relate to the teaching of religion. Students design syllabi and materials appropriate for the teaching of religion in at least two different contexts. In addition, the course covers theoretical issues related to the teaching and learning process.

**RLGN 5010 Lived Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on religion as it is lived by persons and communities. The specific theme of the colloquium changes each time it is taught.

**RLGN 5020 Conceptual Approaches to Religion Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on conceptual approaches to the study of Religion. The literature may focus on specific issues, concepts, and/or social and cultural phenomena. The specific theme of the colloquium changes each time it is taught.

**RLGN 5030 Religion in Text, Image, and Artifact Colloquium (4 Credits)**

This weekly colloquium functions as a collaborative space in which students and faculty of the JDP come together to discuss an interdisciplinary body of scholarship focused on texts, images, and/or artifacts through which religion, culture and worldview can be studied. The specific theme of the colloquium changes each time it is taught.

**RLGN 5101 Methods for Interpreting Biblical Texts (4 Credits)**

This seminar addresses critical study of biblical texts, the history of interpretations and hermeneutics.

**RLGN 5102 Religious Identity in Antiquity (4 Credits)**

An exploration of the way individuals and communities understood their religious beliefs and behaviors during the Hellenistic and Roman periods. The focus is on varieties of Jews and Christians (including how they formed their identities in relation to each other), but consideration is also given to the Greco-Roman religious context.

**RLGN 5750 Professional Development (0 Credits)**

This course provides the "nuts and bolts" on not only surviving, but also thriving within the academy. Assuming that the student's goal is an eventual tenure-track position, the course demystifies the PhD route so that the student, through a working knowledge of the academy, can better position her/himself to succeed. Besides providing professional development, the course attempts to raise the level of involvement of PhD candidates in the profession, from presenting papers to publishing articles.

**RLGN 5751 Experiential Learning (0 Credits)**

This 0-credit course enables students to acquire valuable teaching and other professional experience as teaching assistants, instructors of record, researchers, or other positions on or off campus. In the case of a teaching position, it will normally only be taken after completing RLGN 5000 Pedagogy & Teaching Religion. Students should work with the JDP Program Manager at least one quarter before they plan to register in order to get this course in the class schedule when it will be needed.

**RLGN 5991 Independent Study (1-10 Credits)****RLGN 6000 Dissertation Proposal Seminar (4 Credits)**

This seminar focuses upon the range of research topics and methods in religious and theological studies by examining dissertations and dissertation proposals related to the Joint Ph.D. Program at Iliff and the University of Denver. Bibliographic and research methods and matters of style and format receives particular emphasis. Students present their own dissertation proposals for discussion.

**RLGN 6010 Comprehensive Review I: Perspectives in the Study of Religion (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in the study of religion. The bibliography is available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in theories and methods in the study of religion. This course is taken in the fall quarter of the student's third year.

**RLGN 6020 Comprehensive Review II: Area Theories and Methods (4 Credits)**

Students meet weekly for review and discussion of the bibliography for theories and methods in one of the current areas of JDP program strength: 1) Bible, ancient Judaism and early Christianity 2) Religion, Race and Ethnicity 3) Media, Art and Religion 4) Religion and its Publics 5) Religion and Human Experience or 6) Theories of Religion. Bibliographies are available on line and students are encouraged to read in advance of the course. The final exam is the comprehensive exam in the area. This review course and exam is taken in the fall quarter of the student's third year.

**RLGN 6030 Comprehensive Review III: Knowledge in a Professional Field (4 Credits)**

Students work individually or in small groups with their dissertation advisor and committee members or other faculty in the students' chosen field of specialization. The purpose is to synthesize coursework, fill in gaps, and expand knowledge needed as a professional in the specific field. The final exam is the comprehensive exam in the major field. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review IV, and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6040 Comprehensive Review IV: Knowledge in Minor Areas or Subfields (4 Credits)**

Students work individually or in small groups with faculty in the students' chosen subfield or minor area of study, or with the dissertation advisor on a deeper area of specialization within the professional field. The final exam is the comprehensive exam in the subfield or minor area. This review course and exam is taken in the winter quarter of the student's third year. It must be coordinated with Comp Review III and between these two reviews the student must have at least 3 different faculty examiners.

**RLGN 6991 Independent Study (1-10 Credits)****RLGN 6995 Independent Research (0-10 Credits)**

Joint Doctoral Program students use these credits as they work on their dissertations, beginning upon completion of comprehensive exams. Normally 8 credits are completed by each student.

## Religious Studies (RLGS)

**RLGS 3001 Judaism (4 Credits)**

A literary and historical journey through Judaism. This course examines the "Jewish story" from its roots to its modern-day manifestations, focusing on select, classic Jewish texts in their historical contexts. From them, students explore Jewish tradition and practice and actively engage with and in the vivid interpretive imagination of the authors of Judaism throughout the ages. Cross listed with JUST 3001.

**RLGS 3002 Creation & Humanity (4 Credits)**

Why am I here and what is my place in the world? In this class, students engage a wide-variety of answers to this timeless question. We focus on primary texts regarding the creation of the world and humanity's role within the world from multiple religious traditions, from ancient Near Eastern mythologies to modern spiritualities and film. Themes of the course include humanity's relation to the divine, nature, and one another; we also discuss issues of inequality and sustainability. Students also learn to perform fruitful cross-cultural comparison.

**RLGS 3003 The Moses Traditions: Jewish, Christian, and Muslim Traditions about Moses from Past to Present (4 Credits)**

The "Abrahamic Traditions" (Judaism, Christianity & Islam) are described as such because each tradition situates its origin in the figure of Abraham, yet there is another foundational figure who looms even larger in all three traditions – Moses. The Moses Traditions traces Jewish, Christian, and Islamic traditions about Moses from the Hebrew Bible through modern America, and in so doing brings into the foreground the religious and inter-religious importance of this beloved figure. Drawing from over 2,500 years of texts and traditions, students come away with a deeper understanding of: 1) how the figure of Moses is shaped and reshaped throughout history and across the globe, 2) how religious traditions portray and redescribe foundational figures to suit the ever-changing needs of their communities, and 3) how to engage a multi-faceted, culturally-embedded, and millennia-long collection of traditions in a way that yields fruitful insight into the inner workings of the religious imagination. This course is cross-listed with JUST 3003.

**RLGS 3023 Great Thinkers: Maimonides (4 Credits)**

Using "The Guide for the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), one of the central figures in medieval philosophy and Jewish thought. Our study includes analyses of his ideas on principles of faith, human perfection, intellectual vs. "imaginational" approaches to truth, pedagogy and politics, reasons for the commandments, the nature of God and divine will, the limits of human knowledge, the mechanics of prophecy, and the parameters and implications of providence. Cross listed with PHIL 3023 and JUST 3023. Prerequisite: junior standing or instructor's permission.

**RLGS 3024 Maimonides: Greek, Islamic, and Christian Encounters (4 Credits)**

Using the "Guide of the Perplexed" as our central text, we explore the complex philosophical ideas of Moses Maimonides (1135-1204), a central figure in the history of philosophy and in the history of Jewish thought. In this course, we examine in depth the relationship between Maimonides' core ideas and various Greek, Muslim and Christian thinkers, including: Aristotle, Plotinus, al-Farabi, Avicenna (Ibn Sina), al-Ghazali, Averroes (Ibn Rushd), and Aquinas. Topics to be explored include: what is "metaphysics?"; God's unity and essence as existence itself; the mystery of knowing and not knowing God (including a consideration of God's ways as well as "negative theology"—viz. the extent to which we do not know God); God as pure intellect; the nature of the cosmos and the "separate intellects"; creation vs. eternity vs. emanation: philosophical and religious perspectives on the origins of the universe and implications for "living in the world with/out God." In our study, we will also address the methodological implications of cross-religious and cross-language analyses, and how to spot and address (in your own work and in the work of others) tacit cultural biases at play in the interpretive process. Cross listed with JUST 3024 and PHIL 3024. Prerequisite: Junior standing or instructor's permission.

**RLGS 3086 The Emergence of Monotheism (4 Credits)**

This course is cross-listed with JUST 3086. Monotheism, the belief in a singular deity, did not arise out of nothing. Rather, the emergence of monotheism was a multi-stage process spanning several millennia and involving numerous religious traditions, primarily Judaism, Christianity, and Islam. This process was marked by internal and external conflict, as individuals and communities struggled to distinguish themselves from their non-monotheistic predecessors and neighbors, while often attempting to convince others to do the same. In this class, we begin with the ancient Near Eastern religious environment in which the idea of monotheism first appeared, then turn our attention to how the movement toward monotheism shapes the texts of the Hebrew Bible, New Testament, and Quran. We also look to archaeological sites and case studies in material culture to fill out our understanding of the lived experiences at play in the emergence of monotheism.

**RLGS 3090 God and Giving? Religion and Philanthropy in America (4 Credits)**

This course is cross-listed with JUST 3090 and ANTH 3090. The United States is notable for its high levels of religious participation and for its well-established and rapidly expanding nonprofit sector. In this course, we will explore these phenomena from a variety of disciplinary perspectives including anthropology, history, and religious studies in order to understand the intersections of religion and philanthropy. By looking at religious ideologies, social theory, and legal and economic contexts, we will consider how religion, government, and philanthropy shape and are shaped by one another. We will examine a number of case studies including faith responses to Hurricane Katrina, the history of philanthropy in Denver, and U.S.-based religious global giving. We will explore key questions regarding community and social responsibility and ask which actors get to define key societal problems and who is ultimately responsible for responding to these problems.

**RLGS 3102 Early Judaism (4 Credits)**

This course traces the development of Judaism in history and literature from the Babylonian Exile and the end of the biblical period through the origins of Rabbinic Judaism and the completion of the Babylonian Talmud (c. 650 CE). However, special emphasis is placed on Jewish culture in the late Second Temple period (c. 200 BCE to 100 CE) and its impact on the early Christian movement, including Jewish literature from the time of Jesus, lost texts of the Bible, new evidence from the Dead Sea Scrolls, and the few surviving historical sources of the Second Temple Period. In addition, students analyze how the Bible came to be and understand how sacred texts and their interpretations eventually became the new center of both Judaism and Christianity. Cross listed with JUST 3102.

**RLGS 3150 The Bible & Dead Sea Scrolls (4 Credits)**

This course includes an advanced study of the Dead Sea Scrolls with a particular focus on the Bible as it appears in the Qumran library. We will discuss the variant versions of the Bible, some of which were previously unknown before the discovery of the Scrolls, and how the findings of the Scrolls may question the very idea of "Bible" itself in the context of the late Second Temple Judaism. Further, we will place particular emphasis on studying the way biblical texts were engaged, interpreted and even written by the authors of the Dead Sea Scrolls. In this way, we shall explore the origins of biblical interpretation and how the notion of the Bible came to be. Cross listed with JUST 3150. Prerequisites: None. The Scrolls will be read in English translation, but those with Hebrew reading skills will have an opportunity to read/translate portions of the Scrolls in community.

**RLGS 3151 Dead Sea Scrolls (4 Credits)**

The Dead Sea Scrolls represent one of the greatest manuscript finds of the twentieth century and have been said to be the most important discovery in biblical archaeology. These scrolls offer a rare window into early Judaism and Christianity and offer us the earliest and most important witnesses to the (Hebrew) Bible. This course covers the Dead Sea Scrolls in their historical, literary and religious context in English translation, together with relevant scholarly research. Cross listed with JUST 3151.

**RLGS 3192 Christian Literature (4 Credits)**

Reading and discussion of influential historic books pertaining to Christianity. This course will focus on a selection of primary texts either from a specific period of Christianity (such as early Christianity or medieval Christianity) or on a specific topic within the study of Christianity (such as monasticism or mysticism).



**RLGS 3203 Christianity (4 Credits)**

This is an introductory course about the Christian religion, with a substantial component devoted to experiential learning. The primary goal of the course is to acquaint students with the richness, dynamism and diversity of one of the world's largest and most influential religious traditions. Even those students who have some general knowledge of Christianity benefit from the disciplined approach of the academic study of religion.

**RLGS 3205 Native Americans and Christianity in USA (4 Credits)**

This class will help students explore the forms of Christianity that have emerged among the indigenous peoples of North America. In their struggles against and adaptation to Euro-American cultural forms, indigenous peoples have developed "contextualized" forms of Christian religiosity. Students will develop a careful understanding of the multiplicity and historical contingency of Christianity as it has spread throughout the world.

**RLGS 3300 Psychology of Religion (4 Credits)**

Beliefs, feelings and actions representing human religious response of experience; function of religion in individual life.

**RLGS 3302 Islamic Fundamentalism (4 Credits)**

This writing-intensive course introduces students to the history and scope of fundamentalist movements in the Muslim world, focusing on the Middle East. Beginning with a look at the internal traditions of renewal and reform built around the idea of a return to the fundament or origins of Islam, the course examines the rise of major movements from the 1700s to the present. Students will engage with key questions, including the following: What distinguishes fundamentalism from radicalism? How do Sunni and Shii fundamentalisms differ? What roles have these movements played in politics and society, and how might these evolve in the future? How might policy makers and others best approach fundamentalist groups? A basic knowledge of Islam is assumed; students wishing to enroll without this background knowledge will be provided supplementary readings.

**RLGS 3315 Religion & Moral Psychology (4 Credits)**

Philosophical foundations and research strategies of psychological studies of moral thought; Aristotelian, Kantian and utilitarian thought included, as well as religious dimensions of morality.

**RLGS 3350 Culture, Psyche, and Religion (4 Credits)****RLGS 3370 Freud, Psychology, & Religion (4 Credits)**

Readings, discussion, and papers help students learn about the life, intellectual and social environment, and clinical and theoretical work of Sigmund Freud. Attention is given to the influence of Freud's work on the understanding of religion at the beginning of the 21st century.

**RLGS 3448 Theory of the Subject: From Hegel to Žižek (4 Credits)**

The great French philosopher Michel Foucault in his Collège de France lectures in the early 1980s characterized the theory of the subject as the very key to the development both of Western philosophy and Western thinking in general. This course will explore Foucault's thesis with reference to different theoretical models of subjectivity and "subjectification" (as Jacques Lacan calls it). It will do so through close readings of selections from the works of G.W.F. Hegel, Søren Kierkegaard, Lacan, Alain Badiou, and Slavoj Žižek as well as select portions of Foucault's 1981-82 lectures entitled The Hermeneutics of the Subject. This course is cross-listed with PHIL 3448.

**RLGS 3452 Political Theology (4 Credits)**

A general inquiry, focusing on the modern and postmodern eras, into various forms of philosophical reflection on the relationship between religion and political theory. Survey of the seminal ideas of such major thinkers as Kant, Hegel, Schmidt, Strauss, Derrida, Agamben, Asad, and Žižek.

**RLGS 3453 Is God a Racist Sexist?: Black Liberation and Womanist Theology (4 Credits)**

What is God's race? Does God have a gender? Is God on the side of the oppressed? Black liberation and Womanist theologies have asked these questions based on experience of black oppression in the context of the United States. African Americans have compelled to make sense of God in light of chattel slavery, Jim Crow laws, the Civil Rights Movement, and the Black Power Movement. This questioning continues in light of today's social environment. This seminar course will discuss the many strands of liberation theology in the United States, including Womanist theology. In addition to black liberation theology's methodologies and its challenges to the theological discipline, we will explore the origins and development of theological discourse in the late 1960s during the later part of the Civil Rights Movement and the emergence of the Black Power Movement. Black Theology is a theological perspective which draws on the diverse sources, including religious experience, art, literature, music, and lived narratives. These sources will inform our study. Students will engage critical voices that have shaped the movement such as James Cone, but also engage critiques of Cone and Black Theology. The course will also explore how liberation theologies attempt to deal with the problems of race, class, and gender. Student will be introduced to theological construction in African American communities and analyze the similarities and differences between these theological constructions.

**RLGS 3454 Capitalism, Religion, Democracy (4 Credits)**

The course explores the historical and contemporary relationship between capitalism, religion, and democracy at a theoretical level. Focus will be on the question of what exactly is capitalism as understood by key political philosophers and social theorists in relationship to the religious world views and values that authorize it. At the same time, the course will examine in what measure these world views and values also promote liberal democracy, or work against it, while offering a genealogical account of such phenomena as slavery, colonialism, gender and class domination, along with present day iterations of ethno-nationalism and neoliberal hegemony.

**RLGS 3456 Kant on Religion (4 Credits)**

A study of the philosopher Immanuel Kant's major writings on religion and their subsequent influence on critical theory and the philosophy of religion.

**RLGS 3460 Nietzsche & the Death of God (4 Credits)**

This course will involve an intensive reading and discussion of Friedrich Nietzsche's 'Thus Spake Zarathustra,' together with relevant associated materials, especially 'The Gay Science.' Cross listed with PHIL 3460.

**RLGS 3465 Derrida and Postmodernism (4 Credits)**

Cross listed with PHIL 3465.

**RLGS 3470 Mysticism & Psychedelics (4 Credits)**

The course will examine various texts, traditions, and practice from indigenous to New Age religions that fall under the general category of what has been historically labelled "mysticism." Special emphasis will be placed on chemical or plant-induced forms of altered consciousness, commonly known as "psychedelics" or "entheogens". that both simulate, and are frequently employed by different peoples in different times and places in tandem with, mystical experiences. The course will also examine the transcultural as well as the syncretic nature of mystical practices, spiritual disciplines, and the use of mind-altering substances, in particular with reference to the misuse of these forms by secular enthusiasts who are responsible for what is known as "cultural appropriation" or "neocolonial" misrepresentation.

**RLGS 3475 Deleuze and Semiotics (4 Credits)**

Examines the development of the thought of the famous French postmodern thinker Gilles Deleuze with special attention to his cultural and semiotic theory to the degree that it is relevant to the philosophy of religion. The course also investigates how Deleuze's work has shaped, and is beginning to push in new directions, contemporary postmodern philosophy. Prerequisites: must be at least junior standing and have completed at least two undergraduate courses in philosophy.

**RLGS 3500 Islam (4 Credits)**

Introduction to the history, faith, practice, culture(s), and politics of Islam, starting with the Judeo-Christian Near Eastern context in which it emerged and tracing its theological development and geographic spread around the world. Proceeding thematically along a broad historical frame, the course ends with an examination of the numerous, often competing, trends in contemporary Muslim communities.

**RLGS 3502 Contemporary Islam (4 Credits)**

This course introduces students to contemporary Islam. After a historical overview, the course looks thematically at different spheres of Muslim life. It considers changes that relate to political systems and forms of governance, styles of education, labor and professional work, changes in daily life habits such as timing and organization, changes in gender relations, and changes in religious authority. It also pays attention to the ways in which faith and practice are articulated through cultural practices like pop music and film.

**RLGS 3503 Quran and Hadith (4 Credits)**

This writing-intensive course introduces students to the key texts of Islam--the Qur'an and hadith--including their origins and meaning as well as how they have been interpreted by Muslims over time, and focusing as well on case studies that highlight issues of crucial relevance for today and the future.

**RLGS 3504 Islam and Gender (4 Credits)**

This upper-level course introduces students to key debates, historical developments, and thematic issues in the study of Islam and gender. It grounds this study in theoretical texts but takes a lived religions approach, focusing primarily on the production of "modern" gender norms in the colonial and post-colonial era. It proceeds thematically, with class sessions on sexualities, dress, reproduction, family roles, masculinities, pious self-construction, and the gendering of pilgrimage, and concludes with a look at contemporary and likely future debates.

**RLGS 3505 Gender and Politics in Muslim Pop Cultures (4 Credits)**

This undergraduate/graduate course introduces students to contemporary Muslim popular cultures, in the United States and around the world. It uses gender and politics as thematic lenses, taking a lived religions approach to phenomena that range from pious television programming to online efforts to spread Islamophobia.

**RLGS 3570 Religion and Morality in the American Public Square (4 Credits)**

Close focus on one or two moral issues in which religion is drawn into public debate in the contemporary U.S. Observation of the debate first hand at demonstrations, town meetings, and discussion groups, etc. Analysis of these observations is facilitated by readings on the subject and class discussion.

**RLGS 3642 Martin Luther King, Jr., Malcolm X and Civil Rights (4 Credits)**

In this course, students will explore the lives and religious thought of Martin Luther King, Jr. and Malcolm X, two of the most prominent black religious leaders during the height of the US Civil Rights Movement, often perceived as ideological opposites. Through engaging with their autobiographies, speeches, students will compare and contrast their thoughts on religion, race, and politics in the United States. During the course, students will be able to identify religious and political similarities and differences between the two leaders. We will also explore the development of their religious and ideological shifts in the context of the struggle for civil rights. Ultimately, we explore how their vision for racial justice developed into a call for social and economic equality and human rights.

**RLGS 3645 Religious Nationalisms: A Comparative Approach to White Christian Nationalism and Hindu Nationalism (4 Credits)**

This course examines the religious nationalism in the context of South Asia and the US. We investigate the religion, identity, politics, and power with readings/materials that explore historical memory, religious symbols/rituals/canon, political upheavals, and violent actions in both of these regions. In the context of South Asia, we will examine the British colonial period and post-independence India. In the US, we will focus our attention on post-Civil War politics and the development of the modern US polity. We necessarily interrogate the history and dynamism of important terms such as "religion", "nationalism", and "secular" in the context of Hindu Nationalism and white Christian Nationalism in South Asia and the US respectively. At the core of our inquiry is how specific religious traditions have been invoked in political contexts (and vice-versa), public displays of religiosity, and the complex dynamics of religion and the state.

**RLGS 3693 Religion and the Media (4 Credits)**

Interactions between religion and all forms of communications media in American life.

**RLGS 3694 Religion in the Virtual Space: A Critical Theory Approach (4 Credits)**

This course uses a critical theory lens to consider religious praxis, traditions, beliefs, canons, and rituals within virtual/digital spaces (e.g. websites, apps, social media, digital platforms for gaming, etc.). Students will be introduced to several scholars of virtual religious spaces and practices who use both netnography techniques and critical theory approaches (e.g. Wendy Chun, Lisa Nakamura, Michelle Zappavigna, Oliver Roy, etc.) as well classical scholars of semiotics and language (Judith Butler, Jacques Derrida, Walter Benjamin, Julia Kristeva, and others). Theoretical works are paired with ethnographic, historical and/or public scholarship/experiential to offer students a "lived perspective" critical approach to the topic of digital or virtual religion.

**RLGS 3695 Digital Religion (4 Credits)**

This course introduces students to the study of digital religion from a lived religions perspective. It begins with an examination of the history, concepts and methods of the field, and continues with thematic explorations of digital religion scholarship across varied religious traditions. Students develop an understanding of how scholars study religion and spiritual identities, beliefs, and practices online, and how the religious and digital arenas influence and shape one another.

**RLGS 3701 Topics in Religious Studies (1-4 Credits)**

An exploration of various topics and issues related to the academic study of religion. The subject matter of the course varies and may be taught by the regular faculty of the department or a visiting scholar. Some offerings may include a travel component.

**RLGS 3707 Religion and Film (4 Credits)**

Understanding religion requires us to take culture seriously. In doing so, we must consider products of culture, including popular culture. This course engages both classic and more recent films as "texts" to be analyzed, not as mere entertainments or diversions. We focus not only on those films that identify themselves explicitly as "religious" or reflect a particular religious tradition, but also moved that render the subject more obliquely, which reveal – via image and sound – religion as a complex human activity.

**RLGS 3708 First Americans in Film: Religion, Land, and Identity (4 Credits)**

This course will explore, using a chronological approach, the history of Indigenous portrayal in the US Western Cinematic tradition. Students will be exposed to a variety of interweaving historical processes; including colonial history (with particular interest in Indigenous experience), the history of the film industry, the history of Indigenous representation in film, and the history of the 20 Century United States (with particular interest in Indigenous experience). The first two weeks of the course will be dedicated to the development of a theoretical toolbox. This toolbox – consisting of a series of theoretical concepts and analytical approaches – will function as the bedrock of the class and empower students, supplying the necessary lenses through which to analyze the films that will be screened throughout the quarter.

**RLGS 3732 Feminist and Queer Theory in Religion (4 Credits)**

This course explores the intersection of feminist and queer theories with religious studies. Beginning with feminist theory, we will trace the beginning of the feminist movement and consider the ways in which religion participated in and also resisted feminism. Moving into queer theory, we will critically examine gender and sexuality and center these topics in the field of religious studies. During the course, students will reinterpret religious texts through the use of feminist and queer theory, providing a challenging critique, an imaginative reframing, or even a queering of a sacred text.

**RLGS 3740 Bodies and Souls (4 Credits)**

This course examines the unique place of the body in biblical religion. We ask how the Bible and its interpreters have shaped current views on sex and the gendered body in Western society. How has the Bible been (mis)used in relation to current understandings of the physical body? Is the saying that a "human" does not have a body, but is a body as true for the Hebrew Bible as the Christian New Testament? How have Judaism and Christianity (de)valued sexuality, procreation, and celibacy? How do the biblical traditions shape our modern opinions about the ideal physical body and body modifications? How can we understand "out-of-body" experiences and notions of death and afterlife in Western religion? Students are encouraged to interpret the Bible and their own beliefs from a uniquely embodied perspective. Cross listed with GWST 3740, JUST 3740.

**RLGS 3760 Globalization and Religion: Theory and Methods (4 Credits)**

This course explores how religious movements around the world both affect, and are affected by, the process of globalization. A major segment of the course is devoted to various theories of globalization and how they account for the increasingly important role of religion. Focus is largely on the relationship between Christianity, Judaism, and Islam.

**RLGS 3814 Modern Hinduism (4 Credits)**

Doctrines, practices and history of South Asian Hinduism; conceptions of Gods and gods; image worship and temples; and the influences of caste and gender on the experience of Hinduism.

**RLGS 3820 Buddhism (4 Credits)**

Buddhist life and thought from origins to present in India, Tibet, Japan and China.

**RLGS 3832 Religious Lives: The Dalai Lamas (4 Credits)**

This course explores the many lives of the Dalai Lamas and the transformation of a reincarnated religious teacher into the political leader of Tibet and, eventually, a worldwide religious personality. In order to understand that transformation, the course investigates the institution of the Dalai Lamas from historical, doctrinal, and ritual perspectives. We will look at the role of the Dalai Lama as an embodiment of the bodhisattva of compassion at the center of a tapestry of religious ceremony and ritual performances. The course will also consider the religious, ethical, and political thought of several of the most prominent Dalai Lamas, with significant attention given to the writings and work of the current, fourteenth, Dalai Lama.

**RLGS 3885 Islamic Mysticism (4 Credits)**

The origins and development of Islamic mysticism, including asceticism and the Sufi orders.

**RLGS 3890 Religion and Diaspora (4 Credits)**

When forced to leave a homeland, displaced communities frequently turn to religion to maintain identity and adapt to—or resist—new surrounding culture(s). This course examines the role of religion and identity in three Jewish and Christian communities living in diaspora and poses questions such as the following: What is the relationship between religion and (home)land? How have the biblical themes of exodus, diaspora, promise and restoration been applied to contemporary experiences? And how have our American stories been interpreted through the lens of the Bible? As part of the service learning component, students have the opportunity to work with religious and immigrant aid organizations in the Denver community. Cross listed with JUST 3890.

**RLGS 3891 Justice: A Biblical Perspective (4 Credits)**

This is a service learning course designed for religious studies undergraduate majors, though non-majors are welcome to enroll. Cross listed with JUST 3891.

**RLGS 3892 Grant Writing for Community Engagement and Research (4 Credits)**

This community engagement course introduces student to non-profit work and to scholarship on non-profit activities. It connects students with community partners, continuing the department's commitment to experiential learning and to engagement with living faith communities. Students spend course time discussing scholarship on grant writing and non-profit grant support and discussing logistical and other issues related to their community engagement partners. This course is intended to help provide advanced undergraduate and graduate students with arenas for future research, including possible thesis topics, while also offering a practical opportunity for professional development. Understanding 501(c)3 corporations and experience in writing grant proposals will be an asset for students planning to work in non-profits as well as for those continuing on to doctoral work.

**RLGS 3893 Buddhism and Social Justice (4 Credits)**

This course examines Buddhist theories and practices of social justice, with a focus on the contemporary global movements known as "Humanistic Buddhism" and "Socially Engaged Buddhism." The course covers topics such as: the roots of engaged Buddhism in social and political movements of 19th and 20-century Asia, the role of meditation and other Buddhist practices as both a support for and a means of social engagement, and Buddhist approaches to contemporary issues of racial justice, equality, economic development, and the environment. In the final analysis, the course asks whether the concept of justice makes sense within a Buddhist worldview, or if Buddhist concerns for social welfare hinge on an entirely different paradigm. This course is a community-engaged service learning course. As part of the course, students work with a local community partner to further their own community engagement work.

**RLGS 3898 Dharamsala: Myth, Land, and Traditions (4 Credits)**

This course explores the myths and stories that root cultural, religious, social and political traditions in the material landscape of India. It will explore the sacred spaces, images, rituals, and belief-traditions of the Himalayan region surrounding Dharamsala, India. As a study-abroad course, the materials, site visits, and community-engaged learning projects interrogate how myths operate as both cultural "glue" and demarcations of difference. Students participate in community-engaged learning placements to learn how myth creates and fosters cultural communities. Through site visits and readings we will learn how the "lived experience" of cultural belief-traditions, social and political practices, and sacred images and spaces are products of a unique marriage of land, story, and community. We will also have lectures and a Canvas site with pre-travel readings that will prepare you for the cultural and social belief-traditions we will encounter within Dharamsala. While in India, we will continue to read about ritual, devotion, stories of the land, social and political identities rooted in the land, and more. This course will be cross-listed with INTS for undergraduate and graduate elective credit.

**RLGS 3991 Independent Study (1-10 Credits)****RLGS 3995 Independent Research (1-10 Credits)****RLGS 4050 History of Islam (4 Credits)****RLGS 4100 Hebrew Bible Backgrounds: Seminar in Ancient Israelite Religion (4 Credits)**

This course is designed to train the student in the method and means of engaging in archeo-historical study of the Hebrew Bible. The content of this course focuses on ancient Israelite religion in Iron Age Palestine, particularly on emergent ideas about God ('El) and the development and evolution of the priesthood. Cross listed with JUST 4100.

**RLGS 4150 Biblical Aramaic (4 Credits)**

Reading seminar in Biblical Aramaic. This course focuses on the vocabulary, syntax and expression of Aramaic in the Bible as well as in some related post-biblical texts (Targums, Dead Sea Scrolls, etc.).

**RLGS 4980 Internship (1-4 Credits)**

Designed to provide masters students with valuable experience in non-profit, educational, faith-based, governmental, and related organizations. It helps students translate the knowledge and analytical skills learned in Religious Studies courses into a professional context, while exploring potential career paths and professional opportunities. Students interested in pursuing an internship must meet with the Undergraduate Advisor at the start of the previous quarter to discuss internship goals and identify potential placements. Students meet weekly with a faculty supervisor to monitor their internship experience, and complete the internship by writing a reflective essay. For MA students only.

**RLGS 4981 Internship in Religious Community (1-4 Credits)****RLGS 4991 Independent Study (1-10 Credits)****RLGS 4995 Independent Research (1-10 Credits)**

## Research Methods and Stats (RMS)

### **RMS 4900 Education Research and Measurement (4 Credits)**

This course is intended for Master's degree students in the College of Education. Quantitative research designs, empirical methods of data collection and interpretation, and measurement issues in research are examined.

### **RMS 4910 Introductory Statistics (4 Credits)**

This beginning statistics course examines use and interpretation of statistics in educational and human services research, including descriptive and inferential techniques. Cross listed with SOWK 5930.

### **RMS 4911 Correlation and Regression (4 Credits)**

This course focuses on the study of correlation and multiple regression research designs and their application to educational and social science programs. Cross listed with SOWK 5202. Prerequisite: RMS 4910.

### **RMS 4912 Analysis of Variance (4 Credits)**

Conceptual and applied analyses of one-way through factorial nested analysis of variance designs and multivariate analysis of variance are presented. Prerequisite: RMS 4910.

### **RMS 4914 Structural Equation Modeling (4 Credits)**

This course covers major applications of and issues related to covariance structure modeling, specifically confirmatory factor analysis and latent variable path modeling; types of research applications for which covariance structure modeling analyses are appropriate. Prerequisite: RMS 4921.

### **RMS 4915 Hierarchical Linear Modeling (4 Credits)**

This course introduces models that extend multiple regression to analysis of nested data structures common in education and other social sciences. Application of those methods to various forms of multilevel data, including repeated measure (growth trajectory) data is emphasized. Prerequisite: RMS 4911.

### **RMS 4916 Latent Growth Curve Modeling (4 Credits)**

This course covers advanced issues in longitudinal data analysis using structural equation modeling and hierarchical linear modeling with latent variables. It involves both conceptual development and practical implementation of longitudinal data analysis. This course is intended to be a hands-on approach to working with data and addressing research questions that can be best answered by longitudinal data. Prerequisite: RMS 4914.

### **RMS 4918 Propensity Score Analysis (3 Credits)**

Propensity score analysis provides a conceptual understanding of the rationale and importance of controlling for biases that might emerge during the selection process in experimental research. The common procedures of fitting a propensity score model and estimating the effect of the treatment after correction for biases are demonstrated.

### **RMS 4919 Topics in Statistics (1-5 Credits)**

Topics vary by quarter but may include log-linear analysis, factor analysis, or missing data analysis.

### **RMS 4920 Educational Measurement (3 Credits)**

This course examines the meaning, characteristics, and processes of educational measurement and evaluation. Development and interpretation of both standardized and informal tests are considered.

### **RMS 4921 Psychometric Theory (3 Credits)**

This course examines major psychometric theories (e.g., classical, item response) as related to reliability, generalizability, validity, and item analysis methods. Prerequisite: RMS 4910.

### **RMS 4922 Item Response Theory (3 Credits)**

Theory and methods for the educational and psychological measurement of latent variables using item response theory are covered in this course. Prerequisite: RMS 4910, RMS 4921.

### **RMS 4924 Advanced Measurement (4 Credits)**

This course instructs students in advanced measurement models and techniques are employed in the social sciences. Prerequisites: RMS 4921 & RMS 4911.

### **RMS 4929 Topics in Psychometrics (1-3 Credits)**

Topics vary, but include: large scale testing, computer applications of item response theory, affective measure construction, generalizability theory, additive conjoint measurement, and standing testing. Prerequisite: RMS 4921 or instructor permission.

### **RMS 4930 Quantitative Research Design (3 Credits)**

This course provides in depth study of empirical research methods involved in experimental, quasi-experimental, single-subject, and non-experimental quantitative research designs.

### **RMS 4931 Survey and Design Analysis (3 Credits)**

Survey techniques, needs assessment, item construction, sampling, maximizing response rates and data analysis; survey construction and data analysis are required. Prerequisite: RMS 4910.

**RMS 4932 Meta-Analysis Social Science Research (3 Credits)**

This course examines meta analytic techniques in the social sciences. Included are discussions of review of critical data bases, coverage of all major methods of data collection and analysis, and coverage of how best to present meta analytic findings for publication. Prerequisite: RMS 4911, RMS 4930, and preferred RMS 4912.

**RMS 4939 Topics in Quantitative Research Methods (1-5 Credits)**

Topics vary, but include minimization as an alternative to randomization, propensity score modeling as an alternative to experimental control, and analysis of data from single-subject designs. Prerequisites: RMS 4930 or instructor permission.

**RMS 4940 Structural Foundations of Research in Social Sciences (3 Credits)**

This introductory course on epistemology and research Includes discussion of identification and development of problems for research; introduction to basic quantitative and qualitative methods of conducting research in social science settings, ethnographic, and criticism methods.

**RMS 4941 Introduction to Qualitative Research (4 Credits)**

This course is designed to provide students with more in-depth understanding of naturalistic, qualitative research methods. It is assumed that students enrolling in this course have already completed an introductory research methods course in either education or another discipline. Purposes and questions posed in their course include: Why should a researcher choose to conduct a qualitative study? How are data collection strategies carried out in a qualitative research design? What are some of the ethical concerns that impact qualitative research?.

**RMS 4942 Qualitative Data Collection and Analysis (4 Credits)**

In this intermediate level qualitative research course students learn about design, purposeful sampling, field work, observational approaches, and interviews, with special attention directed to the skills and competencies needed to gather and analyze high quality data. Prerequisite: RMS 4941 or instructor permission.

**RMS 4945 Community-Based Research (4 Credits)**

This class introduces the emerging philosophical and methodological issues that arise when university faculty students collaborate on research with community-based organizations. Prerequisites: RMS 4942 and RMS 4930 or instructor permission.

**RMS 4946 Advanced Qualitative Research (4 Credits)**

This course introduces exemplary qualitative studies and consideration of implications for education and the social sciences, and considers the types of questions asked by qualitative researchers and methods they use, particularly observation and interviewing. Students undertake their own qualitative study to consider application of theory, techniques, and practice to their dissertation research. Prerequisite: RMS 4941 and RMS 4942 or instructor permission.

**RMS 4947 Arts-Based Research (3 Credits)**

In this course students explore the ground upon which arts-based research is built and become acquainted with salient issues regarding this kind of research. We practice interviewing, observations and a few arts-based practices. Prerequisites: RMS 4941 or instructor permission.

**RMS 4948 Criticism and Connoisseurship: Qualitative research and the enhancement of practice (3 Credits)**

Qualitative inquiry in educational settings takes many forms: ethnography, grounded theory, case-study research, and more. What these methods have in common is a framework built upon social science. Criticism and connoisseurship, however, draws its conceptual underpinnings from the arts and humanities. What does it mean to have a conceptual framework dependent upon the arts? How are the methods of educational criticism different from other research methods? This class teaches students how to conduct research using this method and it provides responses to these types of questions in order that students can defend this type of research as well as others that depend on the arts and humanities as their basis. Prerequisite: RMS 4941.

**RMS 4949 Topics in Qualitative Research (1-5 Credits)**

This seminar builds on the content of other qualitative research courses offered in the RMS program and meets the students where they are on their dissertation journey; thus learning opportunities are tailored to individual needs as far as possible. Assignments focus on the issues pertinent to the design of dissertation proposals and writing, including ethical issues and IRB preparation, theoretical/conceptual framework, literature review, methodology, data collection and analysis strategies, and various forms of representation. Prerequisite: RMS 4941.

**RMS 4950 Qualitative Research Methodologies (3 Credits)**

Each year this course examines three qualitative research methods. The methods that might be covered in any given year include: phenomenology, grounded theory, narrative, case study, and ethnography. For each method, the following is addressed: philosophical and historical foundations, various ways the method has been utilized, and practical recommendations for conducting research utilizing this method. Prerequisite: RMS 4941.

**RMS 4951 Mixed Method Research Design (4 Credits)**

This course is designed as a fundamental exploration of mixed model and mixed method approaches. Students design mixed model and mixed method research studies with a particular emphasis on multi-site and longitudinal designs that are especially suited to educational issues. Students learn analysis approaches that incorporate previously learned quantitative and qualitative skills, and apply these in practice problem examples. Prerequisites: RMS 4910, RMS 4930 and RMS 4941, and one of the following: RMS 4947, or RMS 4948, or instructor permission.

**RMS 4952 Research Ethics (3 Credits)**

This course introduces ethical theory and a selection of current issues in research ethics.

**RMS 4953 Topics in Data Management (1-3 Credits)**

This is a preparatory course emphasizing the manipulation and analysis of data in electronic form.

**RMS 4959 Topics in Research Design (1-5 Credits)**

Topics vary, but include single subject design issues, minimization as an alternative to randomization, advances in quasi-experimental design. Prerequisite: RMS 4930.

**RMS 4960 Introduction to Evaluation Research (3,4 Credits)**

This course provides an introduction to frameworks for designing evaluation research studies.

**RMS 4963 Evaluation Research Practice I (3 Credits)**

This service learning course provides part 1 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4963 must take RMS 4964 in the following quarter. The course is not a traditional lecture course; it is a course-embedded experiential learning course.

**RMS 4964 Evaluation Research Practice II (3 Credits)**

This service learning course provides part 2 of a 2-part introductory experience in the practical craft of evaluation. Students who enroll in RMS 4964 must have take RMS 4963 in the preceding quarter.

**RMS 4969 Topics in Program Evaluation (1-5 Credits)**

Topics vary, but include advocacy and policy change, assessment in higher education, multi-level evaluation, cost effectiveness analysis, data visualization and reporting, assessment in distance education, and evaluation in the arts and culture. Prerequisite: RMS 4960.

**RMS 4978 Practicum in Qualitative Research (1-4 Credits)**

Students may complete the Practicum in Qualitative Research with an individual professor or with a community partner. The goal of this practicum is to provide further experiences in thinking about, conceptualizing, designing, conducting, and/or presenting qualitative research. Prerequisites: RMS 4941, RMS 4942, and at least two of the following classes RMS 4945, RMS 4946, RMS 4947, RMS 4948.

**RMS 4980 Practicum in Research (1-5 Credits)**

This course provides a supervised experience in design and implementation of an empirical research or evaluation study. Organization of research proposals, completion of human subjects applications, collection, and analysis of data are emphasized. Students are expected to prepare a written report of their project which is suitable for professional presentation or publication.

**RMS 4981 Community-Based Research Practicum (1-5 Credits)**

Students provide community-based research assistance to a community partner (non-profit, school, community based organization, etc). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's research expertise with the real needs of community partners. Prerequisite: RMS 4945.

**RMS 4982 Practicum in Evaluation Research (1-6 Credits)**

Students provide evaluation assistance to a university or community partner (non-profit, school, community-based organization, etc.). Student researchers are supervised by DU faculty. This course is an excellent opportunity to match the student's evaluation and research expertise with the real needs of university or community partners. Prerequisite: RMS 4960.

**RMS 4991 Independent Study (1-10 Credits)**

This course allows Masters students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 4995 Independent Research (1-10 Credits)**

This course is for Masters students in RMS whose program requires completion of a Master's thesis.

**RMS 5771 RMS Dissertation Research Seminar (1-3 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

**RMS 5991 Independent Study (1-10 Credits)**

This course allows Ph.D. students in RMS to study a topic area independently in conjunction with a cooperating faculty member.

**RMS 5995 Independent Research (1-18 Credits)**

This course is for Ph.D. students in RMS who are engaged in completing their doctoral dissertation.

## School Counseling (COUN)

**COUN 4001 School Counseling Immersion (0 Credits)**

This on-campus experience is for students in the SchoolCounseling@Denver online program.

**COUN 4600 Orientation to Professional Counseling & Ethical Practice (4 Credits)**

This course provides an introduction to the counseling profession, including an overview of legal, ethical, and structural issues.

**COUN 4610 Counseling Techniques (4 Credits)**

Foundations and application of counseling and interviewing skills. This course emphasizes building and maintaining counseling relationships, facilitating client self-exploration and expression, and skills including, but not limited to, empathy, reflection, and challenging.

**COUN 4620 Counseling Theory (4 Credits)**

This course introduces students to basic counseling and psychological theories and philosophical principles as a foundation for professional training including history, concepts, techniques, and trends. Students gain an understanding of the theories and research related to helping relationships and develop the skills to apply their knowledge in therapeutic relationships through experiential activities. Students also develop and refine their own counseling orientation.

**COUN 4630 Research Methods (4 Credits)**

This course provides an introduction and overview of quantitative, qualitative, and mixed-methods research in counseling and education, including the development of program evaluations and assessments.

**COUN 4700 Social & Cultural Diversity (4 Credits)**

Overview of multicultural and social justice issues in the United States and their relationship with and implications for counseling. Content includes but is not limited to examination of concepts related to race, ethnicity, religion, socioeconomic status, gender, sexuality, and neurodiversity within a framework of privilege, oppression, and intersectionality. Prerequisites: COUN 4600 & COUN 4610.

**COUN 4710 Group Counseling (4 Credits)**

This course provides an introduction to group counseling theory, process, leadership, and techniques. It includes participation as a group member in a small group activity, as articulated within the course. Prerequisites: COUN 4600, COUN 4610, and COUN 4620.

**COUN 4720 Assessment & Appraisal (5 Credits)**

This course is designed to give students an introduction to the essentials of psychological testing, assessment, and report utilization. This course provides students with exposure to basic objective tests, projective tests, personality tests, and other diagnostic techniques. Prerequisite: COUN 4600 & COUN 4630.

**COUN 4730 Lifespan Development (4 Credits)**

Survey of the principles of development from conception to adulthood, emphasizing biological, environmental, and cultural factors affecting development. Prerequisites: COUN 4600.

**COUN 4740 Roles & Responsibilities of the School Counselor (4 Credits)**

This course provides an in-depth study into the roles and responsibilities of a school counselor including counselor, consultant, coordinator, and educational leader. Strategies for increasing collaboration among interested parties, attendance among students, and involvement among caregivers are included. Students will understand the role of the school counselor as an educational leader and advocate for social justice in the school setting.

**COUN 4750 Exceptionalities (2 Credits)**

Survey of research and theory related to learners with exceptionalities. This includes but is not limited to differences (e.g., cognitive, behavioral, physical) which warrant additional services toward meeting the needs of the individual. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4800 Career Counseling (4 Credits)**

This course facilitates development of knowledge, skills and competencies to engage in counseling clients with career issues, utilize occupational/career resources including technology-based resources and assessments, examine theories of career development and decision-making, develop the ability to evaluate and implement appropriate assessments, collaborate with clients in identifying personal and career goals, and organize and implement program planning and techniques in a diversity of work settings. Prerequisite: COUN 4630.

**COUN 4801 Developmental Application (2 Credits)**

Application of developmentally informed counseling skills and theories. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4805 Gender & Sexuality (4 Credits)**

This course provides students with an understanding of human sexuality and gender identities/expressions throughout the lifespan. It highlights awareness, knowledge, and skills in working with affectionally-, sexually-, and gender-diverse students in schools. The course explores impacts of our dynamic, intersecting identities on sex, sexuality, gender, intimacy, and diverse relationship structures. Prerequisites: COUN 4700 and COUN 4730.

**COUN 4810 Comprehensive School Counseling Programs (4 Credits)**

This course provides a framework for developing a comprehensive school counseling program in order to meet the development needs of students in the domains of academic, career, and social/emotional development. Students become familiar with the American School Counselor Association's National Model, the use of data to inform programmatic decision making, and factors related to school attendance and safety. The course is designed to provide students with practical experience in needs assessment, and program development, implementation, and evaluation. Prerequisites: COUN 4600.

**COUN 4815 Program Evaluation (2 Credits)**

This course facilitates familiarity with application and implementation of program evaluation concepts, including evaluation design, statistical methods, and ethical and cultural considerations. Prerequisites: COUN 4630, COUN 4730, and COUN 4740.

**COUN 4820 Counseling Youth & Families (4 Credits)**

Introduction to counseling children and adolescents, with considerations related to counseling within the family system. Includes integration of developmental, psychological, counseling, and family theories, and application of evidence-based interventions. Prerequisites: COUN 4730.

**COUN 4825 Activity-Based Counseling (3 Credits)**

This course explores activity-based counseling theory and interventions. Emphasis is placed on the ways children and youth use play, fantasy, art, and other activities to communicate. Students learn developmentally appropriate play and activity-based therapy techniques, theory, and practical application. Prerequisites: COUN 4700, COUN 4710, and COUN 4730.

**COUN 4830 Diagnosis in Counseling (4 Credits)**

This course covers the identification and treatment of psychological disorders and substance use and abuse across the lifespan. Special emphasis is placed on risks, signs, and symptoms of mental health and substance use disorders from a school counseling perspective, including common treatments and both school- and community-based resources and supports. Prerequisites: COUN 4720 and COUN 4730.



**COUN 4835 Counseling for Trauma, Crisis, & Grief (4 Credits)**

Through combination of lecture, role plays, and case conceptualization, this course provides students with foundational knowledge of theories, models, and best practices for trauma, grief, and crisis across the lifespan. Emphasis will be placed on learning how to differentiate between trauma, grief, and crisis when assessing, conceptualizing, and providing services to P-12 students. This course will also address the individual and systemic impact of trauma, crisis, and grief on students, families, and communities. Prerequisite: COUN 4700 & COUN 4730.

**COUN 4840 Educational Strategies and Policies (4 Credits)**

This course provides an overview of the history and current issues in legislation and government policy relevant to school counseling. It provides training in advocacy, leveraging community resources, differentiated instruction, multilingual learners, and classroom management to prepare students for engaging with a diverse P-12 student population. Prerequisites: COUN 4740.

**COUN 4850 School Counselor Interventions (4 Credits)**

This course focuses on developmentally appropriate evidence-based interventions used in a school setting for prevention and intervention to support and promote academic achievement and post-secondary success. The course explores interventions to address common social emotional, academic, and career-related issues faced by students in schools, including culturally competent peer-, community-, and family-based approaches. Prerequisites: COUN 4810.

**COUN 4900 Practicum (4 Credits)**

A minimum of 100-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4740.

**COUN 4901 School Counseling Field Supervision (1 Credit)**

This course provides group supervision for students completing supervised field experience in roles and settings with clients relevant to their specialty area. Prerequisite: COUN 4900. This prerequisite may be taken concurrently with COUN 4901.

**COUN 4910 Internship I (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4900.

**COUN 4920 Internship II (4 Credits)**

A minimum of 300-hour supervised field practice in a school setting, accompanied by weekly live session meetings which provide group supervision. Students' field practice must be supervised by an approved, appropriately credentialed school counselor. Prerequisites: COUN 4910.

## Security Management (SMGT)

**SMGT 4050 Security Concepts Overview (4 Credits)**

This course provides an introduction to the main principles and issues in business and organizational security management. Topics include protection of, and assessing the loss potential of, personnel, facilities, and information, and continuity of operations. The course makes extensive use of case studies and analyses, field exercises and research.

**SMGT 4100 Business Function of Security (4 Credits)**

This course will provide the student with an overview of security operations in a business environment. Students will be able to develop and integrate theory and principles common to the design and implementation of systems—broadly defined—for the protection of people and property in public, commercial and residential settings from loss associated with fire, casualty, disruption, and crime. Students will review the historical, theoretical, managerial, and technological bases for the fields associated with protection management: security management. Students will review security design issues and technologies applicable to structural and nonstructural environments. Students will examine alternative roles and structures for protection management in public, private, and independent sector organizations, and their relationships to law enforcement organizations.

**SMGT 4150 Risk Management (4 Credits)**

This course will examine the concept of enterprise risk management as it applies to the corporate security setting by analyzing and assessing multiple area of corporate and public sector risk. Students will address real-world risks through a variety of case studies.

**SMGT 4200 Integrated Security Systems (4 Credits)**

This course covers the integration of physical, personnel, and information security, including the use of information technology to enhance physical and personnel security. Students will learn the essential elements of system design, development of procedures, testing and maintenance of integrated security systems. This will be accomplished through case studies and practical exercises.

**SMGT 4210 Critical Incident Management (4 Credits)**

This course will discuss the management concepts of a critical incident, whether it is the government response to a hurricane like Katrina or a corporate response to an internal emergency. The course follows the basic accepted tenets and structures of emergency response that connect all government agencies as well as private business. This course diverges from other Critical Incident Management courses in that it not only introduces the fundamentals of critical incident management but also challenges the student to look beyond accepted protocols and develop specific alternatives for their organization.

**SMGT 4220 Hazardous and Radiological Material Preparedness (4 Credits)**

This course introduces the student to the hazards and dangers of Hazardous and Radiological substances. The course is designed to introduce the hazards and the techniques of planning for emergency incidents involving these substances. This course follows the accepted emergency response guidelines and principles of FEMA. Students will learn the use of software and how to develop a hazardous materials operations plan.

**SMGT 4230 Mitigation for Emergency Managers (4 Credits)**

This course prepares students to meet the growing demand for emergency and disaster management planning through the mitigation phase of Emergency Management. Current practices are the result of a growing recognition that all levels of government, service organizations, and the private sector must become involved in collaborative mitigation of existing hazards in order to lessen the impacts of a full range of natural and human-caused disasters and their consequences. In this course, students will analyze the key factors that shape the planning environment and process. They will apply current policies, laws, and guidance to the development of a mitigation plan for a community, organization, or business. Although the development of a completed emergency/disaster plan requires the involvement of many stakeholders and is beyond the scope of this course, the draft mitigation document students will develop will provide students with the skills needed to effectively lead a disaster planning team.

**SMGT 4240 Emergency Incident Recovery (4 Credits)**

Assuring resiliency for any community or organization is of equal importance to the other phases of emergency management. This course addresses the final phase of emergency management: recovery. The course will address the many planning aspects of establishing a recovery plan. Students will formulate policies to aid in returning operations and life to normal following a disaster.

**SMGT 4250 Threats in Information Security (4 Credits)**

This course investigates emerging protection concepts for the information age. Students identify threats to security systems, discover vulnerabilities, and suggest and design protection systems. Topics include management of information security and data processing facilities, data theft, misuses of information technologies, computer viruses, hacking, and network protection. The course also covers information technology laws, privacy issues, and information security planning.

**SMGT 4300 Security Administration (4 Credits)**

This course will provide the theory and practical application of the administration of the security function within a business. Students will examine and recommend strategies for managing the security staff, communicating security related information to different audiences, building and maintaining a security team, identifying business risks, developing key performance indicators including budget, and evaluating the need for security-related hardware and software. This class examines a broad range of topics from organizational design to HR issues. Students will learn that not only must they ask the right questions, but they must ask them in the way that is appropriate for the subject matter and the circumstances.

**SMGT 4350 Business Assets Protection (4 Credits)**

Students examine the application of security knowledge and techniques to the protection of business assets. The security planning process is examined by the study of risk analysis, security surveys, and financial planning and decision making for development of security programs and countermeasures.

**SMGT 4400 Emergency Planning (4 Credits)**

The process of Emergency Management contains four very distinct phases with overlapping intricacies within each of the four. Emergency Planning is the first process that must be addressed by any organization when protecting life, property, or business continuity in response to an emergency or disaster. This course addresses the Planning phase of Emergency Management through the establishment of planning teams, threat assessments, hazard identification, and implementation of an overall Emergency Operations Plan.

**SMGT 4450 Legal & Ethical Issues in Security Management (4 Credits)**

This course examines ethical challenges and legal issues which security professionals in business and organizational security face in our global environment. Students will examine critical issues such as ethical principles, organizational values, ethics law, how to maintain the integrity of internal investigations, ethical and legal compliance; training programs, and examine aspects of legal responsibility, accountability, and liability related to security professionals and their organizations.

**SMGT 4500 Human Factors in Security (4 Credits)**

This course examines the challenges security professionals face in dealing with human factors in the course of protecting people, organizations, and information in our global environment. Students will examine and discuss critical contemporary issues such as effective leadership characteristics, workplace violence, insider threat, fraud, stalking, terrorism and other relevant topics as well as how to perform a risk analysis and conduct a workplace violence assessment audit.

**SMGT 4550 Workplace Investigations (4 Credits)**

Too often the Security Department is called upon to conduct an independent investigation for another business unit within the organization. This can include Compliance, HR, Employee Relations, Audit, IT, and others. While many of these investigations will be allegations of misconduct against individuals, they can also be business process reviews to determine root causes of business process failures. The Security Team is often tapped for these assignments because they are not only viewed as independent, but also as the most experienced in conducting interviews, writing investigative reports, and dealing with evidence. This class examines investigative techniques, documentation, and common pitfalls.

**SMGT 4701 Topics in Security Management (1-6 Credits)**

The content of this course varies each time it is offered. The topics may include time-sensitive issues from the film industry, elective courses that are not scheduled regularly during the course of the year, or advanced inquiry into core-course subjects. Each time the course is offered, the specific content is announced in the quarterly course schedule. Depending on the subject matter, students may be required to have completed prerequisite courses.

**SMGT 4901 Capstone Project (4 Credits)**

The Capstone Project provides students the opportunity to research a topic, problem, or issue within their field of study, and work individually with a Capstone advisor. Similar in weight to a thesis, but more flexible, this final project will synthesize and apply core concepts acquired from the program. The student will select an appropriate Capstone advisor who is knowledgeable in the field of study to work closely with and whom can guide the research project. Evaluation will be focused on the quality and professionalism of applied research and writing; critical and creative thinking; problem-solving skills; knowledge of research design, method, and implementation; and contribution to the field and topic of study. Please see the Capstone Guidelines for additional details. Prerequisites: A Capstone Proposal that has been approved by both the Capstone Advisor and the Academic Director, acceptance as a degree candidate, completion of at least 40 quarter-hours (including all core courses) with a cumulative GPA of 3.0 or better.

**SMGT 4902 Capstone Seminar (4 Credits)**

The purpose of the Capstone Seminar is to develop and apply transferable professional skills to persuade decision-makers. The course requires students to identify a Capstone subject matter, develop a premise, and argue for an applied solution. Students will conduct research to create a strong argument that supports their premise by considering purpose, need, and audience and will provide evidence that the premise can be implemented. Tasks include gathering and evaluating appropriate source information, writing a strong solution in support of the premise, and then defending the solution. Students will write a Capstone paper and prepare a presentation suitable for professional exposure through publication and/or presentation.

**SMGT 4910 Research Practices and Applications (4 Credits)**

This course develops competencies including principles and practices of: academic inquiry, writing, and ethics. Students will complete Institutional Review Board (IRB) training, data collection, analysis, and evaluation; and synthesize application of peer-reviewed literature. Competencies will be applied and integrated throughout the course of study and demonstrated in the culminating work of the master's degree. Competencies are additionally developed for use in professional employment settings.

**SMGT 4980 Internship (0-4 Credits)**

The internship is designed to offer students a purposeful experience in a practical, industry related setting. The internship is an individualized learning experience and a training plan is created for each student in conjunction with the internship site to provide experiences related to the skills and knowledge covered in the certificate and master's programs.

**SMGT 4991 Independent Study (1-8 Credits)**

This is an advanced course for students wishing to pursue an independent study. The student must be accepted in a degree program, have earned a grade point average of 3.0 or better, obtained the approval of the department director, and have completed the Independent Study form and filed the form with all appropriate offices before registering for the independent study. Independent study is offered only on a for-credit basis.

## Social Work (SOWK)

**SOWK 4000 Professional Development Seminar (1 Credit)**

The Professional Development Seminar prepares students to develop a reflective practice and to make connections between applicable lived experience and the learning process, emphasizing professional social work identity. The course provides a supplement to the foundation curriculum and an opportunity for students to discuss their professional growth as social workers. The seminar provides opportunities to reflect on social work values and ethics, populations served, and the many fields and career pathways of social work practice. In conjunction with the foundation curriculum, key ethical issues and requirements are discussed so that students can deepen their understanding of ethics in practice with consideration of local, national, and global contexts. The course also gives an opportunity to reflect on their learning styles, participation in group work and the developmental process of practice. The ideas of conscious use of self and self-care concepts will be explored through a variety of learning modalities.

**SOWK 4001 Clinical Social Work Skills (3 Credits)**

This foundation course focuses on basic skills for micro social work practice with individuals and small groups. The framework of intentional interviewing teaches students to think critically about applying the skills for engagement, assessment and intervention. Attention focuses on use of these skills with clients from multiple social identities (e.g. ethnic, racial, sexual orientation, gender affiliation) and the pitfalls of practitioner micro-aggressions. An active learning approach requires students to participate in role-play exercises both in and outside of class. Students digitally record some of those exercises and share them with the class and instructor.

**SOWK 4003 Clinical Social Work Theory and Practice (3 Credits)**

This foundation course helps students develop a multi-dimensional assessment and intervention framework for clinical social work practice. This course builds upon knowledge of human behavior in the social environment and adds a focus on theories of change - at the individual and family level. The course is grounded in empirical information about the importance of relationship skills, across a variety of classic and modern approaches to intervention. We use a social work lens to emphasize the importance of context in client lives, including their socioeconomic status, cultural history, and experiences of oppression. Since no single theory captures the totality of human experiences, we integrate a variety of intervention techniques from multiple human behavior theories and ground them in a social work framework for ethical and effective clinical practice. Pre-requisite courses: SOWK 4020 and SOWK 4006 and SOWK 4001.

**SOWK 4006 Human Behavior and the Social Environment: Theory and Practice (3 Credits)**

This foundation course provides an overview of theoretical frameworks for understanding human behavior from a social work perspective. Theories reviewed include the developmental stages across the life cycle in terms of psychological, cognitive, moral, spiritual, identity and social development. Students apply a biopsychological assessment across the life span. The course emphasizes a social work perspective and key frameworks for social work, with an emphasis on the person in environment and systems theory as they describe diverse individual behavior in relation to social class, race and ethnicity, age, gender orientation, sexual orientation, and other multicultural backgrounds. The course aims to develop students' foundational understanding of how theories are used to promote relationship development with diverse individuals and to guide interventions across all system levels. Students may test out of this course and substitute an advanced course in human development, with advisor approval, if they have already successfully completed an equivalent course in human development.

**SOWK 4007 Community and Macro Social Work Theory and Practice (4 Credits)**

This foundation course provides students with a foundational level understanding of macro social work practice and roles. The course builds upon knowledge of human behavior in the social environment, and adds theories of change to understand diverse communities and social service networks and the relationship of local, national and global interventions. The course introduces students to empirically supported models and emerging interventions that address macro level social issues. Students complete community/organizational assessments and also participate in work groups to learn how to engage, assess, and intervene in communities and organizations.

**SOWK 4020 Integrated Social Work Practice for Social Justice (4 Credits)**

This foundation course focuses on professional development and identity for social work practice. The course emphasizes values, ethics and ethical decision making in the context of the history of the profession. Students are introduced to person-in-environment, critical theory and empowerment perspectives and apply these concepts to current field of practice and social work roles. Through integration of field placement experiences, students analyze and apply social work frameworks and generalist practice theories to current social justice challenges and diverse contexts that social workers face.

**SOWK 4050 Introduction to the Graduate Internship (1 Credit)**

The Introduction to the Graduate Internship seminar prepares students to enter the profession of social work at a graduate level. The course provides an overview of social work values and ethics, populations served, and issues that concern social workers. Through engagement in the course content, students will complete a readiness for field assessment, including their personal and professional motivations to join the profession and serve diverse communities. Students will be exposed to the social work profession's signature pedagogy, field education, and the stages of experiential learning. The course will also help students develop learning goals for field education and identify potential internship sites.

**SOWK 4120 Social Policy Analysis, Advocacy, and Practice (3 Credits)**

This foundation course analyzes contemporary societal needs and problems, as well as the historical and current context of U.S. social welfare programs and policies. It presents frameworks used to define social problems and analyze social problems, and introduces students to the policy-making process and the role of policy in service delivery with special emphasis on programs designed to aid the poor and the policies that shape them. The course is designed to help social workers advocate for policies within the social welfare system that advance social well-being and fulfill their ethical obligations to improve social conditions and promote social justice.

**SOWK 4132 Power, Privilege and Oppression from a Critical Multicultural Perspective (3 Credits)**

This foundation course examines the phenomena of power, privilege and oppression and their effect on individuals, families and communities in the context of the values of social and economic justice and the social work profession. The course is intended to increase awareness of the intersectionality of multiple oppressions with a focus on race/ethnicity, gender, socioeconomic status and sexual orientation. Students will gain a beginning self-awareness to identify the influence of personal biases and values that impact practice with diverse groups.

**SOWK 4150 Foundation Seminar (1-2 Credits)**

Required seminar format used to facilitate the integration of the foundation field practicum and the professional foundation course content; emphasis on linking classroom learning with practice in the field, integrating theory with professional practice; field practicum situations and issues used for discussion and deliberation. Co-requisite: SOWK 4950.

**SOWK 4151 Foundation Seminar I (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation.

**SOWK 4152 Foundation Seminar II (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4151.

**SOWK 4153 Foundation Seminar III (1 Credit)**

This required seminar format is used to facilitate the integration of the foundation field practicum and the professional foundation course content, with emphasis on linking classroom learning with practice in the field and integrating theory with professional practice, and field practicum situations and issues used for discussion and deliberation. Prerequisite: SOWK 4152.

**SOWK 4201 Evidence for Practice (3 Credits)**

This foundation course focuses on developing student skills in identifying, analyzing, and applying empirical evidence in order to inform their social work practice. The course introduces students to studies designed to examine the effectiveness of interventions. The course aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may critique the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4202 Creating a Regenerative Future (3 Credits)**

This course explores how we can create a regenerative future that is life-renewing for people and planet—a future in which all people, species, and ecosystems thrive. The concept of a “regenerative future” will be examined for how it goes beyond the limitations of a sustainability paradigm and analyzed from the lenses of ecological justice and power, privilege, and oppression. This course will use frameworks of permaculture, regenerative design, and futures thinking to move beyond “fixing” climate change or other planetary emergencies to a more robust, holistic framework for planning socio-ecological change. Students will gain skills of regenerative design, regenerative mapping, and emergent theories of change. These skills will be discussed in a vast array of applications (with both social and ecological systems) to focus on integration and regeneration of humans and the more-than-human world.

**SOWK 4203 Environmental Change Impacts and Resilience Strategies for Mental Health (3 Credits)**

The impacts of the climate crisis and global environmental degradation are becoming increasingly apparent upon mental health. Social workers are well positioned to address the mental health implications of the climate crisis, ecological injustice, and environmental degradation. Understanding how these phenomena bear upon the mental wellbeing of clients and communities will be explored in this required choice methods/skills class. Emphasis will be placed on building resilience to climate grief, solastalgia, eco-anxiety, and climate trauma utilizing a strengths-based perspective. Students will develop knowledge and awareness of how climate change impacts our thoughts, emotions, and behavior to be of support to clients and foster self-care as social work practitioners.

**SOWK 4204 Policy Advocacy for Ecological Justice in the U.S. (3 Credits)**

Contemporary policies in the U.S. are critically analyzed for how they promote or hinder human well-being, environmental sustainability, and ecological justice. Students will analyze policies and develop advocacy skills, with emphasis on intervening at local and state levels of U.S. policy making.

**SOWK 4205 Contemporary Ecological Justice Issues and Social Work Practice (3 Credits)**

This course is designed to support student learning by providing a dynamic review and exploration of contemporary social work issues with a focus on communication and intervention skills for ecological justice social work practice. Current events related to contemporary ecological justice social work practice, theory, or research will be covered included but not limited to: global environmental change, climate justice, environmental degradation and eco-systems loss, disasters, and instances of environmental and ecological injustice. Contemporary social work practice problems and possibilities are elevated, especially in the regard of trending and emerging interventions in social work practice. In this course, students will learn about the disproportionate burdens of ecological injustices in communities at the local, state, national, and international levels. From a social justice perspective, students will critically explore, analyze, and discuss current ecological injustices and relevant social work interventions and communicate them ethically and effectively utilizing web 2.0 platforms and social media outlets.

**SOWK 4232 Critical Race Theory Praxis and Social Work (3 Credits)**

An advanced multicultural social work practice course, this uses the fundamentals of Critical Race Theory (CRT) as a framework for contextualizing and intervening with client systems at the micro, mezzo, and macro levels. This course is a values elective for all concentrations. CRT is used as a framework to examine, critique, and challenge the way that race and racism is unwittingly sustained and perpetuated by traditional social work approaches to the amelioration of personal and social ills. Through this course, students learn the central tenets of CRT, how to evaluate traditional social work practice using these tenets, and begin to design to design a professional social work practice that uses CRT tenets as a foundation for micro-, mezzo-, and macro-level interventions. This course is offered within the concentration curriculum as a Values for Practice course to assist in the training and preparation of social workers practicing with historical underrepresented and marginalized clients and communities of color. Students develop skills and techniques grounded in anti-oppressive culturally grounded social work practice.

**SOWK 4235 Disproportionality and Disparities Across Systems: The Impact on Children and Youth (3 Credits)**

This course will explore the interrelatedness of institutional racism and discrimination across major social systems within the U.S., focusing on the historical context of current racial disproportionalities and disparities in youth service systems such as child welfare, juvenile justice, mental health, education, and health. Using a critical lens, the course is designed to help students analyze how policy decisions have long-range impact on generations; specifically for children and youth of color. Students will have the opportunity to apply this critical lens to their current field placement and the youth populations they serve. As an elective course, the class is open to all GSSW students; however, students concentrating in child welfare, children and youth, and families are especially encouraged to take the course.

**SOWK 4240 Intergenerational Justice (3 Credits)**

This course engages students in the conversation, scholarship, and social work practice issues related to how social justice is promoted across age groups and generational cohorts (i.e., baby boomers, generation X, millennial generation). While looking at debates for how families, local communities, states, and nations link age to power, decision-making, funding, and access to resources, the course also examines what within age group issues of injustice and inequality persist. Topics include: generational equity in terms of government budgets and debt, intergenerational issues related to sustainability and ecological justice, age-based versus need-based service delivery models, interventions to address intergenerational conflicts within families, and best practices in intergenerational social service models. This course is designed as a seminar course for social work students from any concentration to explore values related to social justice as they play out across all levels of practice.

**SOWK 4245 Restorative Approaches in Social Work Practice (3 Credits)**

This course applies the conceptual framework, strategies, and benefits of restorative approaches to social worker roles and responsibilities. This course is designed to help students develop a historical and theoretical understanding of restorative approaches, build restorative-based skills that can be used in a variety of roles, and apply restorative approaches to a variety of client population systems, settings, and needs. Ethical dilemmas, cultural competence, and decision-making in restorative approaches, and the impact this has on oppressed populations, will be discussed. This course fulfills the Values for Practice requirement, and is a general elective with relevance to all social work concentrations. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4250 Concentration Seminar (1 Credit)**

This course is taken (by distance education students only) concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. This is also an evolving seminar co-created between faculty and students. Clinical issues and skill development at a more advanced clinical level is integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first year learning. Prerequisite: SOWK 4150 or 4153 or SOWK 4299.

**SOWK 4251 Concentration Seminar I (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed.

**SOWK 4252 Concentration Seminar II (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4251.

**SOWK 4253 Concentration Seminar III (1 Credit)**

This course is taken by MSW@Denver students concurrently with the concentration year field practicum and the concentration year required courses. The purpose of this course is to integrate the concentration field experience and concentration year course work to prepare students for employment as professional social workers. Clinical issues and skill development at a more advanced clinical level will be integrated into the seminar format as well as topics the student and faculty members agree upon that will enhance their first-year learning. Concentration field experiences and their relationship to concentration year field competencies will also be discussed. Prerequisite: SOWK 4252.

**SOWK 4260 Contemporary Social Work Issues in Western Colorado (3 Credits)**

In this hybrid seminar course, students will learn about the disproportionate burdens of environmental injustices in communities across the Western Slope of Colorado. From a social justice and human rights perspective, students will critically explore, analyze and discuss current environmental health disparities and relevant social work interventions. Students will review environmental health and environmental justice theories and perspectives as they bear on place-based case studies from the region. Students will use contemporary media and relevant web 2.0 platforms, including social media to demonstrate understanding of applied e-advocacy social work practice while exploring such case studies.

**SOWK 4299 Advanced Standing Seminar (3 Credits)**

The seminar reviews knowledge, skills and values that form the basis of GSSW concentration year curricula in clinical practice, community practice and policy practice. The seminar combines content planned by instructors with individualized guided study and planning for field instruction based on student self-assessments. Prerequisite: Admission to advanced standing program.

**SOWK 4302 Advanced Evidence for Practice (3 Credits)**

This course engages continuing social work students in further developing skills for using research evidence in social work practice. These skills support social workers' need to engage in practice-informed research and research-informed practice, as well as facilitates access to resources in the evidence base to support all aspects of social work practice. This course invites students to consider the place of scientific inquiry and research evidence in the resolution of social problems at various levels (e.g. individual, group, organization, community, or societal). This course further develops student skills in identifying, analyzing, and applying empirical evidence to inform their social work practice. The course focuses on studies designed to examine the effectiveness of interventions, aids students in developing a familiarity with basic research concepts such as research design, internal validity and external validity, so that they may assess the utility of evidence for practice. Students also engage in critically examining available evidence for biases and relevance for the diverse array of clients, populations, and contexts with which they work.

**SOWK 4303 Advanced Standing: Engaging Anti-oppressive Social Work (3 Credits)**

This course examines the individual, family, community, and societal factors that are linked to the dehumanizing of people engaged with social work institutions. The course is intended to increase analytical skills in the context of individuals, families, organizations, and communities in the preparation for engaging in anti-oppressive practices in micro and macro social work processes. This course uses an ecological systems approach to introduce students to the dynamics of power related to social problems and social action and its impact on social work's engagement with human communities and the environment.

**SOWK 4305 Child Maltreatment: Causes and Developmental Consequences (3 Credits)**

This course examines theory and research concerning causes and developmental consequences of child maltreatment, as well as theory and research concerning attachment and the developmental consequences of separation and loss that often follow intervention in child maltreatment.

**SOWK 4315 Critical Theories of Child and Adolescent Development (3 Credits)**

This course provides students with knowledge of critical theories of child and adolescent development. The course focuses on understanding development in context, considering the concepts of trauma, damage, resilience, potential, difference, resources, and healing. Ecological factors, including systemic conditions, that are deleterious to development and those that promote healthy development will be considered. The role of oppression in enabling or constraining children and adolescents' progressive developmental trajectories will be highlighted.

**SOWK 4320 Family Systems Theories for Social Work Practices (3 Credits)**

This course introduces systems theory as it is applied to family contexts which may include traditional therapeutic settings, home-based practices, parenting approaches, family religious/spiritual strength and conflict, and transgenerational family processes. Emphasis is given to the integration of theory, practice, and skill development. Students will also explore family organization and development and family subsystems, as they apply to assessment, case conceptualization, and intervention from a family systems perspective with clients, individuals, couples, families, organizations, constituencies, and communities. This course analyzes intersecting issues of power, privilege, and oppression, and requires that students examine their own personal characteristics, preferences, experiences, biases, predispositions, and affective reactions that influence the professional relationship.

**SOWK 4323 Psychopharmacology (1 Credit)**

This course is intended for social work students who plan to work in mental health and health care settings. Students will be introduced to a basic understanding of neurobiology and pharmacotherapy addressing the more common DSM-5 diagnoses. Key medications, including indications, symptom management, and side effects will be addressed. Students will be introduced to the most common medications that providers in medicine and psychiatry use to help improve clients' functioning. The course will provide the basics of the language used to discuss pharmacotherapy and will improve students' ability to interact with prescribers in order to improve care and coordination. The course will emphasize the role of the social worker in alerting medical providers to adverse side effects experienced by the clients, as well as improvement or lack thereof. Critical thinking about pharmacotherapy will emphasize that a good differential diagnostic process must precede any attempt to prescribe medication, just as it precedes the selection of a psychotherapeutic modality. The course will also explore cultural and ethical considerations around the prescription of psychotropic medications.

**SOWK 4325 Evolving Perspectives and Trends in Health and Wellness (3 Credits)**

This course provides an overview of the frameworks that inform social work practice in the area of health and wellness. The broad concept of health is examined for its understanding and meaning in communities and cultures along with the historical and conceptual bases of public health. There is a focus on understanding racism in health and the impact of health inequities for historically marginalized and oppressed communities. While studying evolving trends in health, a range of topics are covered including a systems perspective along with the integration of health, mental health & wellness. There is a focus on health equity, the social determinants of health, prevention, wellness, complementary and alternative practices with an emphasis on social work's role as change agents working towards solutions and promoting equity.

**SOWK 4330 Assessment of Mental Health in Adults (3 Credits)**

Focuses on the assessment of psychological, social and biological contributors to mental health disorders in adults and the use of this assessment as a guide for treatment/clinical interventions. Examines the strengths and weaknesses of the DSM-IV classification system in terms of social work values and ethics. Examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category, and reviews a variety of assessment tools in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged populations.

**SOWK 4334 Assessment of Mental Health in Children and Adolescents (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children and adolescents and the use of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a guide for mental health assessment. The course examines the strengths and weaknesses of the DSM-5 classification system for children and adolescents, especially in the context of culture and social work values. It examines symptoms, theories of etiology, and prognosis within each diagnostic category and reviews diagnostic challenges in the context of gender, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged children and adolescents.

**SOWK 4338 Assessment of Mental Health Across the Lifespan (3 Credits)**

This course focuses on the assessment of psychological, social and biological contributors to mental health disorders in children, youth, adults, and older adults and the use of this assessment as a guide for treatment/clinical interventions. It examines the strengths and weaknesses of the DSM-5 classification system in the context of social work values and ethics. It examines symptoms, theories of etiology, treatment interventions and prognosis within each diagnostic category and reviews a variety of assessment tools in the context of gender identity and expression, ethnicity, cultural diversity, sexual orientation and historically oppressed and/or disadvantaged population.

**SOWK 4340 Leadership and Supervision Skills (3 Credits)**

This course examines the application of leadership and supervision theories to practice settings in communities, organizations and policy contexts. A focus is placed on leadership roles and an examination of leadership styles, with an emphasis on the skills of transformational leadership and supervision. Topics covered include team leadership and supervision, one to one supervision skills, managing conflict, personnel management, and cross cultural work.

**SOWK 4345 Intersections of Mental Health, Substance Use and, Trauma (3 Credits)**

This course is an advanced theory for practice course with builds upon foundation courses in Human Behavior in the Social Environment (HBSE) and clinical theories, and covers conceptualization, dynamics of, and interventions in mental health, substance use, and trauma. The course examines the independent and intersecting theory bases of mental health, trauma and substance use approaches. It also explores recent evidence about individual and environmental risks associated with these conditions and evidence about both specific therapeutic interventions and the importance of common relational factors. Social workers make up one of the largest professional groups working with clients living with mental health concerns, and bring a unique person-in-environment and strengths perspective to that work, which fits well with a recovery philosophy. Clinical frameworks and interventions common across these fields, such as harm reduction, motivational interviewing, self-determination theory, and the transtheoretical model of changes are presented, and students are introduced to integrative approaches that show promise in responding to client conditions.

**SOWK 4350 Evolving Perspectives and Trends in Aging (3 Credits)**

This course provides an overview of how theories of aging inform the role of social workers with older adults and their families across a range of service settings, including emerging fields of practice. The course examines multiple perspectives on the late life adult years, spanning the period from middle adulthood and on into late life, including: historical, biological, psychological, social, cross-cultural, and spiritual theories and related empirical evidence. While addressing evolving trends, the importance of difference, and ethical implications the topical issues include: work and retirement; economic status; residence and housing location; education and learning styles; interpersonal relationships with partners, families, and peers; creativity, spirituality, and religiosity; political beliefs and ideologies (including the formation, maintenance and alteration of prejudice and racism); the experience of chronic illness, disability, and death; and wisdom attained during adulthood and aging.

**SOWK 4355 Genocide: A Social Justice Issue (3 Credits)**

Genocide is both the gravest of crimes under international law and the ultimate violation of human rights. After the Holocaust during WWII, a strong cry of "never again" became the symbol for the world's desire to stop genocide and other crimes against humanity. Unfortunately genocides and other atrocities continue to happen around the globe, including during our present day. This course will study the role that nationalism, propaganda, the media and film have played and continue to play in genocide. We will study how these factors played out in Armenia, the Holocaust, Rwanda and Bosnia, as well as the current situation with the Rohingya people. The role of the United Nations will be studied. We will seek to understand the role of power, privilege and oppression as well as political forces in defining a crime against humanity as a genocide or not. The stages of genocide will be studied and applied to current situations around the globe, including the United States of America. We will pay close attention to how mass atrocities end as well as how they might be prevented.

**SOWK 4360 Social-Ecological Resilience: Connecting Human and Environmental Wellbeing (3 Credits)**

Social-Ecological Resilience: Connecting Human and Environmental Wellbeing is a required theory-for-practice course in the Sustainable Development and Global Practice concentration. This course builds a social ecology perspective that emphasizes integrated social-ecological systems as a necessary theoretical framework for understanding the inter-connectedness of human health, wellbeing and resilience with that of other species and the natural environment. This course reviews and analyzes theoretical concepts and models for contextualizing the important social and ecological issues impacting our global environment as well as the societal implications of global environmental change. Using an integrated social science approach that highlights regenerative development as a paradigm that acknowledges the interdependence and interconnection between humans and the more-than-human world, social workers practicing in local and global communities will be prepared to implement effective, strengths-based solutions to support sustainable development and capacity-building efforts at various scales. This course promotes systems and critical thinking and develops a knowledge base for resilience-oriented prevention and intervention strategies, environmental awareness, sense of belonging in a social-ecological community, adaptation and advocacy.

**SOWK 4361 Adapting and Implementing Interventions (3 Credits)**

Although evidence-based practice has been increasingly integrated in social work practice, the growing area of implementation science is relatively new. An important part of implementation science is the process of deciding whether, and how, to implement an intervention. Existing interventions do not well serve all communities and service settings. The course begins with an introduction to implementation science, emphasizing the role of research practices that engage communities in the data collection and implementation process. The course focuses more deeply on using data collection strategies to inform practice-relevant adaptation and implementation research questions with communities including: 1) whether an existing intervention is a good fit for a specific community or context, 2) whether an adaptation or a completely new intervention is warranted, and 3) how to adapt an intervention. This project-based course includes the opportunity for students to focus on individual, family, organizational, or community-focused interventions. Students learn basic skills in specific data collection strategies including conducting surveys, interviews, and focus groups. Over the course of the quarter, students will select an adaptation research question, design a study, pilot a data collection strategy, and identify implementation supports for their intervention.

**SOWK 4362 EmBODYed Practice: Ethical Approaches to Fatness and the Body (3 Credits)**

Weight-based discrimination is a significant source of social inequity (e.g., economic, healthcare, educational). This class explores body-based oppressions through a lens of weight stigma, body image, & body liberation. Course topics include weight stigma & eating disorders, weight science & associations between weight & health, neoliberal origins of the healthism, racial origins of fat phobia, queering & crippling fatness, indigenous perspectives on embodiment, size-inclusive care, & ethical responses to weight stigma. Students will participate in a photo-voice reflection project to increase awareness of fat discrimination, tell their own body story using traditional or digital mediums, participate in a book club, & write an "ethics brief" documenting their approach to body diversity within the scope of their professional practice.



**SOWK 4370 Community and Organizational Change: Theory for Practice (3 Credits)**

This course presents key theoretical frameworks for students to be informed and innovative in responding to changing community, organizational and societal contexts. Theories of social change are presented that can assist social work leaders in promoting positive social change in the lives of vulnerable populations through the development of policy, community interventions and human services organizations. Students apply theories to understanding organizational change and innovation and the promotion of social and economic justice through community and policy practice.

**SOWK 4390 Cultural and Linguistic Competency in Integrated Behavioral Health (3 Credits)**

This course provides students with the skill and tools to deliver culturally responsive and linguistically appropriate services to diverse, vulnerable populations in Integrated Behavioral Health. The course builds on concepts taught in the foundational Power, Privilege, and Oppression course (prerequisite) and integrates key foundational concepts of the Intercultural Development Continuum (Hammer, 2009). Prerequisite: SOWK 4132 and SOWK 4303.

**SOWK 4401 Integrated Health Care: Models and Practice (3 Credits)**

This course provides an overview of the knowledge, skills and theory of integrated health care social work practice, where physical and behavioral health services are most often provided in a primary care medical environment. Students will learn roles/functions of the behavioral health professional and their effectiveness as a member of the collaborative care team. Incorporating knowledge of evidence-based practice models of care and behavior change theory, they will increase their practice abilities to effectively work at an advanced level of skill as an integrated care behavioral health provider. Strategies and skills in patient engagement, motivational enhancement and advocacy will be taught through case studies and group activities. Cultural competency and effective care planning in an integrated healthcare environment will be emphasized.

**SOWK 4410 Prevention & Treatment of Adolescent Substance Abuse (3 Credits)**

This course examines causal factors and theories that seek to explain why some adolescents develop problems with alcohol and other drugs. Effective substance abuse prevention and treatment approaches are identified at the individual, family, school and community level.

**SOWK 4412 Practice Elements in Interventions with Children and Youth (3 Credits)**

This course offers an integrative framework of theory and research to intervene with children and adolescents in school, family, and community-based agencies. Interventions include both direct work with children and collaborative/conjoint work with parents. Techniques include common elements across empirically-supported interventions such as cognitive-behavioral therapy, behavioral treatment, client centered treatment, social skills training, and parent management training. Intervention strategies are described across four primary problem areas common among children/adolescents: anxiety, depression, disruptive behavior, and attention deficit disorder. For each of these problem areas, intervention techniques are demonstrated, practiced in class, implemented in field placements, and monitored for client progress. The use of empirically-supported interventions is discussed from a multidimensional perspective with consideration for cultural context and adaptations necessary for particular client groups.

**SOWK 4413 Virtual Field Experience Seminar I (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to beginning a live agency field placement.

**SOWK 4414 Virtual Field Experience Seminar II (1-4 Credits)**

Virtual Field Experience is a non-traditional experiential online course, designed to build social work competencies through participation in purposeful simulation events that mirror real-life situations, and which are nested within a simulated agency environment. Simulations tackle broad complex competencies by partializing them into component skills and developing those skills in a graduated/scaffolded manner. Students will develop significant applied skills prior to actually beginning a live agency field placement. Prerequisite: SOWK 4413.

**SOWK 4416 Foster Care and Permanency Planning (3 Credits)**

This course presents strategies for culturally competent assessment and intervention with children who are in foster care, adoption, or with their families. It focuses on permanency planning, involving extended families in making case decisions and caring for children, family reunification, relinquishment of children for adoption, termination of parental rights, preparing children and parents for adoption or guardianship, working with young adults nearing emancipation, and providing post-adoption/guardianship services. Prerequisites: SOWK 4305 and SOWK 4600 or permission of the instructor.

**SOWK 4418 Child Welfare Practice: Assessment & Intervention (3 Credits)**

This course provides an overview of the continuum of care of child welfare practice from entry to exit. The course uses an evidence-based approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. The course is required for students in the child welfare track. The prerequisite is SOWK 4600 (Child Welfare Policy and Services, or permission from the instructor).

**SOWK 4419 Rural Child Welfare Practice: Assessment and Intervention (3 Credits)**

This course provides an overview of the continuum of care of rural child welfare practice from entry to exit. The course will provide students with a brief overview of the history of child welfare and relevant major federal legislation that impacts child welfare practice. The course uses an evidence-based and theoretical approach taking a comprehensive look at child welfare services through a culturally responsive and multi-systemic lens. It presents strategies for culturally competent assessment and intervention with children, youth, and families involved with the child welfare system focusing on engaging families in assessment, service, and permanency planning. It focuses on the unique challenges of child welfare practice in rural counties across America. The course is required for students receiving the Title IV-E Child Welfare Stipend in the Four Corners, Western Colorado, or Online MSW programs. It is an elective option for Denver campus students.

**SOWK 4420 Multisystemic Social Work Practice and Advocacy with Families (3 Credits)**

This course facilitates the development of family systems practice skills with clients, individuals, couples, families, organizations, constituencies, and communities. This course focuses on the development of multisystemic strategies and techniques utilizing family systems theory as part of the ongoing process of engagement, assessment, and preliminary interventions. It emphasizes the integration of research, theory, and practice through experiential learning and skill building. Students will learn strategies and techniques through role play demonstrations practicing intake/assessment/goal setting, preliminary intervention development, and professional documentation. Students will be asked to discuss their own "use of self" development throughout the class and reflect on personal bias, cultural bias, assumptions, values and affective reactions that may influence the relationship with client systems or constituencies. Prerequisite: SOWK 4320.

**SOWK 4425 Positive Youth Development Programming (3 Credits)**

This course provides an overview of the positive youth development (PYD) approach to working with young people diverse in age, gender, race, ethnicity, sexual orientation, disability status, socioeconomic status, geographic location/neighborhood, religion/faith and culture. Many services provided for young people focus on reducing societally-deemed negative outcomes such as teen parenthood, violence, substance use, and school dropout. Instead of focusing on deficits or reducing problem behaviors, the PYD approach reframes the historical pathological approach to treating deviance and focuses on youth's strengths and building assets and skills. PYD programming employs an intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive. It promotes positive outcomes by providing opportunities, fostering positive relationships, and harnessing youth leadership. The PYD approach draws attention to opportunity gaps that social workers can address in partnership with young people. Students in this course will design an innovative PYD program, taking into account how such an approach to social work practice can be applied across different community settings to promote young people's well-being.

**SOWK 4430 Substance Use Interventions (3 Credits)**

There is widespread recognition that substance use is one of America's most pressing social problems. Social workers increasingly find themselves attempting to help individuals and families resolve substance use problems, as well as directly or indirectly related issues. This course introduces students to current and emerging substance use treatment approaches so they can conduct their practices from an informed perspective.

**SOWK 4435 Grassroots Organizing for Social Justice (3 Credits)**

This course examines grassroots approaches to community organizing and social change for social justice. Topics include: power and empowerment theory, insider/outsider considerations, development of critical consciousness and popular education techniques for organizing, history and genealogy of community organizing and social movements related to social work, direct action tactics and strategies, arts-based organizing, campaign development, and ethics and skills for working with diverse communities.

**SOWK 4445 Social Work Assessment and Intervention in Aging (3 Credits)**

This course focuses on biological, neurological, psychological, social, spiritual, and environmental aspects of late life as a foundation for the delivery of assessments and interventions to older adults. This course presents information on demographic projections, population trends, and theoretical perspectives that inform gerontological social work practice. This class additionally focuses on the unique nature of social work with this diverse population including a continuum of care services for older adults, interdisciplinary nature of helping services, dynamic nature of aging for multiple vulnerable older adults such as those facing institutionalized oppression, and specific attention to elder wellness.

**SOWK 4454 Child and Adolescent Trauma (3 Credits)**

This course introduces students to the common concepts (general theory and foundational knowledge), components (intervention and treatment elements) and skills (practitioner skills) underlying evidence-based treatment for children and adolescents who have experienced trauma. Trauma is broadly defined, and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, witnessing interpersonal crime (e.g. intimate partner violence), and other traumatic events. The course highlights the role of development, culture, and empirical evidence in trauma-specific interventions with children, adolescents, and their families. It addresses the level of functioning of primary care giving environments and assesses the capacity of the community to facilitate restorative processes. The course focuses on assessment and intervention as a foundation for subsequent learning about treatment. This course incorporates the new National Child Traumatic Stress Network (NCTSN) core curriculum on child trauma (CCCT). The course conveys the crucial evidence-based concepts, components, and skills designed by NCTSN to strengthen competency in assessment, referral, and treatment.

**SOWK 4465 Human Security (3 Credits)**

Human security is a new paradigm for understanding complex global vulnerabilities. Human security goes beyond traditional notions of national security and highlights the security of the individual rather than that of the nation state. Human security uses a person, entitlement and human rights centered view of security. It is essential for national, regional and global stability and sustainability. In defining human security, the United Nations stressed “the right of all people to live in freedom and dignity, free from poverty and despair”, and recognized that “all individuals, in particular vulnerable people, are entitled to freedom from fear and freedom from want, with an equal opportunity to enjoy all their rights and fully develop their human potential” (A/RES/60/1). “Human security aims at ensuring the survival, livelihood and dignity of people in response to current and emerging threats - threats that are widespread and cross cutting. Such threats are not limited to those living in absolute poverty or conflict.” (UN-OCHA) Today, the impacts of natural disasters, climate change and other forms of environmental change, and global economic crises, among others, are considered to threaten human security in developing as well as developed countries. The increasing numbers of internal violent conflicts, forced migration, natural disasters and environmental degradation have resulted in national and international security failings that reflect the challenges of the post-Cold War security environment. The failure of mainstream development models to generate growth, particularly in Least Developed Countries (LDCs), or to deal with the consequences of complex new threats (e.g., HIV/AIDS, climate change, social and economic inequality) reinforced the sense that international institutions and states are not organized to address such problems in an integrated way. Social workers focusing on human, social and economic issues in global settings will use various human development strategies and other capacity-building approaches in practice. This course will develop students’ skills in human and social development strategies, sustainable livelihood and conflict management strategies, and other capacity-building community strategies, and fosters a solid understanding of the programmatic and practical requirements for human security in a global context.

**SOWK 4480 Social Justice in Mental Health (3 Credits)**

This course builds skills in identifying, analyzing, and attempting to remedy social justice challenges in mental health practice. These challenges include practices that risk marginalizing, oppressing or doing other harm to people with mental health challenges. Using research, theory, and extensive case studies, the course reviews perceived conflicts between clinical social work’s focus on mental health practice and the larger social work profession’s commitment to social justice. The course then provides an overview of mental health practices that raise ethical and social justice issues, reviews the justifications provided for such practices, and examines the efforts of critics to change them. Special attention is paid to controversial practices with vulnerable populations such as children, older adults, racial and ethnic minorities, and sexual minorities.

**SOWK 4500 Foundations of Play Therapy with Young Children (3 Credits)**

This course offers an integrative framework of theory and research to understand and intervene in the major mental health problems experienced by children. This course is also designed as an introductory experience to play therapy. Interventions include both direct work with children and collaborative/conjoint work with parents. Play therapy techniques include both directive and non-directive approaches including but not limited to child-centered play therapy and cognitive-behavioral interventions. Children’s development is considered from a multidimensional perspective including cultural context, risk and protective factors, and the development of psychopathology with an emphasis on early and middle childhood.

**SOWK 4501 Wellness Assessment & Promotion Across the Lifespan (3 Credits)**

This course builds students’ skills and strategies to enhance wellness for individuals, organizations and communities. Students will explore differences and beliefs related to health and wellness in both their internal/personal experience and in social work practice. The western medical industrial complex of ableism and “moral and physical fitness” is focused on illness treatment. In contrast, holistic health models of assessment focus on wellness promotion. Course topics include soul and nature based human development models, Eastern and Indigenous medicine models, and traditional or evidenced based wellness frameworks. Students, use complementary and holistic approaches to assess and address gaps found in public health data, community health, organizational and public policies. The course emphasizes the application of interdisciplinary knowledge and skills, professional ethics and values, and the role of social workers as change agents in creating solutions for public health issues at micro, mezzo and macro levels.

**SOWK 4505 Relationship Therapy (3 Credits)**

This course focuses on assessment, problem/solution path identification, intervention strategies and outcome evaluation in counseling heterosexual, gay and lesbian couples. Identifies common relationship patterns and explores intervention strategies including behavioral, strategic, structural, narrative, transpersonal and feminist. Also covered are issues such as conflict management, relationship enhancement, intimacy, power and control, domestic abuse, infidelity and divorce. Students will analyze the intersecting issues of oppression: sexism, racism, classism, heterosexism and ageism.

**SOWK 4520 Advanced Clinical Social Work Practice with Families (3 Credits)**

This course is an advanced skill-based course that extends students’ knowledge and application of family systems therapy. The course engages the activate participation of students in role-play scenarios and the discussion and deconstruction of actual cases enhancing their developing skills as family therapists-in-training. In this course, students have the opportunity to plan and implement an entire course of treatment for a family. This allows the development of a conceptual understanding of family therapy practice, treatment skills and interventions, and utilization of self-as-therapist that influences the therapeutic system. Students have multiple opportunities to practice family interventions and receive feedback from both classmates and the instructor through the use of the clinical family therapy methods of ‘live supervision’ and ‘reflecting teams’. Students will experience the connection between theory and practice and learn to integrate multiple theories. Issues related to transference, culture based countertransference, resistance, and working with involuntary clients are discussed. Advanced Clinical Social Work Skills with Families builds on the family systems theory and practice applications learned in the required family systems concentration courses and expands students’ opportunity to apply theory to cases in diverse practice and client situations. An emphasis is placed on the development of personal theory, professional development, and therapeutic change/outcome as it relates to common factors in family therapy. This course also builds upon SOWK 4505: Relationship Therapy and aspects unique to couple’s therapy. Prerequisites: SOWK 4320 and SOWK 4420.

**SOWK 4521 Advanced Skills for Working with Military Families (3 Credits)**

The class is designed to give students an understanding of the issues military families face and how to apply that understanding to clinical interventions with military families. It also investigates individual service member concerns, spousal/partner relationships, and family dynamics surrounding deployment, active duty, and returning home permanently or between deployments.

**SOWK 4523 Care Management Skills and Resources to Promote Community Living (3 Credits)**

Many individuals and their families of all ages cope with physical and mental health conditions that impede their ability to live in the community. A vast array of formal and informal resources, public programs, and privately funded services can promote community living. Social workers often provide care management to enhance access, coordinate care, and ensure equality of these long-term services and supports. This course will develop students' skill at care management and knowledge of resources, including resources for persons with developmental disabilities, chronic mental health conditions, physical disabilities, and age-related functional impairments.

**SOWK 4530 Poverty and Community Economic Development (3 Credits)**

This is an advanced community practice class focused on poverty, low-income neighborhoods and local economic development. The class begins with a thorough review of the scholarly literature related to poverty, sustainability, and the concentration of poverty in low-income neighborhoods. Then, public and private responses to poverty are examined. The class focuses on both governmental policies and programs supported by the private sector. Next, the class turns to local responses to the concentration of poverty in low-income neighborhoods. The class focuses on the interdisciplinary nature of programs and interventions aimed at community economic development in low-income neighborhoods.

**SOWK 4535 Planning and Program Development (3 Credits)**

This course prepares students to engage in strategic planning and program development roles and practice within a social work community, organizational, or policy practice setting. Students in this course gain knowledge in the principles of planning, social enterprise, the engagement of stakeholders in planning processes, community collaboration and the elements of designing and implementing programs. Students have the opportunity to put this knowledge base into practice by developing a comprehensive program proposal applying the skills of strategic thinking, planning, critically evaluating research informed practice and practice informed research. In addition, students engage in communicating professional judgment in both written and oral formats.

**SOWK 4545 Social Work Practice with LGBTQIA Communities (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of LGBTQIA identities and communities. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of these identities. This course will explore the social construction of sexual orientation and gender identity, examine the idea of binaries, engage in historical analysis of LGBTQIA histories, and will familiarize students with legal and societal barriers and challenges facing members of the LGBTQIA community. Students will learn definitions around these identities, learn more about the spectrum of sexual orientation and gender, and utilize critical theoretical perspectives. Students will engage in critical dialogue around the representation of LGBTQIA people in our culture and media. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to LGBTQIA individuals, explore various facets of self-determination, social justice, dignity and worth of a person, the role of family, friends and community, and how power, privilege and oppression may impact the lives of LGBTQIA people. Lastly, students will synthesize this information to envision how their social work practice will be inclusive of LGBTQIA individuals and communities, including those who hold other marginalized identities. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4555 Spirituality and Social Work (3 Credits)**

The purpose of this course is to provide students with a nondiscriminatory framework of knowledge to respond competently and ethically to populations with diverse spiritual perspectives and religious cultures in social work practice. This social justice-informed course underlines and respects the diversity of all spiritualities with special attention to spiritual populations historically marginalized and neglected by Eurocentric assumptions common to social work. This course builds on the generalist approach of our foundation curriculum and integrates theories of multiculturalism, human development, and identity development while exploring how individuals view spirituality and religion as they move through the life cycle. Drawing on the work of Edward Canda, Ken Pargament and Froma Walsh, the course will explore definitions of spirituality and religion, survey methods of approaching spiritually sensitive bio-psycho-social assessments, and examine culturally and spiritually sensitive social work interventions. Class activities will emphasize dialogue, reflection, exploration and experiential learning in order to develop a balanced framework for navigating spirituality and religion in practice settings with individuals, groups, families, communities and organizations. In this course, students will gain self-awareness and learn how their own cultural and spiritual perspectives have shaped their worldview and professional sense of self. It is assumed that students enrolling in this course will bring an interest in learning about the many facets of spirituality. As such, students will be asked to explore their own ideology of spirituality as it relates to their professional identity and practice effectiveness. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4565 Social and Environmental Impact Assessments (3 Credits)**

Social and environmental impact assessments are important tools for analyzing and managing both the intended and unintended consequences of development projects on human and ecological systems in order to bring about a more equitable and sustainable social ecological system. This class will incorporate an understanding of the history and concepts of the three levels of impact assessments (micro, mezzo, and macro) into the research process that is the core of social impact assessments. Students will be able to prepare and evaluate social ecological impact assessments through learning to identify and define problems, select theoretical frameworks appropriate to the problem, identify research questions, design a study appropriate for the identified questions, gather and analyze data, and write the final assessment. Particular attention will be paid to assessing the effects of interventions on vulnerable populations. Other topics will focus on the practical aspects of project team selection and management, timelines, and the communication of findings to stakeholders.

**SOWK 4600 Child Welfare History & Policies (3 Credits)**

This course examines contemporary U.S. child welfare policies in historical perspective, focusing on prevention, report and investigation of child abuse and neglect, as well as family preservation, out-of-home care, adoption and services for troubled adolescents. Also evaluated are the impact of policies and proposals for change in policies, considering empirical evidence, values and ethics. Provides a framework to analyze policy choices and encourages students to advocate for needed policy changes.

**SOWK 4610 Policies and Programs for Children and Youth (3 Credits)**

This course examines the history and evolution of social policies and programs targeting high-risk youth. Students will seek to critically analyze the effects of current and recent policies in the context of youth offending and other adolescent problem behaviors. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4630 Family Policies and Services (3 Credits)**

Identifies challenges contemporary American families are experiencing and presents strategies for developing policies and services to meet these challenges. Examines specific policies and services that most affect families, as well as broader questions concerning power and its distribution, allocation of resources and the role of government in promoting individual and family well-being. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4635 Immigration Policies and Services (3 Credits)**

This course identifies challenges for immigrants and presents strategies for developing policies and services to meet these challenges. It not only examines specific policies and services that most affect immigrants but also considers broader questions concerning power and its distribution, allocation of resources, and the role of government in promoting individual and family well-being. This is a concentration policy course for all concentrations.

**SOWK 4640 Mental Health and Substance Use Policies (3 Credits)**

This course provides a comprehensive understanding of policies related to mental health and/or substance use, their historical antecedents, and the socio-political forces that influence their development. This course also introduces students to emerging controversies concerning these policies.

**SOWK 4641 An Introduction to Prison-Industrial Complex Abolition (3 Credits)**

Grace Lee Boggs said we must “transform ourselves to transform the world,” and this course is rooted in this belief. Prison-industrial complex (PIC) abolition is a philosophy, a daily practice, and an organizing strategy. It requires us to examine our default frameworks (built by settler colonialism, racial capitalism, and white supremacy) for relating to one another, and to create entirely new ways of being with and caring for one another. My aim is to co-create a space with all of you where we can think collectively and speak boldly about how, as the writer, performer, and activist Morgan Bassichis states, “The very systems we are working to dismantle live inside of us.” It’s easier to look outward and critique an institution/system than it is to look inward and be honest about—and work to disassemble—the dangerous carceral logics embedded in our.

**SOWK 4642 Global Trauma (3 Credits)**

Social workers often find themselves working with people who have experienced, endured, and survived traumatic events such as terrorist attacks, sexual violence, refugee camps, food scarcity, and war. People are fleeing their homes and communities, most often unwillingly, due to forced migration, war, food insecurity, and environmental degradation. Some are unable to leave and are continuously retraumatized. All of this has resulted in increasing numbers of people experiencing trauma on a collective and global scale. Most of this is not new but it is exacerbated by current events, including a global pandemic. This course examines ways in which people collectively experience trauma and the impact on them within their cultural context. The context of peoples' lives will be examined and the unique impact of collective trauma on children will be explored. This course is designed to challenge assumptions about those who have experienced collective trauma and the meaning they place on their experiences. We will also explore the role of international and national policies and communities in causing situations that result in collective trauma as well as their response to it. The role of social work in prevention, advocacy, and intervention will be explored. Resilience of survivors will be studied and the need for self-care will be incorporated into this course.

**SOWK 4643 Digital Justice in Social Work (3 Credits)**

Should internet access be a universal right? What will be the next “internet”? And what does social work have to do with any of this? Transformation or revolution, the digitalization of the human project is progressing rapidly and demands of social work’s leadership and contributions. As tele-practice evolves across industry, social workers not only require a specific skill set to meet consumer and service delivery demand, but a mindset and approach prepared for an uncertain, innovative, and networked future. This includes the evolution of power, privilege, and oppression and what inclusion and equity mean in a digital ecosystem. This course will explore the possibilities of digital social work practice and opportunities for micro, mezzo, and macro change, while providing students with constructs and strategies for promoting equity.

**SOWK 4645 Health Care Policy (3 Credits)**

This policy course provides an overview of health care policy as it is relevant to social work practice in multiple health and behavioral care settings. With the advent of health care reform and the implementation and operationalization of the Patient Protection and Affordable Care Act (PPACA), there are rapidly changing policy issues related to this innovative integration and delivery of health care services. Students in this course critically analyze the practice of policy in this new and quickly evolving service arena. This course explores key health policy strategies to foster integrated delivery system development and sustainability in line with health policy goals to reduce cost of care, improve population health and improve quality of integrated care services, with special emphasis on the integration of primary care, behavioral health services and wellness/health promotion initiatives. Strategies for students to influence policies and promote change in the interest of the individual/family/community, agency/organization and the communities they serve are presented. Critical thinking skills in developing and analyzing proposals to improve integrated health policy are encouraged. The course builds on policy content offered in the professional foundation year and links policy to practice and research skills.

**SOWK 4650 Aging Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in gerontology. It includes a critical review of rapidly developing policy issues, as well as an overview of U.S. health care and social service delivery systems serving older adults. The course encourages students to participate in critical analysis of issues and to develop and analyze innovative proposals to improve policy and programs for older adults. This course fulfills the policy requirement for the Aging Services and Policy concentration.

**SOWK 4655 Mental Health and Health Care Policy (3 Credits)**

This course provides an overview of social policy and service delivery issues in mental health and health care, with emphasis on achieving quality and addressing disparities. It includes a critical review of United States' historic and developing policy issues, as well as mental health and health care financing and delivery systems and other key issues in the field. Students will participate in critical analysis of issues and will examine various proposals to improve mental health and health care policy and programs. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4660 Social Policy Advocacy (3 Credits)**

Facilitates student learning within policy-making arenas. Students are paired with health and social service agencies and coalitions to assist in agenda-setting, legislative research, and issue-advocacy development and implementation in the state legislature and bureaucracy.

**SOWK 4670 Policy Development & Analysis (3 Credits)**

Focuses on the development and analysis of social welfare policy. Reviews the structure of the policy-making and implementation process, and examines perspectives on the definition of social problems and approaches to the development and analysis of social welfare policies. Students apply the perspectives and frameworks as they analyze a specific social problem and policy directed toward it, identify needed change in policy, select place and strategy for change in policy, and communicate knowledge to central actors in the policy-making and implementation process. Prerequisite: SOWK 4120 or SOWK 4299.

**SOWK 4680 Native Peoples Practice: History and Policy (3 Credits)**

This course is designed as the background to practice with Native Peoples. It will explore the relationship between theory and practice, socio-economic, political, and health issues, and the dynamics of changes in reservation and urban Native communities. Historical trauma, federal policies, impacting Native people, and laws and regulations that impact social service delivery will be reviewed. Social services delivery systems will be analyzed with the uniqueness of the cultural parameters of tribal communities. Guest lecturers from tribal communities may partner with faculty to teach the course. Prerequisites: SOWK 4132.

**SOWK 4681 Cultural Connectedness: A Journey Into Native American Country (3 Credits)**

This course provides an immersion experience into the Native American cultures of the Southern Ute, Ute Mountain Ute and Navajo Nation tribes. It provides a mixture of experiential and academic learning based on a community-learning model. The course begins with orientation at GSSW and/or the Four Corners Social Work program in Durango, Colorado. The course is open to foundation, advanced standing, and concentration students. Students must have completed their first year of the academic program. Slots will be distributed proportionately to main campus, Glenwood Springs and Four Corners programs, with priority given to Four Corners students. This course is designed for students in all tracks who have an interest in understanding current and historical issues that impact social work practice with indigenous populations, particularly those who have suffered intergenerational legacies of oppression and genocide. The course will emphasize the development of cultural responsiveness in social work practice with populations who come from a different historical context where oppression and historical trauma have occurred.

**SOWK 4682 Values for Social Work Practice Native Peoples (3 Credits)**

This course addresses culturally responsive practices with Native individuals, families, and communities. The focus will be on the problem-solving processes across a variety of social systems within Native communities. Social problems that are common in tribal communities will be presented, equipping the student with awareness, a knowledge base, and multilevel practice skills, so that they can effectively engage professionally in Native communities. Students will explore the cultural expectations, understand cultural biases, and standards of practice necessary for assessment, interventions, and evaluation of ethical social work with Native Peoples. Tribal communities and cultures span a wide range of cultural histories, belief systems and practices creating a rich and individual cultural context. It is beyond the scope of this course to address all tribal cultures or a depth of knowledge about any one tribal community. However, foundational perspective that will include values, principles, assumptions and cultural beliefs shared by Native Peoples will be addressed. Given that many tribes experience similar spiritual, physical and mental health consequence as a result of historical and modern colonial violence, content on needed services and delivery systems that are applicable across most tribes, locations, and geographies will be presented. This course provides content relevant to Native Peoples living on their sovereign lands as well as those living in rural and urban areas occupied by the United States. At the end of this course, students will have appropriate skills, processes, and resources required to engage in their own discovery of cultural variations among tribes to address their Native client's needs. Pre-requisite: SOWK 4680: Native Peoples Practice: History and Policy.

**SOWK 4700 Solution Focused Brief Therapy (3 Credits)**

This course explores solution-focused brief therapy (SFBT) and its application in a variety of settings and populations. Focusing on strategies for assessment, intervention, evaluation, and termination, the course applies solution-focused therapy to specific client systems, drawing on knowledge of appropriate techniques, sociocultural factors, and types of problems presented. Solution-Focused Brief Therapy is an elective course in the Mental Health and Trauma Concentration and the Health Equity & Wellness Concentration.

**SOWK 4705 Forensic Orientation in Social Work Practice: Assessment and Interventions with High-Risk Offenders (3 Credits)**

Presents and applies a framework for assessing and intervening with offender populations. This risk and containment framework takes a community safety and victim-centered perspective and focuses on assessing and intervening with multiple systems surrounding offenders. The framework is then applied to specific interventions with domestic violence abuse offenders and with adult and adolescent sexual offenders.

**SOWK 4710 Intimate Partner Violence (3 Credits)**

This is a concentration year practice elective focusing on understanding, assessing, and intervening with domestic violence, understood as violence occurring in the context of intimate relationships. The purpose of this course is to provide students with the theoretical understanding and practice skills necessary to establish a beginning competence in assessing and intervening with domestic violence and in developing community, systemic, and policy responses.

**SOWK 4712 Social Work & the Law (3 Credits)**

Examines legal principles and procedures relevant to social work practice with families and children: structure and operation of the American legal system, principles to follow in conducting legal research, basic principles of constitutional law and law related to juvenile delinquency, child protection, child adoption, education and domestic relations. Covers legal aspects of social work practice including licensing, confidentiality and professional liability.

**SOWK 4713 Interdisciplinary Approaches to School, Family and Community Prevention (3 Credits)**

Behavioral health problems in childhood and adolescence take a heavy toll on millions of lives. These problems range widely – from anxiety and depression to alcohol, tobacco, and drug abuse; delinquent and violent behavior; dropping out of school; and risky sexual activity and unwanted pregnancies. SOWK 4713 presents an overview of practices and policies aimed at preventing behavioral health problems in young people. Emphasis is placed on developing the practice and policy skills that are necessary to deliver preventive interventions and programs in schools, families, and communities. Students will select an effective program, learn the skills necessary to deliver the program, and then implement the program in a classroom setting. Class content will emphasize the importance of increasing the role of social work practitioners and social work values in the interdisciplinary field of prevention practice.

**SOWK 4715 School Social Work Interventions (3 Credits)**

Designed to give students the ability to identify, understand and apply the varied roles of school social worker. Examines politics of education, the educational organizational structure, special education law and process, collaborative teamwork with school and community professionals and intersystem case coordination. Emphasis placed on meeting the needs of special education populations through assessment, intervention and evaluation and on preventive programs for children and youth at risk for school failure, truancy and dropping out.

**SOWK 4718 School Social Work Assessment and Realities (3 Credits)**

This concentration course is the third in the School Social Work Certification. Both SOWK 4715 (School Social Work Interventions) and SOWK 4712 (Social Work and the Law) are prerequisites for this class. The class provides advanced skills in assessment pertinent to the school ecosystem. It also juxtaposes these skills with field trips to several schools to interact with School Social Workers in a variety of settings and work roles to understand how these assessments are used in the school setting. The course emphasizes the written tasks and social work skills that School Social Workers need to perform on a regular basis, as well as how these skills are used to help the student, family, and school environment. Prerequisites: SOWK 4712 and SOWK 4715.

**SOWK 4720 Prevention and Treatment of Juvenile Delinquency and Youth Violence (3 Credits)**

Examines causal factors and theories that seek to explain why some adolescents engage in delinquent conduct and/or violent behavior. Effective delinquency and violence prevention and treatment approaches are identified at the individual, family, school and community levels.

**SOWK 4721 Existential Social Work Practice (3 Credits)**

The problems facing people can be understood in the context of situations and meanings they give to them. This course seeks to identify useful ways to clarify and validate the client's unique "world view", bypassing the many dangers and misuses of diagnostic categorization and empowering clients in relation to themselves and problem definition.

**SOWK 4723 Social Work Practice in Health (3 Credits)**

This course is designed to explore and develop advanced social work knowledge, skills and practice in diverse health care settings. It includes an examination of the social work role on interdisciplinary teams and how to impact change in the health care system and support positive health outcomes for patients and their families. There is an emphasis on patient and family-centered care and interprofessional collaborative practice to reflect social work values in various health settings by focusing on health literacy, evidence based clinical interventions, and responsive multi-cultural practice for acute and chronically ill patients and their families across the lifespan. Modules include content on bioethics, trauma informed care, grief and loss, self-compassion, and special contemporary topics relevant to a social justice approach to advance health and well-being.

**SOWK 4725 Mind-Body Connections and Social Work Practice (3 Credits)**

This course teaches skills for implementing mind-body techniques, models for wellness assessments, and evidence-based mind-body strategies for intervention in client and community problems. An evidence-based approach creates a foundation for: 1) understanding the mind-body connection that influences an individual's and community's physical, emotional, and social well-being and 2) the most efficacious methods for mind-body social work practice skills. Research evidence demonstrates that mind-body strategies are helpful for an array of concerns such as, military personnel with PTSD, adults with emotional regulation issues, academic concerns of stressed-urban youth, community mobilization, and emancipatory practice.

**SOWK 4726 Experiential Therapy (3 Credits)**

This course provides students with knowledge and skills to facilitate experiential-based therapy with children, youth, families and couples with a focus on environmentally sound practices. This is considered a service learning class since we are partnering with nature. Please wear comfortable clothes and comfortable closed toed shoes for all classes and bring a water bottle.

**SOWK 4727 Experiential Therapy in Nature (3 Credits)**

SOWK 4727 is a methods/skills course which provides students with knowledge and skills to facilitate experiential therapy with groups with a focus on environmentally sound practices in the outdoors.

**SOWK 4730 Cognitive Behavioral Therapies (3 Credits)**

This course examines major cognitive behavioral therapies (CBT) suggesting methods focusing on clients' problem-solving abilities, building on client strengths, targeting specific thought patterns that impede clients from reaching goals, and assessing outcomes in terms of changes in thinking and behavior. Theory is applied to individuals, dyads, families, and groups. Additionally, this course examines relevant research suggesting both indication and counter-indications of approaches.

**SOWK 4732 Disrupting Privilege through Anti-Oppressive Practice (3 Credits)**

This course, building on the theoretical foundation in SOWK 4132 Multicultural Social Work Practice, examines the barriers to the professional use of self as an ally to historically disenfranchised groups, both in the context of day-to-day relationships with clients as well as in the context of community and macro-level interventions. The course is intended to assist in understanding the personal, situational, structural, and cultural influences that impede justice-oriented social work practice. The course supports students in developing strategies, skills, and approaches to anti-oppressive practice. Anti-oppressive social work practice is a range of practice approaches that adopt a critical and structural perspective on issues of social inequality, oppression, power, privilege, and domination. It encompasses approaches such as feminist, anti-racist, Afrocentric, disability practice, and critical social work frameworks to name a few (Campbell, 2003). It attends to both process and outcome (Dominelli, 1998), and links the provision of individual assistance to people from marginalized groups with involvement in social movements corresponding to the marginalization (Carniol, 2000). "The [anti-oppressive] framework enables links to be made between individual action and social structures. It informs practice by enabling the worker to evaluate differences that exist at an individual level and within society and how these impact on each other. It provides the means of making accurate assessments by taking into account the inequalities that texture the lives of those denied access to society's resources because of their defined social status and the exclusionary practices of the dominant system. It demands that we consistently engage in the process of critical self examination, which in turn enables us to engage in the process of change." (Dalrymple and Burke, 1995, p. 18). Prerequisites: SOWK 4132 or SOWK 4303.

**SOWK 4735 Interpersonal Approaches to Counseling (3 Credits)**

This course is an elective course which utilizes the interpersonal models of psychotherapy and neurobiology, drawing upon psychodynamic theories and techniques. The course examines traditional and contemporary psychotherapy theories and techniques. Interpersonal interventions are grounded within the values, ethics and standards of practice for clinical social work.

**SOWK 4741 Grief and Loss Across the Lifespan (3 Credits)**

This course is designed to prepare students to understand social work roles and practice (engagement, assessment, intervention and evaluation) in working with those experiencing loss across the life span. Whether the loss is related to health or functioning, family system, developmental stage or an actual death, this course prepares students to be culturally responsive to diverse perspectives and bereavement needs. Students will learn theoretical models of grief and loss and how to effectively evaluate the needs of grieving individuals, families, communities and their support systems.

**SOWK 4742 Disability Studies (3 Credits)**

This values course will facilitate students' exploration of their own perceptions, biases, and belief systems with regards to the broad topic of disability. A values perspective encourages students to reflect on their personal, professional, cultural and political perceptions of the epistemology of the notion of disability. This course will explore the social construction of concepts of ableism and identity, engage in historical analysis of disability (both domestically and internationally), and familiarize students with pertinent legislation/policies that impact persons with disability (PWD). Students will learn definitions of disability, come to know more about the spectrum of disability and utilize critical theoretical perspectives. The study of disability includes persons with disability (PWD), including the broad range of categorizations related to mental health, physical health, and cognitive ability. Students will engage in critical dialogue around the representation of PWD in our culture. Utilizing a person-in-environment perspective, students will look at the Social Work Code of Ethics as it relates to PWD and explore various facets of self-determination, independent living, relationships and sexuality, and the role of family, power and privilege in the lives of persons with disabilities. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4749 Culturally Responsive Practice with LatinX (3 Credits)**

Addresses issues related to mental health needs within Latinx populations in the US, as well as intervention and theoretical approaches for working with Latinx communities. Covers a selection of interventions and strategies for cross-cultural use in adequately addressing the needs of Latinx communities. A required course for the Latinx Social Work Certificate. Prerequisite: SOWK 4750.

**SOWK 4750 Critical Perspectives on the Latinx Context (3 Credits)**

This course provides a framework for culturally responsive social work practice designed to meet the needs of the Latinx community. Students acquire core principles grounded in an understanding of social justice, privilege and oppression, including the interconnection between human and civil rights, globalization, immigration and poverty. Students learn about the diversity of Latinx cultures, community development, historical patterns of oppression, spirituality, and the role of Latinx movements. In an effort to decolonize the classroom, the students are invited to engage as full co-creators of the curriculum and class experience through social, emotional and somatic learning. As a result of this course, students understand how to advocate for nondiscriminatory cultural, social and economic practices within a Latinx context and experience. The course is designed for students who have an interest in understanding issues facing the Latinx community. Enrollment preference is given to Latinx Social Work Certificate students. Interested students not in the certificate should contact the Latinx Social Work Certificate coordinator.



**SOWK 4752 Trauma Informed Assessment and Interventions (3 Credits)**

This course provides an overview of multi-system level definitions of traumatic experience—historical, individual, interpersonal, family, organizational, and community. The emphasis is on social work practice that is culturally responsive, growth-oriented, and strengths based, in which the study of trauma is approached from a theoretical base that perceives the trauma response as a "response" rather than a "disorder." Trauma informed assessment and interventions are examined, incorporating a social justice perspective on historical trauma, poverty, and interpersonal violence. This course promotes the unique contribution social workers offer through the lenses of strength, resilience, and coping as well as commitments to cultural responsiveness and ecological/systems factors. Students will identify how secondary trauma impacts social workers and the importance of professional accountability to self-care and ongoing growth and development.

**SOWK 4753 Social Development in Latin America (3 Credits)**

This course examines social development in Latin America. Knowledge acquisition is focused on social, political, economic and cultural realities of this region and on the skills required to be an active participant in effective change efforts. This course is required for students in the LatinX Social Work Certificate Program and is open to all students with shared interest.

**SOWK 4757 Social Work and Latino/a Cultures: An Intensive Practice and Spanish Immersion Course (1-3 Credits)**

This required course (health and travel alerts permitting) for the Latinx Social Work Certificate combines academic classroom instruction with experiential and conversational learning. Country location for this study abroad course is determined based on yearly certificate objectives and travel advisories. The course has previously travel dot Chiapas, Mexico to explore human rights, development, economic policy, culture and language. Students engage and learn alongside community partners, including nonprofit's that focus on hunger and education, gender equity, sustainability as well as nongovernmental organizations that defend human rights by accompaniment with indigenous communities.

**SOWK 4758 Social Work in Kenya: Context, Conservation, Empowerment, Sustainability (1-3 Credits)**

This course is designed to introduce students to the social, cultural and conservation issues of Kenya and East Africa. This course is field-based with strong emphasis on service learning and direct experiences. Course readings, lectures, classroom discussions, service learning projects and field work in rural Kenya provide participants firsthand experience in the social, cultural, historical, political, environmental, ecological and economic realities that exist in Kenya. This course is open to qualified concentration and advanced standing Graduate School of Social Work students. The course meets on campus for four sessions before traveling to Nairobi, Voi, and Kasigau, Kenya. Due to the intensive nature, remote travel logistics and costs for this course, direct communication with the professors is required. Qualifications include: willingness to sign International Travel Agreement, willingness to receive required medical authorization and immunization, academic good standing, and readiness for the physical and emotional demands of traveling in rural and remote Africa.

**SOWK 4759 Global Cultural Perspectives: Ethical Considerations (3 Credits)**

Social workers increasingly practice in global communities both nationally and internationally. Changes in practice environments demand that social work practitioners are informed citizens of comparative cultures and societies. This course examines the values and ethics of social work practice in a global context of power, privilege and oppression. Course materials and educational experiences are used to challenge students to examine ethical and value-based conundrums when practicing in global settings and to develop practice skills to enhance the health, well-being and sustainability of communities. Through the use of case studies, critical thinking, cultural inventories and reflexivity the course supports and challenges students' personal growth and professional practice.

**SOWK 4760 Resource Development and Fundraising (3 Credits)**

This course examines strategies and tactics around skill building in fundraising, resource-development strategies, grant-proposal writing, budgeting, and fiscal processes common to not-for-profit or governmental organizations. Topics include resource development and acquisition (fundraising) and discussions on the budget process required resource management for nonprofit organizations.

**SOWK 4762 Bosnia in Transition: The Social Work Response (1-3 Credits)**

This course provides students with the unique opportunity to learn firsthand about the social work response in post-war Bosnia through a social justice lens. The social, cultural, historical, political, economic, religious, legal and ethnic characteristics of the former Yugoslavia will be explored as context for studying the genocide that occurred in the 1990s. Learning will occur in the classroom at GSSW, followed by travel to Bosnia. Students will be exposed firsthand to the local, national and international efforts toward rebuilding and healing, through lectures provided by faculty at the University of Sarajevo School of Social Work, interaction with Bosnian social work students, visits to NGOs focused on the post-war efforts, visits to sites important during the war, visits to war tribunal sites, and exposure to current legal, economic and human service processes.

**SOWK 4763 Social Work and Social Justice in South Africa (1-3 Credits)**

This three-credit course will be conducted in partnership with Educo Africa in Cape Town, South Africa. The course will provide experiential and service learning social work experiences. Course activities will encourage cross cultural learning experiences and increase knowledge pertinent to South Africa's social, cultural, environmental, political and historical reality. It will expose students to Community Development challenges as well as environmental and social justice issues in a South African context. The goal of the course is to increase personal, community and global leadership potential of social work and social development professionals. This course in partnership to Educo Africa will use a community-based context to increase the effectiveness and expertise of students and will support student's engagement in program development and building international networks and partnerships.

**SOWK 4764 Historical Trauma and Healing (3 Credits)**

This course is designed to provide students with a context for practice with communities experiencing historical trauma. We learn about the conceptualization of historical trauma, its impact on communities as well as community responses to it. We also discuss the importance of cultural protective factors, strengths, and culturally relevant models of healing around multigenerational, collective experiences of trauma. A number of practice approaches found useful with communities experiencing historical trauma are presented and discussed. Class format includes presentations, small group discussions, films, poetry, movement, and experiential learning in the community. This course is built upon the concepts of empowerment practice, indigenous models of social work, and narrative theory and practice. We use these perspectives as we explore work around historical trauma in communities. This class provides social work direct practice skills on individual, family, community and policy levels.

**SOWK 4765 Global Social Change (3 Credits)**

Social development is a process of planned change intended to bring about a better correspondence between human needs and social policies and programs. This class has a fully global focus with particular emphasis on transitioning economies to align with human wellbeing. Practice-oriented, the class is geared toward a knowledge of policy-making for global human security within a dramatically changing environment and the skills required for local social development.

**SOWK 4782 Feminisms in Social Work Practice (3 Credits)**

This course engages students in the conversation of scholarship and social work practice issues related to social justice and the oppression of women. The course is designed to expand the knowledge of theory, research, policy and practice for working with diverse groups of women in multiple settings. Feminist social work perspectives for social work practice at micro, meso and macro practice levels will be critically examined. Topics include feminist theories, or feminisms, including eco-feminism and womanism, clinical and community feminist practice models, globalization and women, and the value of feminist research. These topics will be informed by knowledge and awareness of intersectionality, oppression and privilege. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4784 Suicide Assessment and Interventions (3 Credits)**

This course builds students' competencies in assessing suicide risk, planning for safety, and providing counseling to individuals who are thinking about suicide or have made a suicide attempt. This class examines theories of suicide causation, methods of suicide risk assessment, and models of techniques for intervention. Students will learn practices for eliciting sensitive information about troubling thoughts, assessing and documenting a client's level of suicide risk, and using cognitive-behavioral and other methods to help reduce suicide risk.

**SOWK 4786 Human Trafficking: Prevention, Intervention, and Support of Its Victims (3 Credits)**

This course meets the values for practice requirement and is relevant for students who are interested in trauma, human rights, international issues, prevention of child abuse, intervention with victims of violence, interventions with child abuse, interventions with high-risk youth, and PTSD. This class investigates human trafficking from a social work perspective: prevention, intervention, and support of victims. Additionally, this course investigates regional differences in both labor and sex trafficking. The class also studies how prevention, intervention, and giving support to victims change from different regional (Asian, African, European, and Latin American) perspectives. The course also investigates human trafficking in the US, both with domestic and international victims. Prerequisite: SOWK 4132 or SOWK 4303.

**SOWK 4790 Human Sexuality (3 Credits)**

Integrates human sexuality in the thinking and practice of social workers. By viewing sexual behavior from the social work perspective, the student is prepared to assume a significant role in helping clients deal with issues of human sexuality. Focuses on clients experiencing sexual dysfunction and on sexually oppressed client groups including the elderly, the homosexually or bisexually oriented, the physically or developmentally challenged and the sexually abused. An elective course.

**SOWK 4795 Foundations for Human-Animal-Environment Interactions in Social Work (3 Credits)**

Foundational course with broad survey of the field and value exploration. Introduction to cultural and social justice aspects of human-animal-environment interactions. Formation of personal HAEI-SW vision and ethical framework, and beginning of culmination project concept development. This is the initial required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate.

**SOWK 4796 Human-Animal-Environment Interventions in Social Work Practice (3 Credits)**

Focus on skill development for the integration of animals in social work practice with a primary focus on treatment. Exploration of clinical and community practice frameworks across the lifespan. This is the second required course for the Human-Animal-Environment Interactions in Social Work (HAEI-SW) certificate. Prerequisite: SOWK 4795 or permission of instructor.

**SOWK 4797 Professional Integration of Human-Animal-Environment Interactions in Social Work (3 Credits)**

Culmination course with a focus on applying knowledge and demonstrating competence through service or program design. Includes professional development and job search preparation, unique to HAEIs in social work. Prerequisites: SOWK 4795 and SOWK 4796.

**SOWK 4900 Methods for Evaluating Practice and Programs (1-3 Credits)**

Provides students with strategies for evaluating social work practice at multiple system levels. Prerequisite: SOWK 4201 or admission to advanced standing program.

**SOWK 4901 Applied Practice Evaluation Research (3 Credits)**

Provides students with the opportunity to conduct a practice evaluation project in their field setting. Prerequisite: SOWK 4900.

**SOWK 4902 Public Impact for Policy, Community Organizing, and Research Dissemination (3 Credits)**

This course examines strategies for translating research for non-academic audiences. Topics include identifying the best approaches based on audience and goal of dissemination, ethical issues in translating complex research findings, and issues in working with media. A central value of dissemination for public impact is bridging the academy and communities most impacted by the research with particular attention to communities experiencing marginalization.

**SOWK 4903 Photovoice as Intervention and Research Methodology (3 Credits)**

This course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research.

**SOWK 4904 Introduction to Human-Centered Design for Evaluation & Program Development (3 Credits)**

This course will provide an introduction to the Human-Centered Design process and its application in developing and evaluating programs. Human-Centered Design is both a creative and practical process for generating solutions that place the people you serve at the center of the design process. During this course, you will move through the human-centered design process with a team, empathizing, prototyping, iterating, and finally pitching to a community partner from GSSW for whom you will be evaluating and developing a solution. You will first build insight and understanding about a focal issue through interviews with experts and end users, in-person observation, and other creative exercises intended to evaluate existing processes and experiences. Teams will utilize this knowledge to take a fresh look at the presented issue and generate breakthrough ideas in partnership with the end user and the GSSW groups who serve them. An iterative process of ideating and prototyping solutions, eliciting feedback, and refining ideas will culminate in pitch presentations at the end of the course. Your team will document its design process and final solutions in detail, which will then be delivered to the GSSW partner for potential implementation.

**SOWK 4950 Foundation Field Internship (0-15 Credits)**

This required practicum provides foundation students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4965 International Field Practicum (0-18 Credits)**

This international course fulfills partial requirement for a student's concentration year practicum. In an international social work setting, the practicum provides students with the opportunity to integrate social work theory and practice for effective professional intervention at clinical and community levels.

**SOWK 4970 Concentration Field Internship (0-18 Credits)**

Concentration students participate in planned practice experience that integrates classroom theory, the learning of practice skills and the continued development of social work attitudes, ethics, and values. Prerequisite for 2-year students: successful completion of foundation-year course work and field internship. Prerequisite for students with advanced standing: successful completion of advanced standing prerequisite courses and BSW-year internship. Field must be taken concurrently with concentration-year course work, or after core concentration course work. Concentration-year field requires a minimum of 20 hours a week experience at the assigned field agency. Any deviation from this standard requirement must be approved by the Director of Field Education. Prerequisite: SOWK 4950 or 4299.

**SOWK 4971 Experimental Class (3 Credits)**

Experimental courses allow GSSW to provide a wide variety of course offerings that respond to current issues and themes in the profession as they arise, as well as providing specialized courses that relate to the interests and areas of expertise of our faculty. All experimental courses are offered as electives open to all students. Prerequisite: determined by each instructor.

**SOWK 4990 Topics in Social Work (1-4 Credits)**

This topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard MSW curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year that have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to social work practice, theory, or research. Topics vary from term to term and may be limited by program administrators, faculty, or by student interest.

**SOWK 4999 Capstone (0-1 Credits)**

This course is a 0-1 credit (Pass-Fail) required course in which students document their work through the development of an individual portfolio. Students are asked to upload artifacts (papers, presentations and field accomplishments) from both classroom and field internship that demonstrate how they have met the CSWE foundation and concentration specific EPAS competencies and practice behaviors. Students complete a reflection statement on their learning as it relates to the EPAS competencies.

**SOWK 5000 Seminar in Professional Social Work Issues (2-6 Credits)**

Examines the dilemmas and challenges confronting the social work profession and social work education. Examines the nature of professional education, the nature of the profession itself and the forces internal and external to the profession that have an impact upon practice and education. Required.

**SOWK 5001 Grant Writing for Soc Science (3 Credits)**

This course provides foundational knowledge for social work researchers preparing to engage in grant seeking and proposal development. This course is designed to help students develop the knowledge and skills to identify targeted research funding opportunities, navigate Requests for Proposals from government and foundation funding sources, develop tailored proposals to fit a particular problem definition and funding source, prepare a budget and management plan to support a research project, work collaboratively with community partners, and understand university grants management mechanisms. Ethical dilemmas in grant seeking, grant writing, and grants management will be discussed. This course is a general elective with relevance to social work students entering a research profession.

**SOWK 5005 Categorical Data Analysis (4 Credits)**

This course is an intermediate statistics class for doctoral students in the social sciences. The course is designed to provide a general understanding of categorical data analysis. Course content will focus on regression analyses for categorical dependent variables/outcomes. Students are often familiar with linear regression analyses that are used for continuous dependent variables/outcomes, but these data analysis methods are inappropriate when working with binary, ordinal, multi-categorical (i.e., nominal with >2 categories), and count dependent variables/outcomes. This course will cover a range of data analysis methods to examine categorical dependent variables/outcomes, such as logistic, ordinal, multinomial, and poisson/negative binomial regression analyses. For each method, students will learn the background; statistical underpinnings/assumptions; computation of statistics; interpretation and reporting of statistical results. Students also learn computer applications that are used to perform these statistical analyses. Data analysis using computer software (Stata) is required.

**SOWK 5101 Social Welfare Policy Analysis and Development (3 Credits)**

Applies analytical techniques to development of social welfare policy stressing the ability to formulate a policy hypothesis (i.e., a statement, in testable form, of a basic premise undergirding a policy position) and to reach conclusions based on analysis of empirical evidence related to the policy hypothesis. Required.

**SOWK 5110 Introduction to Advanced Quantitative Research Methods (3 Credits)**

This required doctoral course introduces students to quantitative approaches to conducting social research. The course includes material related to measurement, sampling, research design, data collection, and data analysis. While each of these topics encompasses technical issues to be mastered by doctoral students, the logic and underlying rationale of these research methods is of prime importance in this course. A second component of the course requires students to define and begin to develop a substantive area of intended study and research during their enrollment in the doctoral program. Elements of articulating a substantive research area and steps toward defining key research questions in a topical area are reviewed. Aspects of conducting literature reviews leading to the articulation of a substantive research area are discussed in class sessions.

**SOWK 5111 Quantitative Methods for Assessing Social Interventions (3 Credits)**

Social work researchers are in a unique position to contribute to knowledge about the causes of individual and societal problems and to test interventions that seek to prevent or ameliorate such problems. A variety of qualitative and quantitative research methods are used to advance knowledge about etiological factors contributing to individual and social problems and to assess the outcomes of specific social policies and practice strategies. This course presents a detailed examination of quantitative methods and designs that are useful in assessing the effects of social interventions. Measurement, sampling and design issues in generating and testing research questions and hypothesis are explored. Experimental, quasi-experimental, and survey research designs are assessed and applied to practice and policy issues and problems. Special emphasis is placed on developing skills necessary to conduct intervention research. Cognate students may be permitted on a case by case basis, space permitting.

**SOWK 5120 Introduction to Advanced Qualitative Research Methods (1-3 Credits)**

This course provides a substantive doctoral-level review of content on qualitative research methods and strategies. It is developed for students from social science disciplines. The content includes the nature of the method, the epistemological implications and assumptions, and appropriate applications. Student learning and evaluation includes the experience of developing a research proposal based on qualitative methodology and conducting data collection for a mini-research project. This course is required for social work doctoral students. Students from other departments may register with permission from the professor.

**SOWK 5121 Qualitative Data Analysis (1-3 Credits)**

The focus of this course is on data analysis and interpretation, demonstration of the science of the analysis, and presentation of findings in oral and written forms. Students are expected to conduct qualitative analyses on textual data they collected as part of SOWK 5120 or as a result of some other qualitative data collection experience. Over the course of the term students learn to code and analyze their data, interpret findings, orally present those findings, and write a final paper in which they demonstrate a rigorous engagement with qualitative data analysis and the literature relevant to their topic. This course is for SOWK PhD students only. Cognate students may be permitted on a case by case basis, space permitting. Prerequisite: SOWK 5120.

**SOWK 5130 Mixed Methods Research in Social Work (3 Credits)**

This course introduces doctoral students to mixed methods research in social work and the social sciences. Students explore mixed methods as a third research paradigm that strategically combines both quantitative and qualitative methods within a single inquiry. The course encourages students to actively reflect on previous quantitative and qualitative research training. Specific topics for the course include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination consideration. SOWK PhD students only. Cognate Students will be allowed to register on a case by case basis, space permitting.

**SOWK 5131 InDIGQualitative RsrchMethods (3 Credits)**

This course is designed to provide students with a foundation for advanced qualitative research methods with Indigenous and other minoritized communities using arts-based inquiry and interpretive methods for collecting and analyzing data. Grounded in an Indigenous epistemological framework applied across intersectional and diverse communities, students will explore deeply contextualized questions about individual and social phenomena. Consistent with Indigenous ways of knowing, self-reflexivity and location of self-in-relation to community and knowledge will be prioritized as questions are developed and considered. We will explore auto-ethnography and auto-archaeology as methodologies while also engaging in performative, creative expression and visual praxis methods for inquiry and analysis. Class format will include presentations, small group discussions, films, poetry, movement, and collaborative pedagogical techniques.

**SOWK 5201 Intro to Statistical Methods in Social Work (5 Credits)**

Examines the use and interpretation of statistics in educational and human services research, including descriptive and inferential statistics. Required.

**SOWK 5202 Correlation and Regression (4 Credits)**

Examines correlational and multiple regression research designs and their application to social work and social science problems. Cross-listed with RMS 4911, SOWK 5952. Prerequisite: SOWK 5201.

**SOWK 5204 Intro to Multilevel Modelling (4 Credits)**

This course is an advanced course in statistics for doctoral students and an introductory course in multilevel modelling. It is an applied course designed for students with a thorough knowledge of ordinary least squares (OLS) regression (SOWK5202 and SOWK 5005 or equivalent). The course will cover not only the traditional theories and application regarding two-level models for continuous outcomes and binary outcomes, and growth curve models, but also the innovative methodology in using multilevel modelling to address socioeconomic intersectionality and disparities, i.e., multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA). The goals of the course are to develop the skills necessary to identify an appropriate technique for multilevel data analysis, estimate models, conduct diagnostics, and interpret results for continuous and binary outcomes. We will use Stata 15 (or any later version) to perform the analyses. Pre-requisites: SOWK 5202 and SOWK 5005 or equivalent.

**SOWK 5300 Social Science Theory and the Philosophy of Science (3 Credits)**

This foundation doctoral level course introduces traditional issues and recent developments in the philosophy of science, and provides an overview of social science theory and theoretical frameworks. It examines philosophical questions on scientific inquiry and the consequences modern science imposes on our basic understanding of knowledge and nature. The course analyzes and critiques the social-and-behavioral-science foundations that undergird the social work knowledge base and current social work theories. There are no prerequisites for this course. This course is required to social work doctoral students.

**SOWK 5301 Social Work Theory in Research and Practice (3 Credits)**

This course builds on SOWK 5300, Philosophy of Science and Social Work Theory, to examine how theories, conceptual frameworks, perspectives, and models are used specifically within social work research, education, and practice. This course explores how theories are used in research and in social work interventions on individual, family, group, organizational, community, and policy levels. The course analyzes and critiques the social work knowledge base and the current state of social work theories. This course is required for social work doctoral students. Prerequisite: SOWK 5300.

**SOWK 5401 Quantitative Research Methods (4 Credits)**

Focuses on basic elements of quantitative social research methods: measurement, sampling, research designs, data collection and data analysis. Emphasizes logic and underlying rationale, as well as technical issues. Prior understanding of computer-based statistical analysis is helpful. Required.

**SOWK 5405 Advance Qualitative Analysis (3 Credits)**

Provides an understanding of analysis methods used to draw meaning from qualitative data, methods that must be practical, applicable and understandable to other observers. Prepares students to use a systematic, scientific process of analysis that captures the meaning of data while avoiding research self-delusion and unreliable or invalid conclusions. Topics include data collection, data reduction, data display, and conclusion drawing and verification. Methods include application of computer software. Prerequisite: SOWK 5121. Required.

**SOWK 5406 Critical Perspectives on Quantitative Research Methods (3 Credits)**

This required doctoral level course introduces students to critical perspectives on quantitative approaches to conducting social research. The course is the 2nd course in the required quantitative research methods sequence and will examine what it means to be a social scientist with a specific focus on critical perspectives in quantitative methods. The course includes material related to data processing, interpretation of results, use of results for non-academic audiences, and intersectionality, as well as an overview of experiments, surveys, and secondary data analysis. Students should gain mastery in these areas while critically examining the rationale and ethics of quantitative methods. Prerequisite: SOWK 5110.

**SOWK 5450 Preparing for the Comprehensive Exam: Integration from a Social Justice Perspective (1-3 Credits)**

The focus of this course is to help you frame, organize, develop, and complete a proposal for your comprehensive exam, with a particular emphasis on building your skills in integration, synthesis, and critical thinking related to the social justice implications of your work. Students will receive support and feedback about how to integrate theory, policy and empirical research when stating the aims and implications of their proposal. Additionally, students will learn to apply a critical social work perspective to analyze the limitations of existing understandings of their substantive areas of interest. Students will learn to acknowledge complexity and bias of vantage and values in social work scholarship, identify the influence of context and question assumptions about dominant policy, research, and theoretical frameworks, and demonstrate a general understanding of the ways societal privilege and prejudice set the frame for analysis and intervention with the problem. Advisors and mentors participate in class presentations and critiques as a part of preparing the student for the comprehensive exam proposal meeting.

**SOWK 5500 Pedagogy in Social Work Education (3 Credits)**

This foundation course examines philosophies, theories, and pedagogical models that are utilized in social work education. It explores how various perspectives shape the approaches and techniques used and how these in turn impact classroom effectiveness and issues of classroom management. The course incorporates concepts and develops skills based on evidence-based teaching. This course is a required course for social work students and has no prerequisite. This course is for SOWK PhD students only.

**SOWK 5600 Critical Approaches to Facilitating and Teaching: Anti-Racist, Feminist, and Queer Pedagogies (3 Credits)**

This course introduces students to anti-racist, feminist, queer, anti-oppressive and other critical perspectives on facilitation and pedagogy. The course is organized in four sections: theoretical frameworks; the role of identities in facilitation, training, and teaching; facilitation and course design and strategies; and supporting social action. Prerequisite: SOWK 5500.

**SOWK 5700 Teaching Practicum (3 Credits)**

This 3-hour required course provides classroom instruction and teaching opportunities designed to prepare doctoral students for faculty positions in undergraduate and graduate level social work education. Students work with a faculty mentor to pursue practicum placements that match their substantive interests. Students are expected to devote approximately 8 hours to the practicum per week. Restricted to Ph.D. students only.

**SOWK 5903 Photovoice as Intervention and Research Methodology (3 Credits)**

This doctoral level course explores the use of Photovoice as a social work intervention, advocacy tool, and research method. Through participating in a mini-photovoice project on the future(s) of social work, students will learn the basics of implementing Photovoice, ethics surrounding the approach, and the various ways it can be applied in practice and research. Finally, students will make an actionable plan for integrating photovoice into their doctoral-level research.

**SOWK 5990 Special Topics (1-5 Credits)**

This special topics course provides students with the opportunity to learn content appropriate to graduate social work education that is not currently incorporated into the standard PhD curriculum. Given the ever-changing nature of social work practice, theory, and research, topics of importance emerge each year which have particular relevance for a period of time or may be new emergent topics that will have relevance for the future of the discipline of social work. As such, this course provides a mechanism through which courses may be offered on a one-time basis. Topics may be related to advanced social work theory, pedagogy, or research. Topics vary from term to term and may be initiated by program administrators, faculty, or by student interest.

**SOWK 5991 Independent Study (1-10 Credits)**

This is an opportunity for MSW students to undertake special study in a defined area of interest with faculty consultation.

**SOWK 5995 Independent Research (1-10 Credits)****SOWK 6991 Independent Study (1-10 Credits)**

PhD students undertake special study in a defined area of interest with faculty consultation. By arrangement.

**SOWK 6995 Independent Research (1-18 Credits)**

The formal mechanism for undertaking the dissertation, providing for faculty support through the appointment of a dissertation committee. By arrangement.

## Special Education (SPED)

**SPED 4001 Teaching Individuals with Developmental Disabilities DD and Behavioral Disorders (5 Credits)**

This course will introduce students to the concepts and principles of behavior on which the discipline of applied behavior analysis was founded. Topics of study will include the history and dimensions of applied behavior analysis, defining and measuring behavior, procedures and factors related to behavior change, and the role of the basic principles of behavior (positive and negative reinforcement, punishment, stimulus control, and motivating operations) in establishing new behavior and decreasing problem behavior.

**SPED 4002 Teaching Individuals with Developmental Disabilities and Behavioral Disorders (4 Credits)**

This course focuses on the basic principles of assessment, instruction, and curriculum development; application of formal and informal assessment procedures for goal selection, formulating instructional plans, and adapting instructional materials to accommodate learning needs of students with developmental disabilities and/or behavioral disorders.

**SPED 4003 Advanced Concepts and Principles in Behavior Analysis (5 Credits)**

This course focuses on the definitions and characteristics of applied behavior analysis and the concepts, principles, and processes. Concepts related to ethics and behavior change procedures will also be discussed. The purpose of this graduate-level course is to provide students pursuing a BACB® credential with 45 hours of instruction in advanced content areas of philosophical underpinnings and concepts and principles as outlined by the coursework requirements for BACB® credentials. The course covers content from areas A & B from the 5th edition of the BACB®'s Behavior Analyst Task List®.

**SPED 4004 Single Case Research Design (5 Credits)**

The purpose of this course is to provide master's level students with 45 hours of instruction in the content areas of measurement, data display, data analysis, and single-case research experimental design and evaluation. This course describes the rationales for single-case research in applied settings. It will equip students to critique, design, and conduct single-case research for applied behavior analysis applications. The course covers content from areas C and D from the 5th edition of the BACB®'s Behavior Analyst Task List®.

**SPED 4005 Ethics in Applied Behavior Analysis (5 Credits)**

This course focuses on ethical and professional conduct in the field of applied behavior analysis. An overview of the profession of behavior analysis is addressed, including the history, foundations, and ethics of the field, as well as professional skills for ethical practice. During this course, we will specifically review the BACB's Compliance Code and disciplinary systems.

**SPED 4991 Independent Study (1-10 Credits)**

Independent study/research.

**SPED 5001 Multi-tiered Systems of Support (3 Credits)**

This course will provide (a) an overview of the historical, legal, and theoretical foundations of multi-tiered systems of support; (b) review the research and evidence-base of a multi-tiered system of support approach for behavior; and (c) explore the influence of behavior analytic procedures within a multi-tiered system of support.

**SPED 5002 FBA's and BIP's in Schools (3 Credits)**

This course will enable students to develop the skills needed for completing Functional Behavior Assessments (FBA), developing Behavior Intervention Plans (BIP), and applying behavior analytic principles to (1) implement the developed BIP, (2) monitor BIP implementation, (3) measure BIP effectiveness, and (4) collaborate with others to improve BIP implementation. Additionally, the course will focus on applying behavior analytic principles through a developmentally appropriate and culturally responsive lens.

**SPED 5003 Supervision and Management (3 Credits)**

This course focuses on supervision and management practices in the field of applied behavior analysis and related settings (i.e., clinics, schools). An overview of supervision is addressed, including foundations, ethics, and professional skills for both the supervisor and the supervisee. During this course, we will specifically review the BACB's standards for supervisory practices as they relate to improving and maintaining the behavior-analytic, professional, and ethical repertoires of practitioners and facilitate the delivery of high-quality services to his/her clients.

## Statistics (STAT)

**STAT 3920 Strategic Management of Operations (4 Credits)**

The operations function is the unit of the organization that produces the products and/or delivers the service for which the company earns revenue. It is the largest unit of the organization with which all other units interact. Therefore, efficient management of this function is a critical success factor for any company. This course focuses on an organization's management (planning, organizing, staffing, directing, and controlling) when converting inputs into products and services. Companies today must remain competitive in the global marketplace, and careful consideration of various options regarding cost containment and use of technology are required. This course will explore how operations managers meet these challenges in the manufacturing and services firms in response to changes in economic conditions. Students will be exposed to a number of quantitative tools as well as becoming familiar with new systems and methods in the operations management field. When appropriate, optimization software such as Microsoft Solver will be utilized to conduct analysis. Prerequisite: STAT 3900.

**STAT 4040 Basic Math-Graduate Students (2 Credits)****STAT 4045 Basic Math-Evening MBA Student (1 Credit)****STAT 4050 Basic Statistics-Grad Students (2 Credits)****STAT 4100 Quantitative Methods I (4 Credits)**

An introduction to the methods of quantitative analysis commonly used in business, with an emphasis on finance applications. Topics include descriptive statistics, probability, probability distributions, fundamentals of statistical inference, correlation, and simple and multiple regression analysis.

**STAT 4200 Quantitative Methods II (4 Credits)****STAT 4300 Production & Operation Mgmt (3 Credits)****STAT 4350 Statistical Computing (4 Credits)**

Introduction to and training in the use of modern statistical software packages. Exposure to several of SAS, STATISTICA, S-PLUS, and SPSS with focus on one to best fit student needs. Data acquisition, management, graphs, analyses, reports, customizing and programming. Cross listed with STAT 3350.

**STAT 4400 Risky Business (4 Credits)**

An interterm travel course to Las Vegas that deals with the theory, practice, and business of gambling.

**STAT 4500 Prob Thry Math Gamb (4 Credits)**

This course covers the theory of probability and the formal study of mathematics underlying gambling and games of chance. Topics include probability concepts, probability rules, expectation, permutations and combinations, the law of large numbers, the law of "averages," history of gambling, house advantage, fallacies and betting systems, volatility and operations, game odds and price setting, games of pure chance, games with a skill component. Prerequisite: a previous course in statistics or permission of instructor. Cross listed with STAT 3500.

**STAT 4510 Applied Decision Theory (4 Credits)**

Application of classical and Bayesian decision theory and game theory to practical problems. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4610 Business Statistics (4 Credits)**

This course introduces students to basic analytical tools in statistics and operations management, and provides theoretical concepts and skills that are building blocks for future courses. The approach is to present students with a "corporate" view of how statistical tools are used to analyze data and facilitate business decision-making. Students will familiarize themselves with all of the statistical techniques and models presented in the course and will demonstrate knowledge in applying the appropriate techniques and models to various data sets and interpreting the results of the analysis. The Microsoft Excel Data Analysis and Solver Toolkits will be used to conduct statistical analyses, allowing students to become more proficient overall in using Microsoft Excel and to place their emphasis on applications to core business disciplines, statistical reasoning, and proper interpretation of results. A rich variety of such problems and settings will be discussed in class.

**STAT 4640 Regrsn/Correlation Analysis (4 Credits)**

Simple linear regression analysis, methods of estimation, multivariate multiple regression and correlation, tests of reliability and significance, simultaneous equations model and applications. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4650 Applied Multivariate Analysis (4 Credits)**

The introduction and application of multivariate analytical techniques and model building for problem solving in business and other settings. Cross listed with STAT 3650. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4680 Sampling Theory & Application (4 Credits)**

Simple and stratified random sampling; multistage, cluster, and sequential sampling; optimum allocation and economic efficiency; ratio estimation methods; design of sample studies of various human and physical populations; financial auditing by probability sampling. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4687 Advanced Statistics (4 Credits)****STAT 4700 Intro Computer Simulation (4 Credits)**

Deterministic and probabilistic model structures, planning models, heuristics and artificial intelligence, Monte Carlo methods, simulation programming languages, model design, experimentation, and verification. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4704 Topics in Statistics (1-5 Credits)**

Various topics including travel courses.

**STAT 4709 Computer Simulation Methods for Business (4 Credits)**

Large-scale simulation in business and economics, deterministic and probabilistic model structures, corporate planning models, heuristics and artificial intelligence; Monte Carlo methods, model design, experimentation and verification, tactical problems in total systems simulation. Cross listed with STAT 3709.

**STAT 4710 Statistical Quality Control (4 Credits)**

Applies the basic concepts of statistics to quality improvement in the business environment. Topics include a summary of Total Quality Management (TQM) and where Statistical Quality Control fits in, the tools of Statistical Process Control, Deming's Continuous Improvement Cycle, as well as the evaluation of Process Capability and Sampling. Cross listed with STAT 3710. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4780 Dsgn & Analysis Exp & Survey (4 Credits)****STAT 4783 Forecasting-Financial Envrn (4 Credits)**

Cross listed with FIN 3610, STAT 3620.

**STAT 4793 Sem: Statistical Methods (1-5 Credits)****STAT 4794 Sem: Operations Research (1-5 Credits)****STAT 4795 Grad Research Sem-Statistics (1-5 Credits)****STAT 4800 Dsgn & Analysis Exp & Survey (4 Credits)**

Designing experiments, analysis of results of experiments, nonparametric and parametric tests, randomization, factorial and nonfactorial designs, Latin squares, survey methodology, survey techniques for field investigations. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4810 Nonparametric Statistics (4 Credits)**

Statistical procedures applicable in many situations where standard normal theory methods are not. Especially useful when data are of categorical or rank type or when sampled population is excessively skewed. Emphasis will be on applications, making use of the laws of probability. Cross listed with STAT 3110. Prerequisite: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4830 Stats-Econ & Bus Forecasting (4 Credits)**

Methods to explain, discover, and predict business and economic forces, bases for evaluating such methods. Prerequisite: STAT 4100 or equivalent. Cross-listed with FIN 4620.

**STAT 4840 Decision Sciences (4 Credits)**

Decision-making techniques, processes, and support systems; basic decision models dealing with certainty, uncertainty, and static and dynamic time frames; emphasis on viewing all decision problems from perspective of a generalized decision-making structure; introduction to computerized decision support systems. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4850 Operations Research I (4 Credits)**

Linear programming, including transportation, warehousing, assignment models, and sensitivity analysis, integer programming and game theory. Permission of instructor required.



**STAT 4860 Operations Research II (4 Credits)**

Non-linear models and optimization, Kuhn Tucker conditions, quadratic and dynamic programming, inventory and queuing models, simulation. Permission of instructor required.

**STAT 4870 Advanced Statistics (4 Credits)**

Discrete and continuous probability distributions, sampling distributions, estimation methods, moment generating functions, analysis of variance, test of reliability, and significance by parametric and non-parametric methods. Prerequisites: MBA 4111, MBA 4112, or permission of instructor.

**STAT 4930 Sem: Statistical Methods (1-5 Credits)****STAT 4940 Sem: Operations Research (1-5 Credits)****STAT 4950 Grad Research Sem-Statistics (1-5 Credits)****STAT 4960 Intern/Case Study: Statistics (1-5 Credits)****STAT 4970 Intern/Case Study: Ops Res (1-10 Credits)****STAT 4980 Intern/Case Study: Statistics (0-10 Credits)**

Hours and times arranged by student.

**STAT 4981 Intern/Case Study: Ops Res (4 Credits)****STAT 4991 Independent Study (1-4 Credits)**

Individual research and report. Hours and times arranged by student.

**STAT 4995 Independent Research (1-10 Credits)**

## Taxation (TAX)

**TAX 4001 Fundamentals of Taxation (4 Credits)**

This class will cover fundamental concepts of the federal income tax system, including the definition of income, adjusted gross income, taxable income, exclusions from income, business and personal deductions, tax credits, basis, amount realized, gain and loss, capital gains and losses, depreciation, involuntary conversions, like-kind exchanges.

**TAX 4002 Corporate Taxation (3 Credits)**

This required course covers the taxation of corporations and shareholders, including formation, nonliquidating distributions, the dividends received deduction, stock redemptions, distributions in kind, constructive distributions and liquidating distributions.

**TAX 4003 Partnership Taxation (3 Credits)**

Tax treatment of partnerships and partners; aggregate and entity principles; problems associated with the formation, operation, and dissolution of partnerships; transactions between partnerships and partners; compensation of service partners; sales of partnership interests; withdrawal and retirement of partners; basis adjustments; treatment of unrealized receivables and substantially appreciated inventory.

**TAX 4004 Tax Procedure (1-2 Credits)**

This required course addresses foundational procedural matters that must be addressed in resolving tax controversies with the Internal Revenue Service. Topics covered include filing obligations, statutes of limitation on assessment and collection of taxes and claims for refund, statutory notices, administrative appeals, limitations on injunctions against the assessment and collection of tax, examination procedures and collections procedures. Students are also introduced to ethical obligations of tax advisors.

**TAX 4005 Taxation Research and Writing (1-2 Credits)**

Research sources, techniques, and practice; in-depth research of selected areas. Emphasis on argument and communication of conclusions; evaluation of legislative history and administrative authorities.

**TAX 4015 S Corporations (2 Credits)**

This elective course addresses the federal taxation of S corporations and their shareholders. Topics covered include qualification as an S corporation, elections, the flow through of items to shareholders, basis in S stock and debt, accumulated adjustments account, the built-in gains tax, and passive activity limitations and taxes. Prerequisite: TAX 4002 - Corporation Taxation.

**TAX 4024 Advanced Tax Procedure (2 Credits)**

This class addresses advanced procedural matters arising in tax controversy. Topics covered include innocent spouse relief, jurisdiction of courts to resolve tax matters, petitioning Tax Court, and bringing suit for refund in U.S. district courts and US Court of Federal Claims. Prerequisite: TAX 4004.

**TAX 4025 Estate & Gift Taxation (2 Credits)**

This elective course will cover taxation of gratuitous transfers under the federal estate and gift tax codes, including taxable inter vivos gifts, annual exclusion, gift-splitting, gift tax charitable deduction, gift tax on powers of appointment, estate tax on owned interests, property transferred inter vivos with retained interests and powers, property subject to powers of appointment or transferred in contemplation of death, jointly owned property, life insurance proceeds, annuities and employee death benefits, marital deduction, charitable deduction, estate tax credits, estate tax deductions and valuation problems.

**TAX 4035 Tax Accounting (2 Credits)**

This elective course covers adoption of and change in accounting periods; income recognition and deduction allowance under the cash and accrual methods; prepaid and contested income and expenses; long-term contracts; capitalization and expensing; interest, original issue discount, and the time value of money; deferred payment transactions; income and deduction reversals; accounting method and practice changes.

**TAX 4045 Exempt Organizations (2 Credits)**

The statutory exemption for "charities," social welfare and social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, exempt organizations, property title companies, federally organized or chartered organizations, and political organizations' activities, funds, and lobbying activities; prohibited transaction rules; the private foundation; the unrelated business and debt-financed income tax exposures; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

**TAX 4050 International Taxation-Inbound (2 Credits)**

This course addresses the U.S. taxation of foreign taxpayers with economic activity connected to or within the United States. Topics covered include jurisdiction to tax, determination of residence, source, categorization of income, and tax treaties.

**TAX 4055 Tax & Financial Planning (2 Credits)**

This course addresses the Federal income taxation of investments and introduces students to the concepts and tools used to advise clients in investing and planning for the taxation of their investments and accumulated wealth.

**TAX 4060 Natural Resources Taxation (2 Credits)**

Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

**TAX 4065 Taxation of Corporate Reorgs & Divisions (2 Credits)**

This course addresses the taxation of corporate reorganizations and divisions. Students will be introduced to the law governing the taxation of corporate reorganizations and divisions, whether taxable or tax-free, and learn to advise taxpayers on the results.

**TAX 4120 Qualified Pension and Profit Sharing Plans (4 Credits)**

An in-depth study of ERISA, labor department rules, and Internal Revenue Code provisions relating to qualified deferred compensation. The course is geared toward an understanding of all the pension and profit sharing rules required for plan qualification, with emphasis on qualified plan planning for both incorporated and unincorporated forms of business.

**TAX 4121 Taxation of Retirement Plans and Deferred Compensation (2 Credits)**

Taxation of Retirement Plans and Deferred Compensation introduces students to issues related to retirement savings plans available to employers and taxpayers, including vesting requirements, top-heavy plans, and the taxation of plan contributions and distributions. The course also addresses non-qualified deferred compensation governed by § 409A, including, traditional non-qualified deferred compensation plan designs, executive compensation programs (e.g., equity compensation arrangements and types of non-qualified trusts established for the benefit of executives), common § 409A errors and correction, tax and accounting implications, and the "special timing rule" for FICA taxes.

**TAX 4125 Fiduciary Income Taxation (2 Credits)**

This course covers the federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under sections 671-678; trust ownership rules for subchapter S stock; and the calculation of the alternative minimum tax. Estate & Gift Taxation is highly recommended before taking this course.

**TAX 4150 International Taxation-Outbound (2 Credits)**

This class addresses the U.S. taxation of U.S. taxpayers with economic activity outside of the United States. Topics covered include foreign tax credits, subpart F income, hybrid entities, global intangible low-taxed income and foreign-derived intangible income.

**TAX 4165 Taxation of Startups and Venture Capital (2 Credits)**

This course addresses taxation of startups and venture capital. Topics covered include choice of entity, taxation of intellectual property, carried interests, employee compensation, international expansion, and exit strategies. TAX 4003 Partnership Taxation and Tax 4002 Corporate Taxation are co-requisites or pre-requisites for this course.

**TAX 4220 Fiduciary Income Taxation (4 Credits)**

Federal income taxation of estates and trusts. Included is a discussion of the concept of an estate or trust; trust accounting income for a simple and complex trust; calculation of taxable income, including special rules on the calculation of distributable net income, capital gains, personal exemptions, and charitable contributions; the separate share rule and trapping distributions; income in respect of a decedent; the grantor trust rules under Sections 671-678; and the calculation of the alternative minimum tax.

**TAX 4225 Estate Planning (2 Credits)**

This course is a survey of estate planning issues. We will analyze an estate from the beginning through the end of the process. We will examine fact gathering and the analysis of data; the psychological and ethical aspects of working with families at different phases of the estate plan; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance and retirement planning in an estate and business planning context; planning with trusts; and the transfer of wealth and a closely held business interest from one generation to the next. We will also study ways to plan for future generations and domestic asset protection planning. Estate and Gift Taxation (TAX 4025) is a pre-requisite for the for this course.

**TAX 4230 Estate Planning (3 Credits)**

Estate analysis, including fact gathering and the analysis of data; the psychological aspects of "role playing" in estate planning; the members of the team (the attorney, the CPA, the life underwriter, the trust officer); life insurance in an estate and business planning context; planning with trusts, including revocable, short-term, and irrevocable; the transfer of a closely held business interest from one generation to the next, including full and partial stock redemptions, cross purchase agreements, private annuity, installment sale, retirement, recapitalization, qualified and nonqualified plans of deferred compensation; special estate planning considerations for the professional corporation, the highly paid executive, and the farmer and rancher; specific cases analyzed. Prerequisite: TAX 4210.

**TAX 4240 Tax and Financial Planning (3 Credits)**

This is an introductory, integrated course focusing on personal financial planning. Topics covered include cash flow projections and budgeting, annual and multiple period income tax planning, an introduction to taxation of investments, an insurance and liability coverage survey, retirement planning, and estate and succession planning.

**TAX 4250 Ethics in Tax Practice (3 Credits)**

An examination of the ethical rules and considerations affecting lawyers and accountants in tax practice, including transactional, compliance and controversy matters.

**TAX 4315 Low Income Taxpayer Clinic (1-4 Credits)****TAX 4325 Tax Planning for Closely Held Businesses (2 Credits)**

This course addresses succession planning for closely held businesses. Topics covered include buy-sell agreements, stock redemptions, intra-family transfers of business entities, compensation arrangements, and family limited partnerships. TAX 4003 Partnership Taxation and TAX 4002 Corporate Taxation are pre-requisite or co-requisites for this course. Estate Planning and Fiduciary Income Taxation are recommended.

**TAX 4386 Graduate Tax Program Externship (2-4 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Externships are supervised by faculty and GLS department who interact with the eligible student and the employer or organization that provides the externship. The externship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the externship will result in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP externs.

**TAX 4410 Taxation-Natural Resources (3 Credits)**

Tax problems encountered in the acquisition, operation, and disposition of natural resource properties; pre-production expenditures, depletion, depreciation, and ad valorem taxes; emphasis on overall tax planning for natural resource ventures.

**TAX 4415 Low Income Taxpayer Clinic (1-8 Credits)**

Using a focused series of classes related to issues facing individual low income taxpayers embroiled in conflict with the Internal Revenue Service or in litigation before the United States Tax Court (innocent spouse relief, earned income credit, dependency exemptions, appeals of audits and collection due process issues, tax litigation), this course first prepares tax students to represent taxpayers regarding such issues, then provides the opportunity to practice before the IRS and in the Tax Court. In a clinical setting, students are trained in all facets of practice before the IRS and the Tax Court. Once trained, under the supervision of clinical staff, the students undertake representation of low income taxpayers in tax audits, appeals, collection proceedings, and, if necessary, before the Tax Court. All facets of client representation, including initial client meetings, representation agreements, client advocacy, and ending the representation, are experienced by each clinic participant.

**TAX 4430 Exempt Organizations (3 Credits)**

An examination of the statutory exemptions for "charities," social welfare organizations, social clubs, homeowners' associations, fraternal orders, employee benefit organizations, mutual or cooperative companies, business and professional leagues, labor unions, property title companies, federally organized or chartered organizations, political organizations, and other exempt organizations; rules on electioneering and lobbying activities; taxation of private foundations; prohibited transaction rules; the tax on unrelated business income, including debt-financed income; excise tax exemptions; administrative appeal and declaratory judgment procedures; anti-discrimination considerations; charitable contributions.

**TAX 4470 Employment Tax (2 Credits)**

Explore existing employment tax risks, recognize employment tax planning opportunities through appropriate compensation and entity structuring techniques, analyze proper worker classification, and highlight preventative techniques to avoid personal liability.

**TAX 4490 State & Local Taxation (3 Credits)**

Taxable incidents, privilege tax, discrimination, and multiple taxation under the Commerce Clause of the United States Constitution; taxation based on class legislation and the Equal Protection Clause; nexus or jurisdictional due process; allocation and apportionment formulas; business versus nonbusiness income; multi-state tax compact; unitary concept; residence definitions; nonresident income sources; tax credits and short period returns for individual income taxpayers; sales of tangible personal property; retail and wholesale sales; taxable and nontaxable leases; contractors rule, exemptions, and resale certificates under sales and use tax statutes; valuation techniques for real personal property; and administrative and judicial appeal of property tax valuations and assessments.

**TAX 4500 Consolidated Returns (3 Credits)**

Methods used by related corporations to report income and losses; affiliation and consolidation; computation of consolidated taxable income; allocation of consolidated tax liability; deferred intercompany transactions; treatment of investments in affiliates; earnings and profits; impact of corporate combination and separation.

**TAX 4550 Consolidated Returns (2 Credits)**

This course covers the rules and requirements for consolidated income tax returns, including qualification for consolidation, determination of consolidated taxable income, allocations of liability, adjustments of E&P and basis, and various loss limitations.

**TAX 4590 State and Local Taxation (2 Credits)**

This course addresses state law approaches to taxation, including variations in state rules, constitutional limitations on states' authority to impose tax, and various approaches to apportionment of taxation. We will also discuss policy considerations underlying these systems.

**TAX 4600 Seminar: Selected Topics (2-4 Credits)**

Recognition of tax problems and opportunities for a broad range of transactions encountered by individuals. Areas include family income splitting and other tax reduction and avoidance techniques; portfolio transactions, including short sales, puts and calls, and commodity futures; structuring agreements in contemplation of marriage or arising out of separation or divorce; personal insurance; charitable contributions; net operating losses; alternative minimum tax; various year-end planning techniques.

**TAX 4620 Accounting for Income Taxes (ASC 740) (2 Credits)**

Examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature. Topics include the calculation of current and deferred income taxes, an overview of book-tax differences, the calculation of interim period tax provisions and the presentation and disclosure of income taxes in financial statements. Students will learn the basics of accounting for income taxes related to advanced topics such as stock compensation expense, foreign operations, state income taxes, accounting for uncertain tax positions (formerly known as FIN 48), business combinations, inter-company transactions and valuation allowances.

**TAX 4625 Accounting for Income Taxes (2 Credits)**

Accounting for Income Taxes examines the financial accounting and reporting of income taxes under Statement of Financial Accounting Standards Codification Topic 740 (FASB ASC 740), formerly known as FAS 109, and related accounting literature.

**TAX 4701 Special Topics in Taxation (1-5 Credits)**

Special topics courses are used for timely offerings of specialized courses not otherwise found in the course catalog. Titles will vary. Please see [law.du.edu/registrar](http://law.du.edu/registrar) for more information.

**TAX 4750 Special Topics in International Taxation (2 Credits)**

This advanced seminar discusses international taxation of economic activity arising in multiple jurisdictions. Topics discussed can include tax treaties, dual residence entities, anti-abuse regimes, approaches to base erosion and profit shifting, taxation of intangible income, and issues related to stateless income. TAX 4150 International – Outbound is a prerequisite for this course.

**TAX 4980 Internship (0 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Director or a full-time GTP faculty member.

**TAX 4985 Internship (0 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Internships are supervised by faculty who interact with the eligible student and the employer or organization that provides the internship. The internship should provide a new learning experience for the student intern and must be related to taxation. Satisfactory completion of the internship results in a passing grade for the internship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for GTP interns. Students must obtain approval from the GTP Program Manager.

**TAX 4991 Independent Study (1-4 Credits)**

Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. The 4 quarter-hour maximum may be applied toward graduation requirements with no more than 2 quarter hours in any one quarter. Must obtain pre-approval from the Graduate Tax Program.

**TAX 5025 Tax Externship (1-4 Credits)**

The Graduate Tax Program (GTP) encourages students to gain practical experience and to develop professional skills in the field of taxation. Tax externships are designed to allow students the opportunity to gain monitored work experience in Tax-oriented placements outside of the law school. Example placements include judicial chambers, government agencies, private firms, corporations, and nonprofit organizations. Students should discuss any placement with the Director of the Graduate Tax Program before enrolling in this course. Externships are supervised by faculty who interact with the eligible student and the employer or organization that provides the externships. The externship should provide a new learning experience for the student and must be related to taxation. Satisfactory completion of the externship results in a passing grade for the externship. The GTP Director or a full time GTP faculty member may serve as Faculty Supervisor for students. Students may complete an externship for 1 to 4 credits. Each credit corresponds to 42.5 hours of work and thus students can work from 42.5 hours to 170 hours. This class does not satisfy the upper-level writing requirement.

**TAX 5991 Independent Study (1-3 Credits)**

Opportunity to study and write in any area agreed upon between the student and a member of the faculty. The student is required to produce a written work of publishable quality to receive a final grade for the course. Must obtain pre-approval from the Graduate Tax Program.

## Teacher Ed Prep (TEP)

### **TEP 4010 Foundations of Special Education: Inclusive Pedagogy for Students with Dis/Abilities (2-4 Credits)**

This course serves as the foundation for understanding children with disabilities and dis/abilities, as well as the philosophies, laws and policies that support the students. To be responsive to the diverse strengths, needs, and experiences children bring to the classroom, educators need a foundational knowledge of special education and opportunities that can influence student learning. We emphasize a strengths-based perspective and provide pedagogy for supporting for all learners. We introduce the classroom teacher's role in understanding the Individual Education Program (IEP) process, designing lesson plans and inclusive practices based on differentiated and universal design learning instructional strategies and working collaboratively with families and interdisciplinary teams. In addition, we introduce potential commonalities of students with high-incidence disabilities, the history and legal aspects of Special Education and the Response to Intervention Model (RtI)/Multi-Tiered System of Supports (MTSS). Course restricted to students in TEP program or instructor approval.

### **TEP 4520 Art Methods K-12 (3-4 Credits)**

Throughout this course, Apprentice Teachers will analyze the following essential questions about teaching and learning in the visual arts field: 1) What type of visual arts classroom environment best supports student learning and skill development in a 21st century classroom?, 2) How do the Colorado Academic Standards guide arts instruction?, 3) What is the role of descriptive feedback in the reflective practice of teaching and learning?, 4) How can visual arts instruction enhance positive-identity development for diverse learners?, and 5) How can visual arts educators use arts assessment in curriculum planning and to gauge student learning?.

### **TEP 4590 Elementary Literacy Instruction I (3,4 Credits)**

This is the first of two elementary literacy classes. The purpose of Literacy Instruction I is to provide apprentice teachers with the research-based foundations of reading processes for diverse learners. Teacher candidates will be knowledgeable about the development of reading, the science of reading research, and its application to effective instructional practices within the language domains of reading, writing, speaking, and listening. Teacher candidates will learn how to plan and organize core literacy practices such as interactive read alouds and small group reading instruction in conjunction with Colorado Academic Standards and the Common Core State Standards. The National Reading Panel (NRP) summarized their findings in five components of reading instruction that will guide our work together: phonemic awareness, phonics, fluency, vocabulary development, and text comprehension. Course restricted to students in TEP program or instructor approval.

### **TEP 4591 Elementary Literacy Instruction II (3-4 Credits)**

This is the second quarter of a twenty-week course focused on literacy with an emphasis on language, phonics, and writing. The purpose of TEP 4591 or Literacy Instruction is to provide teacher candidates with the research-based foundations and processes employed in skillful speaking, listening, reading and writing. Specifically, we will look at the building blocks of literacy that include phonics and language acquisition: phonology, morphology, and syntax and its application to reading and writing as we build from our reading emphasis the previous quarter. In this course, there will be a shift from literacy input (reading and listening) from the previous quarter to literacy output (writing and speaking). Further, at the end of the course, teacher candidates will reflect upon their literacy philosophy as we review key concepts and classroom strategies. Course restricted to students in TEP program or instructor approval.

### **TEP 4592 Secondary Literacy Instruction I (3,4 Credits)**

This is the first quarter of a twenty-week course on literacy. The purpose of this course is to provide teacher candidates with the research-based foundations of literacy and cognitive processes employed in skillful reading and writing for effective secondary instruction. In this first course, teacher candidates will be knowledgeable about the stages of reading as well as student literacy development in reading, writing, speaking, and listening. Teacher candidates will practice recognizing and evaluating these skills on a micro level through a mini-case study of an individual student. Teacher candidates will learn how to plan, organize, and tailor literacy instruction in their specific content area using ongoing and summative assessment in conjunction with the Common Core State Standards/Colorado Academic Standards. Teacher candidates will develop the knowledge, skills and understanding of the science of reading as it applies to all students from a wide range of backgrounds. There is a special emphasis in this course on literacy instruction in urban, diverse, and multi-lingual settings. Course restricted to students in TEP program or instructor approval.

### **TEP 4593 Secondary Literacy Instruction II (3,4 Credits)**

This is a literacy course for secondary-level English, math, science and social studies teacher candidates. In this course, there will be a shift of focus from literacy input (reading) from the previous quarter to literacy output (writing), and we will broaden our scope from analyzing one student at a time to assessing and addressing students' literacy needs in a whole-classroom environment. This quarter we will also examine outside influences – such as culture, language, and technology – on classroom literacy and how literacy practices and teaching methods can be adapted for multiple contexts. Throughout the course, teacher candidates will develop and reflect upon their literacy philosophy in terms of planning and instruction in a specific content area. Course restricted to students in TEP program or instructor approval.

### **TEP 4600 Introduction to Secondary Methods (3-6 Credits)**

Provides general introduction to principles of effective secondary instruction curriculum design and assessment. Frequently covered topics include: design of classroom environments, comparison of different instructional practices, purposes for and approaches to assessment, comparison of middle and high school philosophies, introduction to instructional unit plan development, and theories of instructional approach and design. Course lays a foundation for more specialized subject-matter methods courses. Prerequisite: enrollment in the Teacher Education Program.

### **TEP 4610 English in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching English Language Arts at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4620 Social Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Social Studies at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4630 Science in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Science at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4640 Math in Secondary School (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Mathematics at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge. Course restricted to students in TEP program or instructor approval.

**TEP 4650 Foreign Language Methods in K-12 Schools (3-5 Credits)**

In this course, Apprentice Teachers will explore the theory and practice of teaching Foreign Language at the secondary level. Topics include standards alignment, student cognitive development, and pedagogical content knowledge.

**TEP 4690 Field Experience (1-12 Credits)**

Involves field experiences, including full-day teaching for 12 weeks in elementary or secondary school classroom and regularly scheduled seminar discussions with supervisor. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4691 Field Experience I (1 Credit)**

This is the first quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4540 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4692 Field Experience II (1 Credit)**

This is the second quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4541 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4693 Field Experience III (1 Credit)**

This is the final quarter of an academic year-long field experience to develop and reflect upon effective teaching practices in an urban school setting. Following the gradual release calendar of teaching responsibilities, Residents will be observed, coached and evaluated on specific LEAP indicators in the domains of learning environment, instruction, and professionalism. In conjunction with the CUI 4542 Curriculum, Instruction and Assessment course, Residents will deepen their understanding of teaching and learning in diverse schools to increase student achievement for all students.

**TEP 4781 Elementary Art Methods (3-6 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in elementary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4782 Secondary Art Methods (3-4 Credits)**

Prepares K-12 art teachers to design and implement effective instruction in secondary school classrooms. Course introduces full array of sound teaching and assessment strategies for all aspects of art. Prerequisite: enrollment in the Teacher Education Program.

**TEP 4991 Independent Study (1-10 Credits)****TEP 4995 Independent Research (1-10 Credits)**

## Theatre (THEA)

**THEA 4991 Independent Study (1-10 Credits)****THEA 4995 Independent Research (1-10 Credits)**